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Calculating Time and the End of Time in the Carolingian World, c. 740-c. 820*

Apocalyptic hopes and fears were capable of driving significant change in the Middle Ages.¹ Individuals and groups could be moved to action in order to bring about or prepare for the end. Alternatively, focusing on fear, people might try to do something to prevent it, to attempt to suppress the anxiety or its causes. Political ideologies could be redrawn as a result; social structures remade. The apocalyptic could provide a language and framework for inspiring and conceptualising what was going on, which made it particularly potent and its popularity enduring.² Apocalyptic tradition in the period is often closely associated with significant years which might have inaugurated either the Last Times or a final heavenly kingdom on Earth: the 6,000th year of the world (= c. AD 500 or c. AD 800 by different calculations), or, more famously, the Apocalyptic Year 1000.³ Scholars have argued that such thought influenced key events in European history, such as the decision to restore empire

*I am grateful for the comments of the anonymous reviewers, as well as the thoughts of Justine Firnhaber-Baker, Richard Landes, Simon MacLean, Henry Mayr-Harting and Elina Screen. Errors and idiosyncrasies remain my own.

¹ This is the common thesis of J. Fried, *Aufstieg aus dem Untergang. Apokalyptisches Denken und die Entstehung der modernen Naturwissenschaft im Mittelalter* (Munich, 2001); idem, 'Endzeiterwartung um die Jahrtausendwende', *Deutsches Archiv*, xlv (1989), 381-473; and essays in R. Landes, A. Gow & D.C. van Meter, eds., *The Apocalyptic Year 1000: Religious Expectation and Social Change, 950-1050* (Oxford, 2003). See also n. 3 below.

² S. O'Leary, *Arguing the Apocalypse: A Theory of Millennial Rhetoric* (Oxford, 1994), 10.

³ J. Gil, 'Los terrores del año 6000', in *Actas del simposio para el estudio de los codices del 'Comentario al apocalypsis' de Beato de Liebana* (Madrid, 1978), 217-247; R. Landes, 'Lest the Millennium Be Fulfilled: Apocalyptic Expectations and the Pattern of Western Chronography, 100-800 CE', in W. Verbeke, D. Verhelst & A. Welkenhuysen, eds., *The Use and Abuse of Eschatology in the Middle Ages* (Leuven, 1988), 141-211; idem, 'Millenarismus absconditus: L'historiographie augustiniennne et l'An Mil,' *Le Moyen Age*, xcvi (1992), 355-77; idem, 'Sur les traces du Millennium: La via negativa', *Le Moyen Age*, xcix (1993), 5-26; W. Brandes, "'Tempora periculosa sunt": Eschatologisches im Vorfeld der Kaiserkrönung Karls des Großen', in R. Berndt, ed., *Das Frankfurter Konzil von 794: Kristallisationspunkt karolingischer Kultur* (Mainz, 1997), 49-79; A. Borst, *Die karolingische Kalenderreform* (Hanover, 1998), 729-739; J. Heil, "'Nos nescientes de hoc velle manere" – "We wish to remain ignorant about this". Timeless End, or: Approaches to Reconceptualising Eschatology After AD 800 (AM 6000)', *Traditio*, lv (2000), 73-103; J. Fried, 'Papst Leo III. besucht Karl den Großen in Paderborn oder Einhards Schweigen', *Historische Zeitschrift*, cclxxii (2001), 281-326.

through the coronation of Charlemagne on Christmas Day AD 800. Yet the idea that the date was really so powerful remains disputed, even between scholars who agree that apocalyptic tradition defined more widely was significant in Latin and Byzantine history.⁴ I wish to open up new fronts in this debate by re-examining the apocalyptic mood and developments in chronology in the years around AD 800 when, it has been claimed, the Carolingian kingdoms adopted new world chronologies and AD-dating, allegedly to avoid the issue of *annus mundi* (AM) 6000 through diversion and a ‘consensus of silence’.⁵ Such a claim raises two important issues: first, how the diverse intellectual networks of the Carolingian world could develop and maintain such a consensus;⁶ and second, whether the defining dynamic was between an ‘apocalyptic’ minority and ‘anti-apocalyptic’ majority or, as I shall argue, whether there was a more vigorous mainstream apocalypticism at work in which the date was at best of secondary interest.

My argument will proceed as follows. First, it will be necessary to sketch briefly some of the touchstones of debate about apocalypticism and chronological tradition in the early Carolingian world. These are debates which are not usually well integrated because the approaches used can be so different. Studies of the apocalyptic have either focussed closely on the development of theological ideas, often in the abstract, or else have drawn on quasi-sociological models to determine the logic of apocalyptic traces (or their absence) in a wide spread of sources. Scholars working on chronology, on the other hand, have either focussed on the narrative structural properties of histories, or have studied the development of the numerous (and mostly unpublished) handbooks relating to the science and theology of

⁴ B. McGinn, ‘The End of the World and the Beginning of Christendom’, in M. Bull, ed., *Apocalypse Theory and the Ends of Worlds* (Oxford, 1995), 58-89 especially 62-4; R.A. Markus, ‘Living Within Sight of the End’, in C. Humphrey & M. Ormrod, eds., *Time in the Medieval World* (York, 2001), 23-34, especially 28-30. See also n. 14.

⁵ Landes, ‘Lest the Millennium be Fulfilled’, 196-203; idem, ‘Sur les traces du Millennium’, 16.

⁶ R. McKitterick, *The Frankish Church and the Carolingian Reforms, 789-895* (London, 1977); eadem, ‘Unity and Diversity in the Carolingian Church’, in R. Swanson, ed., *Unity and Diversity in the Church*, Studies in Church History, 32 (Oxford, 1996), 59-83; Y. Hen, ‘Unity in Diversity: The Liturgy of Frankish Gaul before the Carolingians’, in Swanson, *Unity and Diversity*, 19-30.

computus (loosely, ‘time-reckoning’). It is the last block of scholarship which we most urgently need to factor into the relationship between apocalypticism and chronology, because it reveals that the Carolingian interest in adopting new AM and AD dating systems was founded upon technical issues to do with paschal calculations and not eschatological reflection. To show this more fully, the second section will outline how most traces of apocalyptic thought in the eighth and early ninth century tie into a relatively narrow cluster of reforming agendas, revealing its situational logic and context. Then, in the third section, I will come in detail to the argument that the variety of reckonings and technical ideas in computistical handbooks fail to support the idea that either apocalypticism or anti-apocalypticism drove changes in chronological tradition. Rather, what these handbooks reveal is the openness of debates about time, and the complex interactions of intellectual networks, as the Carolingian court and its satellites pursued a greater sense of order in the world.

The variety of apocalyptic tradition is crucial. Richard Landes’s arguments that there was a focus on the date, for example, prioritises a sense of ‘chronological’ or ‘predictive imminence’ in the Middle Ages.⁷ These dates could represent either the coming end of the world or, in a more millennial mood, a new reformed political order, following a literal understanding of the thousand-year reign of the saints in Rev. 20.4.⁸ Treating the date as prophetic was controversial because it violated the idea that God alone knew when Judgment would come (Matt. 24.36; Mark 17.32; Acts 1.7), which Augustine of Hippo had warned

⁷ See especially Landes, ‘Lest the Millennium’, *passim*.

⁸ R. Landes, ‘Roosters Crow, Owls Hoot: On the Dynamics of Apocalyptic Millennialism’, in G.S. McGhee & S. O’Leary, eds., *War in Heaven, Heaven on Earth: Theories of the Apocalyptic* (London, 2005), 19-46. A useful approach is also set out in G. W. Trompf, ‘Millenarism: History, Sociology, and Cross-Cultural Analysis’, *Journal of Religious History*, xxiv.1 (2000), 103-24.

against.⁹ In the process, Augustine promoted the idea that numbers and signs from the Bible were typologically meaningful and therefore could not provide literal clues which could be used to predict imminence in history, although this did not stop many influential writers such as Gregory the Great (d. AD 604) promoting action in anticipation of an End that was both imminent and unpredictable. Bernard McGinn labelled a position such as Gregory's 'psychological imminence'.¹⁰ Many adherents to this kind of apocalypticism, it should be noted, also rejected the idea of an earthly reign of the saints.¹¹ In practice, primary sources such as Bede's *Letter to Plegwin* plainly testify to both positions in various quantities and manifestations.¹² Nevertheless, Landes has considered the medieval opponents of 'chronological imminence' to be 'anti-apocalyptic' and suppressive rather than differently apocalyptic, while McGinn and others have argued that concerns about chronology were largely irrelevant.¹³ We might want to look towards the kind of model sketched by Paul Magdalino for the Byzantine East, with a range of non-chronological apocalyptic traditions made active by events and individual eschatologies, only some of which could make chronology relevant.¹⁴ This leads us to consider the ways in which apocalypticism could be situational and contingent.

Chronological traditions themselves were no less stable and closed to revision. In fact, here lies a key point in Landes' argument: that changes in calculating time were driven by

⁹ Augustine, *De civitate Dei*, XX.7, ed. B. Dombart & A. Kalb, CCSL xlviii (Turnhout, 1955), 710-11. P. Fredriksen, 'Apocalypse and Redemption in Early Christianity. From John of Patmos to Augustine of Hippo', *Vigiliae Christianae*, xxxiii.3 (1991), 151-83; McGinn, 'The End of the World', 61-2.

¹⁰ McGinn, 'The End of the World', 63.

¹¹ Again Augustine, *De civitate Dei*, XX.7, ed. Dombart & Kalb, 709; Bede, *De temporum ratione*, 67, ed. C.W. Jones, CCSL cxxiii B (Turnhout, 1977), 536-7.

¹² Bede, *Epistola ad Pleguinam*, ed. C. W. Jones, CCSL, cxxiii C (Turnhout, 1980), especially ch. 15, 624-5.

¹³ I pass over here the less productive efforts to explain away all traces of apocalyptic thought in the period, notably S. Gouguenheim, *Les fausses terreurs de l'an mil* (Paris, 1999), especially for the eighth century 204-16.

¹⁴ P. Magdalino, 'The History of the Future and its Uses: Prophecy, Policy and Propaganda', in R. Beaton & C. Roueché, eds., *The Making of Byzantine History. Studies Dedicated to Donald M. Nicol* (Aldershot, 1993), 3-34; P. Magdalino, 'The Year 1000 in Byzantium', in P. Magdalino, ed., *Byzantium in the Year 1000* (Leiden, 2002), 233-270 with criticism of Landes's approach at 233-5. See also W. Brandes, 'Anastasios ó δίκωγος: Endzeiterwartung und Kaiserkritik', *Byzantinische Zeitschrift*, 90 (1997), 24-63.

anti-apocalyptic writers keen to avoid the Year 6000, preferably by projecting it further into the future.¹⁵ From the third century, the dominant line had been that the Incarnation coincided with the 5,500th year of the world, but early in the fourth century the anti-millenarian writer Eusebius of Caesarea recalibrated biblical and profane histories so that the Incarnation fell in AM 5199 or 5200 instead, three hundred years further into the future. Although it made little impact in the East, this became the default reckoning in the West through Jerome's translation and subsequent extensions, as well as the prologue to Victorius of Aquitaine's widely-used Easter tables.¹⁶ Then in Britain, as AD 800 approached at some distance, a new reckoning was produced and promoted by Bede (d. AD 735) which fixed the Incarnation in AM 3952 in the course of his work on Dionysiac Easter tables, as the use of AD-dating spread alongside in histories and charters.¹⁷ This new AM-reckoning was then widely but not exclusively adopted in Frankish circles from AD 807, after AM 6000 had passed without incident. But does this count as a telling pattern? Chronographers such as Eusebius and Bede had good technical reasons to criticise previous authorities without needing or invoking an anti-apocalyptic agenda (Bede, for example, was addressing differences in the length of generations in the Vulgate Bible compared to the Septuagint).¹⁸ Recent work by Alden Mosshammer and Peter Verbist has illuminated just how complicated such enterprises could be, as medieval chronographers calibrated not only historical information but also the luni-

¹⁵ See Landes, 'Lest the Millennium', *passim*.

¹⁶ Jerome, *Chronica*, ed. R. Helm, *Eusebius Werke 7: Die Chronik des Hieronymus*, Die Griechischen Christlichen Schriftsteller der ersten drei Jahrhunderte, xlvii (Leipzig, 1956); A. Mosshammer, *The Chronicle of Eusebius and the Greek Chronographic Tradition* (London, 1979).

¹⁷ Bede is traditionally credited with the development of this chronology because it underpins his *De temporibus*, 16-22 ed. C.W. Jones, CCSL, cxxiii C, 600-611; *Epistola ad Pleguinum*, especially 3-5, 617-19, and *De temporum ratione*, 66, 463-535. See now D. Mc Carthy, 'Bede's Primary Source for the Vulgate Chronology in his *Chronicles* in *De temporibus* and *De temporum ratione*', in D. Ó Crónín & I. Warntjes, eds., *Computus and its Cultural Context in the Latin West, AD 300-1200* (Turnhout, 2010), 159-89, where it is shown that Bede and Irish annalists must have had access to a common, earlier source. In support of this, note the reckonings association with the Irish in *Laterculus Malalianus*, 4, ed. and trans. J. Stevenson (Cambridge, 1995), 124 and the commentary on 178. That Eusebius's chronology was challenged is less surprising if we remember that Augustine had already highlighted concerns: *De civitate Dei*, XV.13, ed. Dombart & Kalb, 471.

¹⁸ See F. Wallis, *Bede's The Reckoning of Time* (2nd edn, Liverpool, 2004), 353-66.

solar cycles which underpinned Easter tables.¹⁹ Scholars rarely adopted new calculations of time for their aesthetic values alone.²⁰ Why new reckonings became popular may be a different matter, but the logic of the individual changes seem to undermine the superficial appearance of the longer so-called ‘pattern’.

Medieval computus is crucial to understanding the build up to AD 800 in this context. The technicalities of computus, balancing scientific luni-solar cycles against theological traditions, mean that it can appear to be rather quirky or peripheral to mainstream historical concerns. But in fact, as Arno Borst and Rosamond McKitterick have recognised, it is in computus and its treatises that we find the conceptualisation and organisation of time itself which then fed into co-ordinated liturgical practice and a common linear historical framework across Europe.²¹ The eighth century was a critical period: following on from the famous Easter disputes in Britain where three different reckonings were in use, there were prolonged debates in the Frankish world too, as the quasi-official tables of Victorius of Aquitaine were only slowly dropped in favour of those following the Alexandrian principles of Dionysius Exiguus, who first used AD-dating.²² The Frankish resource base for change was varied and at times idiosyncratic, drawing influence from a number of sources.²³ Within this, however,

¹⁹ A. Mosshammer, *The Easter Computus and the Origins of the Christian Era* (Oxford, 2008); P. Verbist, *Duelling with the Past: Medieval Authors and the Problem of the Christian Era, c. 990-1135*, Studies in the Early Middle Ages xxi (Turnhout, 2010). See also P. Nothhaft, *Dating the Passion: The Life of Jesus and the Emergence of Scientific Chronology 200-1600* (Leiden, 2011).

²⁰ Dionysius Exiguus, *Libellus de cyclo magno paschae*, ed. B. Krusch in *Studien zur christlich-mittelalterlichen Chronologie [II]: Die Entstehung unserer heutigen Zeitrechnung*, Abhandlungen der Preußischen Akademie der Wissenschaften, Jahrgang 1937, Phil.-hist. Klasse, viii (Berlin, 1938), 64, provides one notable but telling exception. Dionysius argues for AD-dating over dates calculated from the reign of Emperor Diocletian because it was better to commemorate Christ than a persecutor.

²¹ Arno Borst pursued this idea across a number of publications: *Computus: Zeit und Zahl in der Geschichte Europas* (4th edn, Berlin, 2004), especially 7-9; *Die karolingische Kalendarreform; Schriften zur Komputistik im Frankenreich von 721 bis 818*, MGH Schriften zur Geistesgeschichte des Mittelalters xxi (3 vols, Hannover, 2006). R. McKitterick, *History and Memory in the Carolingian World* (Cambridge, 2004), 95-7; eadem, *Charlemagne: The Formation of a European Identity* (Cambridge, 2008), 321-6.

²² B. Krusch, ‘Die Einführung des griechen Pachalritus im Abendlande’, *Neues Archiv der Gesellschaft für ältere deutsche Geschichtskunde*, ix (1884), 99-169; Wallis, *Bede’s The Reckoning of Time*, xxxivlxiii; G. Declercq, *Anno Domini: The Origins of the Christian Era* (Turnhout, 2000).

²³ McKitterick, *History and Memory*, 92-5; Borst, *Schriften zur Komputistik*, I, 75-8. Also fundamental now is Warntjes, *The Munich Computus: Text and Translation. Irish Computistics between Isidore of Seville and Bede and its Reception in Carolingian Times* (Stuttgart, 2010), especially xxxviii-xli and clix-cci. Note that these

Borst believed he could detect Charlemagne's hand in two reforms of computus, starting with the teaching of the discipline and creation of a new calendar in AD 789, and then in AD 809 with the creation of a monumental seven-book *Libri computi* designed to resolve the 'confusion' (*Wirwarr*) in Frankish schools.²⁴ The idea that Charlemagne, first as king and then as emperor, would have attempted to control time centrally is alluring because it plays to certain ideas about modernity of time and power.²⁵ But, alas, there is little direct evidence to suggest that the court was behind the calendar or the *Libri computi*.²⁶ Those books did, however, play an important role in popularising the more recent downward revision of the world's age, so they have been interpreted as an effort to reconcile chronological tradition following the lack of any apocalyptically significant events in AM 6000.²⁷ This too stretches what can be said about the encyclopaedias, as we shall see below – not least because their arguments relied on Easter cycles rather than the theology of the date.²⁸ To continue, however, we must step back to survey the nature of apocalyptic thought in the period.

First, let us not deny that there was an apocalyptic mood in the Carolingian world and that chronology could play a part. Since the seventh century, many chroniclers in or around the Frankish kingdoms had not only counted the years from Creation to their own times, but had also noted how many years remained of the sixth millennium following the tradition set down

works now show Bede's computistical works to have been only one part in a complex series of debates which predate Bede's significant works, *contra* D. Whitelock, *After Bede*, Jarrow Lecture (1960), 41-2 and Declercq, *Anno Domini*, 175-80.

²⁴ Borst, *Schriften*, III, 1054.

²⁵ For a good critique of projecting modernity in studies of time see W. Gallois, *Time, Religion and History* (Harlow, 2007), chs. 2-3.

²⁶ B. Eastwood, review of Borst, *The Ordering of Time: From the Ancient Computus to the Modern Computer*, trans. A. Winnard (Chicago, 1993), in *Speculum*, lxxi.3 (1996), 692-3; W. Stevens, review of Borst, *Die karolingische Kalenderreform*, in *Speculum*, lxxviii.1 (2003), 144-7.

²⁷ Heil, 'Timeless End', 76; Fried, 'Papst Leo III.', 325 (with reference only to the 807 chronicle adapted for the *Libri computi*).

²⁸ For example *Libri computi*, I.7C-E, ed. Borst, *Schriften*, III, 1122-3.

in the *Chronological Canons* of Eusebius-Jerome. Examples include numerous copyists of Isidore of Seville's *Chronica maiora*, Asturian monk Beatus of Liébana, both the first copyist and first 'continuator' of the Fredegar chronicle, and an anonymous Cologne writer of AD 798.²⁹ None of these explicitly cite apocalyptic interests, but they do attest to a heightened awareness of what one Irish computist – in a text preserved in Regensburg in c. AD 817 – described as 'the space which extends from the beginning *up to the end*'.³⁰ Whether such thinking supplied the dominant framework for reflection is often unclear. In AD 786, for example, many signs were reported in the sky and people were afraid.³¹ But whether this fear was because of the proximity of AM 6000, as Gil, Landes and Brandes have suggested, is uncertain.³² Signs, prodigies and the weather were meaningful at any time, and in this case likely so because of a major revolt against Charlemagne in Thuringia.³³ One might note that it is in some ways more remarkable that there are very few signs reported anywhere between AD 786 and AD 800, which brings attention back to AD 786 as an important year in itself rather than as a signpost for what was to come.

Perhaps the most potentially significant event is also one of the hardest to relate clearly to apocalyptic concerns: the imperial coronation of Charlemagne on Christmas Day AD 800, the first day of the year in the Julian calendar and the first day of the seventh

²⁹ These examples are all discussed in Landes, 'Lest the Millennium be Fulfilled', especially 168-71 and 191-6. One can also add the Victorian prologue of AD 699, which indicates a table which extends to AD 799/ AM 6000: I. Warntjes, 'The Introduction of the Dionysiac Era, the Use of the Easter Table of Victorius of Aquitaine, and Apocalypticism in Ireland at the Turn from the Seventh to the Eighth Century: The Evidence of a Newly Discovered Victorian Prologue of AD 699 in an Unknown Sirmund Manuscript (Bremen, Staats- und Universitätsbibliothek, msc 0046)', *Peritia*, 21 (forthcoming 2011).

³⁰ *The Munich Computus*, 1, ed. Warntjes, 2-3: 'Tempus est spatium tendens de principio usque in finem'.

³¹ *Fragmentum annalium Chesnii*, s.a. 786, ed. G. Pertz, MGH SS, ii (Hanover, 1829), 33.

³² Gil, 'Los terrores', 238; Landes, 'Lest the Millennium be Fulfilled', 191-2; Brandes, 'Tempora periculosa sunt', 72.

³³ J.L. Nelson, *Opposition to Charlemagne*, German Historical Institute Lecture (London, 2008). The Thuringian revolt is passed over in *Annales regni Francorum*, but is recorded with different colourings in *Annales sancti Amandi (continuatio altera)*, s.a. 786, ed. G.H. Pertz, MGH SS, i, (Hanover, 1826), 12; *Annales Laubacenes (continuatio altera)*, s.a. 787, ed. Pertz, MGH SS, i, 13; *Annales Laureshamenses*, s.a. 786, ed. E. Katz (St Paul, 1889), 32; *Annales sancti Emmerammi Ratisponensis maiores*, s.a. 786, ed. Pertz, MGH SS, i, 92. On influential weather in the period see M. McCormick, P.E. Dutton & P.A. Mayewski, 'Volcanoes and the Climate Forcing of Carolingian Europe, AD 750-950', *Speculum*, lxxxii.4 (2007), 865-95.

millennium by the Eusebian reckoning. As an avowed reader of Augustine, it seems unlikely that Charlemagne was signalling a new millennialist regime or making a stand against those who had thought something would happen in AM 6000.³⁴ There was, nevertheless, some level of eschatological thought behind the scenes. As Mary Alberi has shown, Charlemagne's proto-empire had already been defined as *castra Dei* ('camp of God'), to be defended against the enemies, defined typologically rather than literally as those from the 'End Times'.³⁵ Alcuin, Charlemagne's one-time advisor, urged his king anxiously in the 790s to protect the Christian world 'in these perilous times (II Tim. 3.1)' when Pope Leo III was in trouble in Rome, and Emperor Constantine V was deposed by his own mother.³⁶ But it was also this time, as Mayr-Harting has emphasised, that Charlemagne was consolidating his conquests of the Saxons and Avars, lending further political impetus to the coronation.³⁷ Here lay a number of historical coincidences which moved events forward. Charlemagne travelled to Rome to restore order after an appeal by Leo in AD 799. Once he had been crowned emperor, the justification then circulated that it was done because, with Irene in power in the East, there was no (male) emperor and therefore a power vacuum existed.³⁸ Einhard, his biographer, wrote that Charlemagne was surprised by the coronation, although a contemporary source from Cologne shows that a Byzantine embassy had already raised the idea in 798.³⁹ Quite quickly, in fact, it becomes plain that there were a number of extenuating

³⁴ Einhard, *Vita Karoli*, 24, ed. G. Waitz, MGH SRG, 25 (Hanover, 1911), 29. J. Nelson, 'Why Are There So Many Different Accounts of Charlemagne's Imperial Coronation?', in her *Courts, Elites, and Gendered Power in the Early Middle Ages: Charlemagne and Others* (Aldershot, 2007), XII, 19. Problem of proof raised in Gouguenheim, *Les fausses terreurs*, 205-6.

³⁵ M. Alberi, "'Like the Army of God's Camp": Political Theology and Apocalyptic Warfare at Charlemagne's Court', *Viator*, xli. 2 (2010), 1-20, especially 3-5.

³⁶ Alcuin, *Epistolae*, 174, ed. E. Dümmler, MGH Epp. iv (Berlin, 1895), 288-9; M. Alberi, 'The evolution of Alcuin's concept of the *Imperium christianum*', in J. Hill & M. Swan, eds., *The community, the family, and the saint: patterns of power in early medieval Europe* (Turnhout, 1998), 3-17.

³⁷ Mayr-Harting, 'Charlemagne', especially 1128-9.

³⁸ Fried, 'Papst Leo III.', 311-315; Collins, 'Charlemagne's Coronation', 68; Nelson, 'Accounts', 10.

³⁹ Einhard, *Vita Karoli*, 28, ed. Waitz, 32-3. A review of opinion is given in R. Schieffer, 'Neues von der Kaiserkrönung Karls des Großen', Bayerische Akademie der Wissenschaften, Philos.-hist. Klasse, 2004, Heft 2 (Munich, 2004), especially 9-14 and Nelson, 'Accounts', 14-16.

circumstances and interpretations of Charlemagne's coronation and authority, and in none of them was anybody moved to make capital of the date.

The date may yet have had some resonance as Juan Gil and Richard Landes have stressed. But there is silence on the matter, both in the medieval sources and to a large extent in modern historiography.⁴⁰ Certainly, to judge by his library, Charlemagne's palace chaplain, Archbishop Hildebold of Cologne, knew exactly what the year AM was according to Eusebius-Jerome, and he could have advised Charlemagne on the matter.⁴¹ It may not have helped that a significant body of tradition in the eighth century calibrated AD and AM years differently, placing the Incarnation in AM 5199, so that many chronographers would have considered AM 6000 to have fallen in AD 799, well in advance of the coronation.⁴² Regardless: it seems surprising that, if the timing of coronation was deliberate relative to apocalyptic tradition, no one attempted to guide that interpretation of events.⁴³ At best, the eschatological significance of empires in general may have been an issue, given the situation in the East; but divorced from chronological concerns. The state of the Roman Empire had long been considered instrumental to the fate of the world and, since Jerome, it had been associated with the final worldly kingdom envisaged by Daniel.⁴⁴ Charlemagne certainly knew about this, and was the recipient of a short text book on the subject, just as his grandson

⁴⁰ In 1988 Landes pointed out this gap ('Lest the Millennium Be Fulfilled', 198) but subsequent literature has largely continued to ignore the subject: for example H. Mayr-Harting, 'Charlemagne, the Saxons, and the Imperial Coronation of 800', *EHR* cxi (1996), 1113-33; M. Becher, *Karl der Grosse* (2nd edn, Munich, 2007), 85; R. Collins, 'Charlemagne's Coronation and the Annals of Lorsch', in J. Story, ed., *Charlemagne: Empire and Society* (Manchester, 2005), 52-70; McKitterick, *Charlemagne*, especially 115-16. On the other hand, note Nelson, 'Accounts', 17-20.

⁴¹ See *infra*, ??

⁴² On the synchronisation see Warntjes, *The Munich Computus*, lxxiii-iv and n. 209. The court dating of the coronation to AD 801 is in *Annales regni Francorum*, s.a. 801, ed. F. Kurze, MGH SRG, vi (Hanover, 1895), 112. 5199 years from Creation to the Incarnation is widely asserted, notably in the preface to the *Annales Laureshamenses*, 27. 5200 years is more often implied, for example when AD 800 is equated to AM 6000 in *Annales Augienses brevissimi*, s.a. 800, ed. G.H. Pertz, MGH SS, iii (Hanover, 1839), 137, despite the text opening by asserting 5199 from Creation to Nativity (136). Another alternative was 5195 years, given by *Annales Guelerbytani*, pref., ed. Pertz, MGH SS, i, 23-46 at 22, so that Christ could be 33 on the traditional date of his Passion, AM 5228.

⁴³ Schieffer, 'Kaiserkrönung', 24.

⁴⁴ Jerome, *Commentariorum in Daniele*, II.vii.7, ed. F. Glorie, CCSL, lxxv A (Turnhout, 1964), 842-3.

Louis the German would be in the 840s.⁴⁵ Yet it was only later in the ninth century, and then more explicitly with Adso's *De antichristo* in ca. AD 950, that Frankish kingship was explicitly held up as a force to restrain the end of time by continuing Roman rule.⁴⁶ Frankish efforts to promote the legitimacy of the imperial coronation rested on the extent of Charlemagne's power, its importance to the Church, and in some cases the 'power vacuum' in the East. The absence of any 'apocalyptic' or even clear 'anti-apocalyptic' sentiments in these discourses are only striking if we have good grounds for expecting them; and in fact, as we shall see, evidence for apocalyptic hopes and fears are so plentiful in other contexts around the time that maybe there may be no conspiracy or consensus of silence concerning the date.⁴⁷ Even symbolic interpretations based on 'apocalyptic' hopes of imperial renewal barely register outside Alcuin's letters. Charlemagne's empire was not, in AD 800, apocalyptically meaningful to the many and varied observers who wrote about it.

The mood of the empire quickly darkened, as it was presented with a major series of problems. In AD 809, a series of meetings in Aachen exposed the anxieties of reformers twenty years after Charlemagne's *Admonitio generalis* (AD 789) had set out a vigorous approach to ecclesiastical renewal.⁴⁸ According to the *Annales regni Francorum*, 'the state of the churches was examined, and the way of life of those who were to serve God in them; but

⁴⁵ Archdeacon Peter, *Liber de diversis quaestiunculis cum responsionibus suis*, Q1, PL xcvi.1347. The commentary for Louis the German remains unedited from Karlsruhe, Landesbibliothek Aug. perg, 208, fo. 2r-73r, although the prefatory letter is ed. E. Dümmler, MGH Epp. V (Berlin, 1898), 467-9.

⁴⁶ P. Geary, 'German Tradition and Royal Ideology in the Ninth Century: The *Visio Karoli Magni*', in his *Living with the Dead in the Middle Ages* (Princeton, 1994), 49-76 (with edition of text, 74-6); B. McGinn, 'Eriugena Confronts the End: Reflections on Johannes Scottus's Place in Carolingian Eschatology', in J. McEvoy & M. Dunne, *History and Eschatology in John Scottus Eriugena and his Time* (Leuven, 2002), 3-29 at 4-13. Adso, *De ortu et tempore Antichristi*, ll. 112-20, ed. D. Verhulst, CCCM, xlv (Turnhout, 1976), 26. For a recontextualisation of Adso's famous letter see S. MacLean, 'Reform, Queenship and the End of the World in Tenth-Century France: Adso's "Letter on the Origin and Time of the Antichrist" Reconsidered', *Revue Belge de Philologie et d'Histoire*, lxxxvi (2008), 645-675

⁴⁷ It seems only fair to note that Prof Landes has argued to me on this point that it is precisely the presence of so much anxiety which necessitated the maintenance of silence regarding the date.

⁴⁸ On the reforming context see M. de Jong, 'Charlemagne's Church', in Story, ed., *Charlemagne*, 103-35, especially 115-16; McKitterick, *Charlemagne*, 307-8.

nothing was decided, so it seemed, on account of the magnitude of things'.⁴⁹ This was a bleak statement, symptomatic of a mood of introspection which pervaded the later capitularies issued by Charlemagne despite a long and successful reign.⁵⁰ There were, however, extenuating circumstances. In AD 805 widespread famine had unsettled the empire, leading the emperor to order three three-day fasts to prove the Franks' humility and penitence before God.⁵¹ The following year Charlemagne ordered that further famines should be met with suitable prayers for mercy and a moderate approach to food pricing – a combination of the spiritual and the practical which had already so marked his legislation.⁵² Real-world concerns had triggered renewed efforts to improve standards and liturgical observation. But still terrible things happened, with plague devastating Fulda in AD 807,⁵³ and a Frankish army defeated by a Transalpingian confederation in AD 808 (although the *Annales regni Francorum* in true revisionist mood reports instead a victory).⁵⁴ With this in the background, experts in AD 809 were called to discuss matters of apparent urgency: theologians to resolve the *filioque* debate (more liturgical 'reform'), and computists to agree upon the structures of time and how to reckon them.⁵⁵ A number of scholars have interpreted the computistical and chronological compositions associated with the AD 809 meetings as efforts to resolve anxieties triggered by the passing of the Eusebian year AM 6000.⁵⁶ As with interpretations of

⁴⁹ *Annales regni Francorum*, s.a. 809, 129: 'agitatum est etiam... de statu ecclesiarum et conversatione eorum, qui in eis Deo servire dicuntur, nec aliquid tamen definitum est propter rerum, ut videbatur, magnitudinem'.

⁵⁰ J. Nelson, 'The Voice of Charlemagne', in R. Gameson & H. Leyser, eds., *Belief and Culture in the Earlier Middle Ages: Studies Presented to Henry Mayr-Harting* (Oxford, 2001), 76-88.

⁵¹ *Karoli ad Ghaerbaldum episcopum epistola*, ed. A. Boretius, MGH Cap. i (Hanover, 1883), 245-6.

⁵² *Capitulare missorum in Theodonis villa datum secundum, generale*, 4, ed. A. Boretius, MGH Cap. i, 122-6 at 122. On the link between famine and reform in the period, see H. Mordek, 'Karls des Großen zweites Kapitular von Herstal und die Hungersnot der Jahre 778/779', *Deutsches Archiv für Erforschung des Mittelalters*, lxi (2005), 1-52.

⁵³ *Annales Laurissenses minores, Codex Fuldensis*, 39, ed. G.H. Pertz, MGH SS, i, 114-123 at 120.

⁵⁴ *Annales Laurissenses minores, Codex Fuldensis*, 40, 121. Compare the up-beat account in the *Annales regni Francorum*, s.a. 808, 125.

⁵⁵ On the 809 computistical meeting and its background see A. Borst, 'Alkuin und die Enzyklopädie von 809', in P. L. Butzer & D. Lohrmann, eds., *Science in Western and Eastern Civilization in Carolingian Times* (Basel, 1993), 53-78. On the *filioque* debate, McKitterick, *Charlemagne*, 314-15.

⁵⁶ Landes, 'Lest the Millennium be Fulfilled', 180; Borst, *Die karolingische Kalenderreform, 729-739*; Heil, 'Timeless End', 76-7; Fried, 'Papst Leo III.', 325-6.

the coronation, these arguments rely on the vague proximity of the date, rather than any direct statements about purpose.

It is more clearly in church reform that one finds apocalyptic voices. Apocalyptic, after all, provides a call to action which is framed by an awareness of a limited time span brings with it a sense of urgency because it limits the time to react.⁵⁷ Such exhortation also generates a sense of personal responsibility. If the action is not completed in time it will be the fault of those who heard but who did not act in time; and with Judgement imminent, there will be little time to make amends. Cuthbert of Canterbury, in a letter to Lull of Mainz, talked of ‘perilous times’ caused by a neglect of ‘the decrees of the ancient fathers and the laws of the church’; and the same mood permeated the preface of Chrodegang of Metz’s *Vita canonicorum* as the bishop sought to motivate the emendation of the secular clergy before the always-imminent judgement came.⁵⁸ Pope Zacharias wrote to St Boniface of *seductores episcopi* and *pseudopresbiteri* in a letter of 751; but rather than harbingers of the end to be observed passively, these figures were portrayed as deviants who were to be actively challenged and excommunicated if they refused to conform to orthodoxy.⁵⁹ The pattern extends throughout the Bonifatian correspondence of the mid-eighth century, with a variety of labels employed to characterise the lax and the unreformed in emotive ways. Once, in a letter to the pope condemning the heretics Aldebert and Clemens, Boniface accuses his enemies of leading the people of the Franks and Gauls astray with the ‘fables of heretics and empty signs and prodigies of the precursors of Antichrist’.⁶⁰ It demonstrates the seriousness with which Boniface approached the issue of uncanonical behaviour, simultaneously acknowledging the threat of disunity while reinforcing the resolve of the Church to tackle

⁵⁷ O’Leary, *Arguing the Apocalypse*; F. Borchardt, *Doomsday Speculation as a Strategy of Persuasion* (Lewiston, 1990).

⁵⁸ Cuthbert of Canterbury, *Bonifatius-Briefe*, 111, ed. M. Tangl, MGH Epistolae Selectae, i (Munich, 1916), 238-43 at 241; Chrodegang of Metz, *Vita canonicorum*, pref., ed. J. Bertram, *The Chrodegang Rules* (Aldershot, 2005), 27-8.

⁵⁹ Pope Zacharias, *Bonifatius-Briefe*, 87, ed. Tangl, 195. See also 57, 66-7, 80 and 90.

⁶⁰ *Bonifatius-Briefe*, 59, ed. Tangl, 110: ‘hereticorum fabulas et vana prodigia et signa precursoris antikristi’.

such problems.⁶¹ Opening up discourse with apocalyptic frames of reference could be a potent weapon to promote action. There is silence about the date; but what would that have added?⁶²

A sense of general temporal anxiety did encroach upon reformist language under Charlemagne. In the king's grand statement, *Admonitio generalis*, in 789, it was argued that *pseudodoctores* will come (future tense) in the *tempora novissima*.⁶³ Again this is noted by modern scholars,⁶⁴ but the defining context is often missing: this motif is employed, not in the preface in which Charlemagne expounds his over-arching sense of Christian duty to correct the Church, but at the end in a clause on preaching, following a long exemplar of a good sermon.⁶⁵ The anxiety at the end does not dictate the entire tone of the reform but, as with the earlier reformist agendas of the century, only the compulsion to preach properly. Indeed it is possible to see at least one instance in which this very clause was adapted and amplified within narrow furrows. Alcuin, in the preface to his reworking of Jonas of Susa's *Vita Vedasti*, amplified future *tempora novissima*, talking instead of present *tempora periculosa*, in order to urge his readers to take care in their learning because of *pseudodoctores* introducing 'novel doctrines' (*nova secta*).⁶⁶ It is clear that this is not a statement of anxiety generated by the date, but an allusion to the Adoptionist debate – itself a rather fiery controversy – in the course of which he was similarly critical of *nova secta* being

⁶¹ N. Zeddies, 'Bonifatius und zwei nützliche Rebellen: die Häretiker Aldebert und Clemens', in *Ordnung und Aufruhr im Mittelalter: Historische und juristische Studien zur Rebellion*, ed. by Marie T. Fögen (Frankfurt, 1995), 217-63.

⁶² Again here and for the following paragraph I note Prof Landes' objection that these reformist anxieties grew because of the date. I do not detect sufficient change in discussions and records of correction across the period to support this view.

⁶³ *Admonitio generalis*, 82, ed. Boretius, MGH Cap. i, 62.

⁶⁴ Landes, 'Lest the Millennium Be Fulfilled', 192; Brandes, 'Tempora periculosa', 65-6.

⁶⁵ On Charlemagne's sense of Christian duty see McKitterick, *Charlemagne*, ch. 5 and, in the context of the present debate, Gouguenheim, *Les fausses terreurs*, 209.

⁶⁶ Alcuin, *Vita Vedasti*, 3, PL ci.666.

introduced contrary to orthodox apostolic faith.⁶⁷ Of course heresies are themselves apocalyptically meaningful, as those involved in both sides of the debate kept pointing out. But in the typological exegesis developed by Tyconius and popularised by Augustine's *De civitate Dei*, any given instance of heresy represented the symbolic totality of the problem, not part of a concrete historical End Times scenario and countdown.⁶⁸ Alcuin's correspondence from the same period contains similar motifs, as Wolfram Brandes has emphasised;⁶⁹ but it is also only one aspect of his rhetorical flourishes and one which is generally limited to Frankish failure to convert the conquered Saxons and Avars, and the sinfulness amongst the Anglo-Saxons which must have brought about the viking sack of Lindisfarne in AD 793 and the murder of kings in AD 796.⁷⁰ To read isolated phrases in these letters as straightforward proofs that Alcuin thought the end was coming, and maybe even that his view was influential, is to prioritise a narrow reading of texts which contain many changes of tone and mood, as Alcuin moved from lamenting the instability of his 'perilous times' to arranging happily to meet friends at court the following Spring.⁷¹ Apocalyptic rhetoric had varied uses but a distinct logic.

There remains one instance in which apocalyptic rhetoric was employed in a reforming context which has hitherto been missed, and it relates back to the meetings of AD 809. The primary purpose of a council held in Aachen that November was to draw up a

⁶⁷ Alcuin, *Contra Felicem Urgellitanum epistocum*, VI.1, PL ci:199; Brandes, 'Tempora periculosa', 68. On the Adoptionist debate see J. C. Cavadini, *The Last Christology of the West: Adoptionism in Spain and Gaul, 785-820* (Philadelphia, 1993).

⁶⁸ See Bede, *In Apocalypsin*, pref., ed. R. Gryson, CCL, 121 A (Turnhout, 2001), 223-5, and on Rev 20, 3-4 compare 35, 503-5 and Ambrosius Autpertus, *Expositionis in Apocalypsim*, IX, ed. R. Weber, CCCM, 27 A (Turnhout, 1975), 741-2. On the development of this kind of exegesis on Apocalypse, see Fredriksen, 'Apocalypse and Redemption', and E.A. Matter, 'The Apocalypse in Early Medieval Exegesis', in R. Emmerson & B. McGinn, eds., *The Apocalypse in the Middle Ages* (Cornell, 1992), 38-50.

⁶⁹ Brandes, 'Tempora periculosa sunt', 66-71. See also Fried, 'Papst Leo III.', 299 and 303-4.

⁷⁰ On Alcuin's change of mood after 796 see M. Garrison, 'The Bible and Alcuin's Interpretation of Current Events', *Peritia*, 16 (2002), 68-84 and Gouguenheim, *Les fausses terreurs*, 211-13. A more political interpretation is offered by Mayr-Harting, 'Charlemagne', 1128.

⁷¹ For example Alcuin, *Epistolae*, 184 and 193, ed. Dümmler, 308-10 and 319-21. Note that Alcuin, although a respected teacher, did on some issues fail to see eye-to-eye with Charlemagne: Alcuin, *Epistolae*, 136 (on Charlemagne's heavy-handed tactics in Saxony) and 247 (on a dispute over an escaped convict), ed. Dümmler, 205-10 and 399-401.

defence of the use of the *filioque* in the creed on the grounds that it reflected the orthodox double-procession of the Holy Trinity even if it was not in the wording set out at Chalcedon in AD 451.⁷² Arno of Salzburg, Smaragdus of St-Mihiel, Theodulf of Orléans, Heito of Basel and Adalwin of Regensburg each presented dossiers on the subject, and after the council Bishop Bernharius of Worms, Abbot Adalhard of Corbie, and Bishop Jesse of Amiens were sent to discuss the issue with Pope Leo III.⁷³ An account of the debate which followed has survived and within the text we find the employment of apocalyptic rhetoric as a mode for discussing the imperative of reform.⁷⁴ At one point, for example, the *missi* argued that the end of the world approached, and that this gave a sense of urgency to promoting liturgical unity.⁷⁵ As Harald Willjung, the text's most recent editor, pointed out, this is the high point of some amplified rhetoric which had sought to place the papacy and the Franks as the defenders of Church orthodoxy.⁷⁶ The dialogue as a whole is by its very nature a literary construct rather than a strict account of moods at the time, using its structural device to defend its argumentative stance. Moreover, the apocalyptic element is clearly used to heighten the imperative to action. It proposes that striving (variously: *laborare, studere, valere-prodesse*) to restore (*reddere*) is essential preparation when facing Judgement. Only a Church united through its rituals and understanding of sacrament and scripture is truly prepared, and the Carolingian Empire under Charlemagne was defined by the deep rhythms of its liturgical practice. Perhaps with the Adoptionist controversy rumbling on, Christological debates continued to unsettle theologians attached to the Carolingian court because they threatened

⁷² McKitterick, *Charlemagne*, 314-15.

⁷³ *Annales regni Francorum*, s.a. 809, 129; *Ratio Romana*, pref., ed. H. Willjung, MGH Conc., Suppl. ii.2 (Hanover, 1998), 287, relates that Bishop Jesse of Amiens accompanied them.

⁷⁴ There was little reference to apocalyptic thought in the dossiers, although Theodulf and Adalwin both cited Rev. 22.1 - 'And he showed me a river of water of life, clear as crystal, proceeding from the throne of God and of the Lamb' - as a metaphor for the co-eternity and co-substantiation of the Father and the Son. This was later seized upon by Ado of Vienne who added the reference to a borrowing from the *Annales regni Francorum* to explain the decision of the synod (PL cxxiii.132-3). Smaragdus, Theodulf and Adalwin also used Thess 2.8 to show that Christ was God's mouth to defeat the wicked one ('ille iniquus').

⁷⁵ *Ratio Romana*, 12, ed. Willjung, 290.

⁷⁶ Willjung, 'Einleitung', 111.

unity. Whatever the precise trigger, it seems to be primarily in the context of reforming debates that we find expressions of apocalyptic anxiety used most commonly.

Chronology and computus were important fields within Carolingian efforts at ecclesiastical renewal. Charlemagne ordered computus be taught in schools in his *Admonitio generalis* of AD 789, and a ‘computus’ was considered part of the essential kit of a priest in the Carolingian world.⁷⁷ It was essential to any sense of liturgical unity. At the same time, the use of historical writing in political discourse became crucial to the way the Frankish court and other centres operated.⁷⁸ If Arno Borst’s work, and his *Schriften zur Komputistik* (2006) in particular, demonstrates anything, it is that the popularisation of AD dating was a response to changes in the use of Easter tables in the Frankish kingdoms in the first half of the eighth century, supported by a diverse range of texts and compilations. The use of Dionysiac tables, which used AD-dates as a primary organising category, grew rapidly in the 730s and 740s at the expense of the confusing tables of Victorius of Aquitaine organised by consulships and *anni passionis*.⁷⁹ Crucially to my argument, the changeover was motivated by technical considerations such as a preference for Dionysius’s lunar limits for Easter, not because AD-dating was apocalyptically neutral.⁸⁰ The use of Easter tables was also regulated by canon

⁷⁷ *Admonitio generalis*, 72, ed. Boretius, 60. There are some traces of computi composed in 789 other than the Lorsch calendar, for example Basel, Universitätsbibliothek, F III 15k, fo. 36r-49r and Paris, Bibliothèque Nationale, nouv. acqu. Lat. 1615, fo. 146v. For decrees on priests’ books see the decrees of Waltcaud of Liège, 11 and 13, ed. P. Brommer, MGH Capitula episcoporum, I (Hanover, 1984), 47 and Riculf of Mainz, 7, ed. R. Pokorny, MGH Capitula episcoporum, III (Hanover, 1995), 180.

⁷⁸ McKitterick, *History and Memory*, chs. 4-6; McKitterick, *Charlemagne*, ch. 1; M. Innes & Y. Hen, eds., *The Uses of the Past in the Early Middle Ages* (Cambridge, 2000); A. Scharer & G. Scheibelreiter, eds., *Historiographie im frühen Mittelalter* (Vienna & Munich, 1994).

⁷⁹ On the early development of Dionysiac computi see now I. Warntjes, ‘The *argumenta* of Dionysius Exiguus and their Early Recensions’, in Ó Cróinín & Warntjes, *Computus and its Cultural Context*, 40-111, especially 63-71; and my forthcoming ‘Computus after the Paschal Controversy of 740’, in Warntjes, ed., *The Proceedings of the Second International on the Science of Computus*.

⁸⁰ C.W. Jones, ‘The Victorian and Dionysiac Paschal Tables in the West’, *Speculum*, ix (1934), 408-421.

law, and the use of different tables in Europe led to more than one accusation of heresy.⁸¹ Change therefore had to be managed carefully and argued and debated at length. The approach of AM 6000 is too simplistic reason to account for the vast technical literature Easter debates generated, not least because the labelling of years was one of the least important aspects of it.

The sense in which chronological systems could be used ‘programmatically’ clearly needs to be examined further in this technical context. Although there was rapid agreement about what kinds of Easter table to use, there remained little by way of canonical writings to support and explain such documents and the art of reckoning time. Bede’s *De temporum ratione* had begun to take on such a role, although always alongside, and rarely at the expense of, other texts and treatises on the subject. Matters came to some kind of head in those meetings at Aachen in AD 809. A number of manuscripts preserve what can at best be described as an inquest into computistical knowledge.⁸² Unlike usual computistical dialogues, it is striking because there are a number of points on which ignorance is admitted. Early on the assembled *computistes* agreed that the year AD was indeed 809; but on the age of the world they were more hesitant, stating that there were a number of different authorities but that they wished to observe the reckoning of the ‘Hebrew Truth’ – namely the chronology derived from the Vulgate, and thus the Iro-Bedan chronology based upon it.⁸³ This again seems to state a genuine state of affairs – there were now indeed many authorities – rather than an aversion to Eusebian chronology per se. A précis of Bede’s *Chronica maior*, updated

⁸¹ *Concilium Arelatense* (314), ed. C. Munier, CCSL, 148 (Turnhout, 1963), 4-22 at 5 and 9; *Concilium Antioecenum*, 1, PL lxvii.59 (Greek) and 60 (Latin); *Concilium Aureliense* (541), 1, ed. C. de Clercq, CCSL 148 A (Turnhout, 1963), 132. Accusations of heresy: Columbanus, *Letters*, 1 and 2, ed. and trans. G.S.M. Walker, *Scriptores Latini Hiberniae*, ii (Dublin, 1957), 2-23; Bede, *Historia ecclesiastica gentis Anglorum*, especially II.19 and III.25, ed. C. Plummer (Oxford, 1896), 122-4 and 181-9; Aldhelm, *Epistolae*, 4, ed. P. Ehwald, MGH AA, xv (Berlin, 1919), 480-6.

⁸² *Capitula*, ed. Borst, *Schriften*, III, 1040-53. See C.W.Jones, ‘An Early Medieval Licencing Examination’, *History of Education Quarterly*, iii. 1 (1963), 19-29 and K. Springsfeld, *Alkuins Einfluß auf die Komputistik zur Zeit Karls des Großen* (Stuttgart, 2003), 105-19.

⁸³ Borst, *Die karolingische Kalenderreform*, 734.

two years earlier and now extended to AD 809 too, seems to have been linked somehow to this decision and went on to be widely copied.⁸⁴ Another related enterprise was the composition of a major new collection of computistical formulas which used both the ‘Hebrew’ year AM 4761 (labelled *nostrates* in contrast to the Hieronymian and Greek reckonings) and AD 809 as its *annus praesens* in examples for calculating leap years and so on.⁸⁵ These formulas formed book II of the seven-book *Libri computi*, and Borst argued that the compilation as a whole was commissioned by Charlemagne ‘to end the confusion of computistical writings forever’.⁸⁶ Certainly the complete versions of a seven-book encyclopaedia are impressive, even if the earliest (and incomplete) extant copy, now in Madrid, can only be dated to ca. AD 820.⁸⁷ The formulas were also widely copied. Nevertheless, there is no evidence whatsoever that Charlemagne was involved in any way; the manuscript evidence shows that the text had little authoritative integrity and became quickly fragmented, and the AD 809 compositions in general merely added to a proliferation of computistical outputs. With no emerging standardisation and no evidence for imperial authority, Borst’s impression of centralised authority in the computus, projecting Carolingian power over time, is far from apparent. Instead, the evidence offers valuable insights into intellectual networks, with implications for Landes’s ‘consensus of silence’ concerning the passing of AM 6000.

Rather than content ourselves with pointing out potential weaknesses in Borst’s theory, we are better following Paul Meyvaert’s lead in exploring the networks hinted at by

⁸⁴ *Series annorum mundi nova*, ed. Borst, *Schriften*, II, 971-1008. The title is Borst’s formulation, not a medieval one. It is more commonly found entitled *Adbreuatio chronica* in manuscripts. On the chronicle see I. Garipzanov, ‘The Carolingian Abbreviation of Bede’s World Chronicle and Carolingian Imperial Genealogy’, *Hortus Artium Medievalium* xi (2005), 291-8.

⁸⁵ *Libri computi*, I.7, ed. Borst, *Schriften*, III, 1122-3.

⁸⁶ Borst, *Schriften*, III, 1054: ‘damit sie dem Wirrwarr komputistischer Schriften ein für allemal ein Ende machten’.

⁸⁷ The key manuscript is Madrid, Biblioteca Nacional, lat. 3307 (Murbach, c. 820). See Borst, *Schriften*, I, 248-9 and the literature cited there.

Borst's voluminous critical apparatus to understand their wider implications.⁸⁸ One possible alternative starting point for such an analysis is presented by Paris, Bibliothèque Nationale, nouv. acq. lat. 1615, written in Auxerre between AD 820 and AD 830. This computistical compilation has attracted a range of scholars because it contains unique astronomical diagrams, annals and calendar, and is a good witness to the treatises of Bede.⁸⁹ Less well known is that it is the only Carolingian manuscript to contain the text of the Aachen investigation (ff. 143r-144r), the AD 809 formulas (f. 148v and ff. 151v-152r)⁹⁰, and the précis of Bede together (ff. 171r-172v) – all notably jumbled together with other material. Given the numerous witnesses to the three texts individually, the unique nature of this manuscript suggests that the AD 809 materials were not consistently available as a bundle. Moreover, even if the scribe had access to a full copy of *Libri computi*, it shows that the near-immediate impulse of scholars was to extract and diversify information. The AD 809 computistical materials in the Paris manuscript are preceded and followed by extracts from different sets of formulas, the latter part containing an important list of eclipses from AD 812 (f. 151v) and the formulas with the *anni praesentes* AD 820 and AD 830 which has provided the date for the manuscript (ff. 154r-v).⁹¹ While coming from different sources, these texts were not contradictory and, as in many other compilations, they all represented unity in so far as they contributed to an understanding of the Dionysiac system. This is always doubly the case when found alongside Bede's work, as it is here (ff. 19r-126v), as the Northumbrian's treatises offered the most robust defence of Dionysius's tables against the older tables of Victorius of Aquitaine.

⁸⁸ P. Meyvaert, 'Discovering the Calendar (*annalis libellus*) Attached to Bede's Own Copy of *De temporum ratione*', *Analecta Bollandiana*, cxx (2002), 5-64.

⁸⁹ W. Stevens, 'Astronomy in Carolingian Schools', in P.L. Butzer, M. Kerner & W. Oberschlep, eds., *Karl der Große und seine Nachwirken. 1200 Jahre Kultur und Wissenschaft in Europa* (Turnhout, 1997), 417-488 at 449; J. Story, 'The Frankish Annals of Lindisfarne and Kent', *Anglo-Saxon England*, xxxiv (2005), 59-110 at 71-2; Borst, *Schriften*, I, 282-3.

⁹⁰ *Libri computi*, II.1-6 and 14-20, ed. Borst, *Schriften*, II, 1145-50 and 1162-71.

⁹¹ On these argumenta see Warntjes, 'The *argumenta*', 68-9.

The presence of the AD 812 list of eclipses in the Paris manuscript leads us to confront further complications with Borst's version of events. The list appears in the Madrid copy of *Libri computi* (f. 68v) and all its full descendants, and is taken to suggest that the encyclopaedia was not completed until AD 812 after three years of drafting.⁹² The complication lies in the fact that the list was only copied into a space in the Madrid manuscript in a later Prüm hand of the 840s, similar to one of the hands responsible for the *Annales Prumienses*.⁹³ The earliest witness to the list in fact dates from AD 812 itself, judging from the unusual starting date of its Easter table, and comes from a compilation from Monte Cassino.⁹⁴ It is likely that such a list had circulated at Charlemagne's court already, as the emperor asked Dungal of St Denis to comment upon its prediction that there would be two eclipses in AD 810.⁹⁵ (Dungal, incidentally, pointed out correctly that this was scientifically plausible, and Einhard noted obliquely but with disappointment that Charlemagne was convinced by this analysis, showing that rationality could indeed quell anxiety caused by signs in the natural world).⁹⁶ It was, however, only in the Monte Cassino manuscript that any of the AD 809 formulas and the AD 812 list demonstrably came together. These texts would also come together in other ways in Auxerre, as we have seen, while similar material was also copied into another Prüm manuscript before the list of eclipses would be copied into the *Libri computi*.⁹⁷ Each could represent imperfect witnesses to a lost *Urtext* of the encyclopaedia, as Borst thought, or they could be traces of networks as different

⁹² *Libri computi*, V.10, ed. Borst, *Schriften*, III, 1277-9. On the 'drafts' of 809 see Borst, *Schriften*, III, 1057.

⁹³ L. Boschen, *Die Annales Prumienses. Ihre nähere und ihre weitere Verwandtschaft* (Düsseldorf, 1972), 21-2. Boschen argued that because the list was in the same place in other copies it cannot have been original; but this would still be the earliest copy, so there is nothing to suggest that the other copies did not follow any additions from Prüm.

⁹⁴ Rome, Biblioteca Casanatense, 641 (Monte Cassino, 812). See Borst, *Schriften*, I, 283-4.

⁹⁵ B. Eastwood, 'The Astronomy of Macrobius in Carolingian Europe: Dungal's Letter of 811 to Charles the Great', *Early Medieval Europe*, iii.2 (1994), 117-134. The list must have been calculated rather than observed because it is unlikely either eclipse of 810 could have been observed north of the Alps.

⁹⁶ Einhard, *Vita Karoli*, 33, ed. Waitz, 36. P.E. Dutton, *Charlemagne's Mustache and other Cultural Clusters of a Dark Age* (London, 2004), ch. 4.

⁹⁷ The Prüm manuscript is now Berlin, Staatsbibliothek, Phillipps 1869 (Prüm, c. 840), with the eclipses on fo. 3r, 4r, 7v, 8v (ed. Borst in *Die karolingische Kalenderreform*, 265, 268-9, 284, 288). See Borst, *Schriften*, I, 216. This is the same manuscript which contains Borst's 'reform calendar' of 789.

centres passing materials between each other; and without evidence for the authority of the centre, there would be stronger grounds for supporting the second hypothesis. Authority was generated by good education in schools, rarely by the circulation of new texts, so it is important to study how centres such as Auxerre, Prüm and Monte Cassino related and responded to each other, as well as how they might have interacted with the ‘centre’.

There is a more substantial problem which Borst underplayed: the material incorporated into *Libri computi* clearly represents only one cluster of responses to the AD 809 meetings. A similar three-book encyclopaedia with an *annus praesens* of AD 818 is well known from Salzburg, but it is worth noting that Eastwood has argued that this itself might represent AD 809 original ‘updated’, because its astronomical diagrams are simpler than those in Borst’s preferred text.⁹⁸ There were also others which had greater independence from the AD 809 material. In Trier in AD 810, for example, the initial response seems to have been simply to copy the expanded Irish recension of Dionysius Exiguus’s formulas, adding a new statement on the age of the world in different traditions – either the post-millennial AM 6009 according to Eusebius, Jerome and Orosius, or AM 4742 according to the ‘Hebrew Truth’.⁹⁹ Borst has suggested that such texts represent conservative ‘protests’ against the reforms of the centre, pointing also in this context to the copying of old Irish *computi* and a letter recycling dated material in Regensburg.¹⁰⁰ The extent to which these examples can be considered to represent ‘protests’, however, rests on strong assumptions about differences between centre and periphery which, without evidence about the centre, is difficult to sustain. Out-dated material continued to be copied alongside orthodox material in all centres, and at

⁹⁸ B. Eastwood, ‘The Astronomies of Pliny, Martianus Capella and Isidore of Seville in the Carolingian World’, in Butzer & Lohrmann, *Science*, 161-180 at 165-6, against Borst, ‘Alkuin’, 73-4.

⁹⁹ Biblioteca Apostolica Vaticana, Pal. lat. 1448, fo. 13r-19r (Trier, 810). On this manuscript and its context see now W. Stevens, ‘Ars computi quomodo inventa est’, in *Zwischen Niederschrift und Wiederschrift*, 29-65, especially 64-5, and Warntjes, ‘The *argumenta*’, 64-6.

¹⁰⁰ Borst, *Schriften*, II, 1009; III, 1021-2; idem, *Der Streit um den karolingischen Kalender*, MGH Studien und Texte, xxxvi (Hanover, 2004), 117. The principal manuscript here is Munich, Bayerische Staatsbibliothek, Clm 14456.

the same time there is no hint that any community on the continent followed anything other than a Dionysiac Easter by the ninth century. Carolingian computus, when described in these terms, would seem to be characterised by the same ‘diversity within unity’ which characterised other branches of practical ecclesiastical material such as liturgical handbooks.¹⁰¹ The Trier computus alone shows that the net result of this diversity was not a suppression of the Eusebian reckoning or tension between centre and periphery but rather the recycling of old texts and the consideration of all options.

On occasion, it is possible to see an embracing of this diversity. In AD 810 a new set of argumenta was composed, maybe again in response to the Aachen meeting, which like the Trier computus embraced the traditional Eusebian *annus mundi* alongside the year AD. To these, separated only by a short text on finger counting, was added the united AD 809 formulas anyway, with its ‘Hebrew’ years AM. There is no suggestion that the scribe had any problem using the two different AM dates alongside the year AD, or that he was doing so for any reason other than for the synchronisation of different reckonings. The compilation, which also includes older texts from the so-called ‘Sirmond collection’, better displays a certain openness to collecting any potentially relevant text, as one would find with florilegia, collections of monastic *regula* and more. The influence of this alternative compilation needs further investigation, as parts of it were included at the end of the famous *Computus Bobiensis*, which despite its common name was likely compiled in Burgundy in AD 827 before being sent to Lombardy.¹⁰² As it stands, the AD 810 compilation can be found in two copies from St Gall.¹⁰³ The only previous St Gall compilation with computistical material is a

¹⁰¹ See n. 6.

¹⁰² Milan, Biblioteca Ambrosiana, H 150 Inf; partial edition in PL, cxxix.1273-1371. Borst, *Schriften*, I, 252 labels the AD 810 argumenta in the Milan manuscript as simply a reworking of Dionysiac argumenta in the context of a block making computistica ‘useful for the present’. See also D. Ó Cróinín, ‘A Seventh-Century Irish Computus from the Circle of Cummiánus’, in his *Early Irish History and Chronology* (Dublin, 2003), 99-130 at 104 and especially n. 19 for the comments of Bernhard Bischoff.

¹⁰³ St Gall, Stiftsbibliothek, Cod. Sang. 902, fo. 153-79 (St Gall, s. ix³). A copy can also be found in St Gall, Stiftsbibliothek, Cod. Sang. 251, fo. 1-25 (St Gall, s. ix³). These, and other St Gall manuscripts, are online at

complicated affair rather than a coherent textbook, with references to the importance of Victorius's table as a chronological aid alongside a Dionysiac table, and for its early copy of Pseudo-Methodius's *Revelation* – itself a text which places 'the present' past AM 6000.¹⁰⁴ It is not even evident that Bede's computistical works were known in St Gall before the mid-ninth century, when a copy arrived from Laon and one – not necessarily a different one – was listed in the library catalogue.¹⁰⁵ What St Gall has in common with the other centres we have seen, on the other hand, is that it was developing a reputation for its learning, while its library embraced a heterogeneous approach to collecting texts of all sorts. Indeed, by the mid-ninth century there were texts by Augustine, Orosius, Quodvultdeus, Eusebius, Pseudo-Methodius, Bede, Hrabanus Maurus and others available in the library, covering a wide spectrum of apocalyptic and non-apocalyptic thought. There was little selectivity or enforcement of 'orthodoxy'. In such a context, the silence of monks in St Gall about AM 6000 suggests that they were not worried – they were well-prepared! – not that they were engaged in a conspiracy.

In addition to the persistent interest in the chronology of Eusebius-Jerome, it is possible to trace a brief fashion in the Rhineland for using the Greek *annus mundi* (AD 1 = AM 5508), which had long passed its own Year 6000. The earliest extant computus to engage with this reckoning dates to AD 757 (= Greek AM 6265) in a text entitled *Computus Grecorum* in the sole manuscript witness.¹⁰⁶ The origin of the text is as yet unknown, but its influence on the *Lectiones sive regula computi* of 760/ 792 might suggest a centre in the

<http://www.cesg.unifr.ch/en/> The computistical manuscripts of St Gall are described in A. Cordoliani, 'Les manuscrits de comput ecclésiastique de l'Abbaye de Saint Gall du VIII^e au XII^e siècle', *Zeitschrift für Schweizerische Kirchengeschichte*, xlix (1955), 161-200 and in the same volume 'L'évolution du comput ecclésiastique à Saint Gall du VIII^e au XI^e siècle', 288-323.

¹⁰⁴ St Gall, Stiftsbibliothek, Cod. Sang. 225 (St Gall, s. viii³). The computistical section of this manuscript is described in K. Springsfeld, 'Eine Beschreibung der Handschrift St Gallen, Stiftsbibliothek, 225', in Ó Cróinín & Warntjes, *Computus and its Cultural Context*, 204-37.

¹⁰⁵ St Gall, Stiftsbibliothek, Cod. Sang. 248, fo. 83-212 (Laon, s. ix), listed in the mid-ninth-century catalogue St Gall, Stiftsbibliothek, Cod. Sang. 728, fo. 10 ('de compoto et temporibus, volumen i').

¹⁰⁶ Berlin, Staatsbibliothek, Phillipps 1831, fo. 90r (Verona, s. ix). I plan a more detailed study and edition.

Rhineland.¹⁰⁷ Also in that region, in AD 764 a computist composed a formula for calculating the ‘years of the world according to the Greeks’, although the answer given – AM 6276 – is either wrong or miscopied.¹⁰⁸ The text was soon copied without mathematical or copying errors in Mainz in AD 771 (= Greek AM 6279).¹⁰⁹ These texts all included argumenta to aid students in cross-referencing *annus mundi* and *annus ab incarnatione*, a scholarly activity which took on a different form in the now-lost Easter table from Reichenau with parallel columns for the two reckonings starting in AD 777/ AM 6285 (attached to a copy of the *Annales Laureshamenses* which used the Eusebian AM!).¹¹⁰ The geographical and chronological proximity of these examples suggests a relatively coherent fashion in computistical circles which had little impact further afield. And as the title of the computus of AD 757 suggests, this interest was founded upon an association between the ‘Greek’ Dionysiac computus and Greek chronological tradition. It is also striking that that very year, envoys from Byzantium arrived at court with an organ for Pippin III, providing an opportunity for discussion about chronology.¹¹¹ To add a silent ‘anti-apocalyptic consensus’ to the motivation of these scholars adds unnecessary explanations. This was just a moment in time, of course, with chronology thereafter dominated by Eusebian, ‘Hebrew’ or Dionysiac reckonings instead, as other established traditions were reasserted. There were a few isolated references in compilations such as the Burgundian *Computus Bobiensis*, where an

¹⁰⁷ *Lectiones sive regula computi*, ed. Borst, *Schriften*, II, 544-659; Cologne, Dombibliothek, 83(ii), fo. 59r-69r. The Cologne manuscripts cited are online at <http://www.ceec.uni-koeln.de/> To see the 757 text as merely a forerunner to the later compilation, as Borst does (*Schriften*, II, 527), does not do the distinctiveness of the text justice.

¹⁰⁸ Cologne, Dombibliothek, 103, fo. 184v (Cologne, s. ix¹) and Wolfenbüttel, Herzog-August-Bibliothek, Wissemburgensis 91, fo. 169r (Worms, c. AD 800 – online at <http://www.hab.de/bibliothek/wdb/mssdigital.htm>), edited in PL xc.877. The answer according to the formula should be AM 6272, and there are other argumenta in the collection which support a date of AD 764: see C.W. Jones, *Beda's Pseudepigrapha: Scientific Writings Falsely Attributed to Bede* (Ithaca, 1939), 82. A new study is promised by Immo Warntjes.

¹⁰⁹ Paris, Bibliothèque Nationale de France, lat. 4860, fo. 116v (Mainz, c. AD 900), edited in PL xc.598.

¹¹⁰ Described in Katz, *Annales*, 13 and 47, with origin asserted at 20-1. The table contained information for the years AD 777-817/ AM 6285-6342. The only other table I am aware of which has parallel AM/ AD dates is in Cologne, Dombibliothek, 83(ii), fo. 76v-79r, although there the AM dates are the Eusebian ones and run from AM 5998 to AM 6111 (= AD 798-911). It is probably Spanish or Aquitanian to judge by the presence of a column for the Spanish era. See *infra*, ??.

¹¹¹ *Annales regni Francorum*, s.a. 757, 14 (revised version, 15); *Annalium Petavianorum*, s.a. 757, 11.

argumentum from the St Gall computus of AD 810 was adapted to provide the Greek date rather than the Eusebian one cited elsewhere in the same work.¹¹² Such examples only further underline that many scholars were interested in the variety of temporal reckonings in the context of computistical inquiry, particularly as paradigms were changing. The control of apocalyptic expectation seems only secondary here.

There also remained writers who bullishly refused to engage with non-Eusebian tradition. The Latin translation of Pseudo-Methodius's *Revelation*, probably made in Italy early in the eighth century, had maintained 'Syriac' tradition by asserting that current affairs were unfolding in the middle of the seventh millennium, something which interested at least one chronographer in Lombardy in AD 818.¹¹³ But in Alemannia, a late-eighth-century reworking of the text changed this aspect of the text to bring Pseudo-Methodius's eschatological history within the confines of 6,000 years.¹¹⁴ Two further Lombard texts, meanwhile, defended the authority of Eusebius-Jerome in the face of anxiety. In 747, an Irish treatise on the 6,000 years of the world was updated, possibly in Bobbio, reasserting old arguments for the finite 6,000 years of the world based on the six days of creation, and noting that there were only 53 years left before a possible new age.¹¹⁵ True Augustinian spirit won out, however, and the author repeatedly maintained that only God could know when the End

¹¹² *Computus Bobiensis*, 77-80 and 153, PL cxxix.1312-13 and 1364.

¹¹³ *De scientia temporum*, 27, ed. Borst, *Schriften*, I, 461, where the year AD 818 is reckoned as AM 6309 'secundum Syros'. As Borst suggests at 431, the chapter is not really part of the original text it concludes, and indeed in the manuscript – Berlin, Staatsbibliothek, Phillipps 1831, fo. 134v – it is added in a later hand.

¹¹⁴ O. Prinz, 'Eine frühe abendländische Aktualisierung der lateinischen Übersetzung des Pseudo-Methodios', *Deutsches Archiv*, xli (1985), 1-23 at 11; H. Möhring, *Der Weltkaiser der Endzeit* (Stuttgart, 2000), 138-9. Compare the first recension, ed. W. J. Aerts & G. A. A. Kortekaas (Leuven, 1998), 135.

¹¹⁵ Florence, Biblioteca Laurenziana, Plut. 20.54, fo. 15r-21r (Florence, s. xi), with the dating clause on fo. 15v (see <http://teca.bmlonline.it/TecaRicerca/index.jsp>), copied from an exemplar I have not yet seen, of s. x, in Biblioteca Laurenziana, Conv. Soppr. 364. The dating clause only ed. T. Mommsen, MGH AA ix (Berlin, 1892), 158. The Irish origin of the text is confirmed by the text's relationship to the Irish texts *The Munich Computus* (ed. Warntjes), *Computus Einsidlensis* (unedited) and *De ratione computandi* (ed. D. Ó Cróinín (Toronto, 1988)), all of which were likely written in the same intellectual environment in Ireland but which did not circulate widely or together on the continent. It begins with a yet unidentified recension of a lost *De divisionibus temporum*, on which see C.W. Jones, *Bedae Pseudepigrapha* (Ithaca, NJ, 1939), 48-51, E. Graff, 'The recensions of two Sirmond texts: *Disputatio Morini* and *De divisionibus temporum*', in Ó Cróinín & Warntjes, *Computus and its Cultural Context*, 112-42 at 117-25, and Warntjes, *The Munich Computus*, 4-5 (commentary). I plan to publish a more detailed study of this text in due course but am grateful to Immo Warntjes for discussing early thoughts on the text with me.

would come, although his repetitive arguments suggest no clear comfort was forthcoming in this given the few years left. It was a dilemma which famously troubled Beatus of Liébana too in AD 786.¹¹⁶ Another text, copied in AD 767 from a Gallic original of AD 727, noted that there were only 32 years left and then warned against rejecting the authority of Eusebius, Jerome, and their continuators.¹¹⁷ (The third-century chronographer Julius Africanus is listed too, illustrating how poorly his older calculation of AD 1 = AM 5500 was known in the West). Eusebian chronology did not have to be rejected in the face of apocalyptic speculation. These were, however, texts which developed within different intellectual networks and, with centres such as Bobbio involved, not insignificant ones either.

The themes of Eusebian authority and chronological diversity come together most clearly in *Additamenta Coloniensia ad Chronica* of AD 798 and its chapter *Supputatio Eusebii Cesariensis episcopi et Hieronimi presbiteri* ('The computation of Bishop Eusebius of Caesarea and the priest Jerome').¹¹⁸ This, rather like the first Lombard text above, offers a summary history designed to locate the present in relation to the totality of the past. It was held in the library of Charlemagne's chaplain Archbishop Hildebold of Cologne, and has

¹¹⁶ Beatus of Liébana, *Commentarius in Apocalypsin*, IV, ed. E. Romero (Rome, 1985), i. 609-25.

¹¹⁷ London, British Library, Cotton Nero A ii, fo. 34v-35v (Lombardy, 767), at fo. 35v: 'Sunt in summa ab exordio mundi usque ad praesente tempore anni quinque milia noventi [x]xxviii et remanent de sexto miliario anni lxxii, subtractus xl remanent xxxii. Qui vult contendere, requirat Iulio Africano et Eusebio Cesareise episcopo, Hyreonimo presbitero erudissimo viro, Agustino Yppo regense [regiae] episcopo, Orosio presbitero, Victorio qui cy[...] Hispalense episcopo et Gregorio catholico et erudito viro Toronense episcopo vel alius quam pluris quod longum est enarr[at]ore per singulae perplexo stilo has sententias helicit, qui vult contendere apud ipsos conferat quia superna illa civitas ex angelis et hominibus constat'. Note that the AD date 727, rather than 728, is suggested by comparison with the *Computus of 727*, ed. Borst, *Schriften*, I, 374, which also gives 32 years to complete the sixth millennium.

¹¹⁸ *Additamenta Coloniensia ad Chronica*, ed. Borst, *Schriften*, II, 780-794; Cologne, Dombibliothek, 83(ii), fo. 14v.

therefore been taken as particularly revealing of world history at court.¹¹⁹ The passage with which the text concludes has repeatedly drawn comment in this context as it reads:¹²⁰

From the beginning of the world according to the Hebrew Truth of Jerome to the 31st year of the reign of King Charles 5998, or 6268 according to the Septuagint (the same year hostages were received from a 3rd part of the Saxon populace and the Greeks offered him *imperium*). From the incarnation, 798. May he who is not pleased by this sweat, read and count better.

Landes considered the mistake of associating Jerome with the ‘Hebrew Truth’ AM – i.e. Bede’s – to be a ‘flagrant misrepresentation of Bede [and] an aggressive challenge to his followers’, given that the ‘Hebrew Truth’ should actually be AM 4740.¹²¹ Whether the situation could be so simply characterised is doubtful, because to affirm ‘the Hebrew Truth of Jerome’ in a text composed with explicit deference to the chronicle of Eusebius-Jerome might readily produce an ‘irrelevant error’ of the kind Landes thought unlikely.¹²² One might still want to maintain that this is unambiguous proof of a ‘fascination and inhibition’ regarding *annus mundi*, as it is introduced by Landes, but again the juxtaposition of three universal dating systems, the relativising regnal date of Charlemagne and the reference to two recent events surely leads back to the issue of calibration. Borst, who argued that the extract should not be read as an annal, downplayed the technical significance of the text in the face of the general tone of *Heilsgeschichte*.¹²³ The year AD 798 was, however, computistically

¹¹⁹ H. Lowe, ‘Eine Kölner Notiz zum Kaisertum Karls des Großen’, *Rheinische Vierteljahrsblätter*, 14 (1949), 7-34 at 22 (on the supposed St Amand connection); Fried, ‘Papst Leo III.’, 309-10 (rightly, I think, seeing it as a contemporary composition in Cologne); Brandes, ‘Tempora periculosa’, 56-7; D. Bullough, ‘Charlemagne’s “Men of God”’: Alcuin, Hildebald and Arn’, in Story, ed., *Charlemagne*, 136-50, especially 145.

¹²⁰ *Additamenta Coloniensia ad Chronica*, ed. Borst, *Schriften*, II, 793-4: ‘Sunt anni ab initio mundi secundum veritatem Hebraeorum, ut transtulit Hieronimus, usque ad istum annum tricesimum primum regni Karoli regis – ipse est annus, quando hospites accepit de Saxonia tertiam partem populi et quando missi venerunt de Graecia, ut traderent ei imperium –, anni quinque milia nongenti nonaginta octo, secundum vero Septuaginta anni sex milia ducenti sexiginta octo, anni ab incarnatione Domini septingenti nonaginta octo. Cui vero sic non placet, sudet et legat et melius numeret’.

¹²¹ Landes, ‘Lest the Millennium Be Fulfilled’, 189.

¹²² See *Additamenta Coloniensia*, II, 1, ed. Borst, *Schriften*, II, 789-791. Cologne, Dombibliothek, 83ii, fo. 14v.

¹²³ Borst, *Schriften*, II, 774 and 776-7.

significant for the Franks, because it was another year in which a 19-year lunar cycle began, and therefore the calibration of different reckonings was important to harmonise Paschal tables with other frameworks of time. The table of Dionysius ran in 95-year blocks, starting in 532, with a double continuation from AD 722 to AD 911;¹²⁴ but early Frankish tables can be found starting in AD 703,¹²⁵ AD 760,¹²⁶ AD 779¹²⁷ and, in the very same Cologne manuscript, AD 798 itself,¹²⁸ which confirms McKitterick's argument that Dionysiac tables were circulating within the Frankish kingdoms before and independently of Bede's perfectly cyclical 532-year table.¹²⁹ The date of *Additamenta* in a compilation of computistical, cosmological and historical texts, along with an Easter table which began in AD 798 – constructed, in fact, with an added column for *anni mundi* and the Spanish Era – means that computistical interest seems to be the driving force rather than the apocalyptic.

The call for better counting in the face of apocalyptic anxiety remains, nevertheless, peculiar. Many have commented on its significance for indicating the presence of non-Augustinian views otherwise often absent (although the text of AD 747 might now complicate that picture).¹³⁰ The author of *Additamenta* was certainly expressly Augustinian in his stance, reciting the common passages from Scripture which argued for an unknowable date for the End Times. Yet even this did not mean he was *anti*-apocalyptic. He was also concerned about the coming of Antichrist, and particularly the threat posed to the unity of the

¹²⁴ Evidence includes *Praefatio cycli paschalis* (722), ed. Borst, *Schriften*, I, 337-347, which may be the exemplar for the Cologne table. No known extant Easter ran from AD 722 to AD 816, although others did end in AD 816, such as the one in the Godescalc Evangelistary (in n. 127).

¹²⁵ Paris, Bibliothèque Nationale de France, lat. 10837, fo. 40v-41v and 43r-43v (Echternach, s. viii¹); London, British Library, Cotton Caligula, A xv, fo. 110r-117r ('North-Eastern France', s. viii²).

¹²⁶ St Gall, Stiftsbibliothek, Cod. Sang. 225, fo. 114-17 (St Gall, s. viii³); table printed and discussed in Springsfeld, 'Eine Beschreibung', 206-12, where she demonstrates that the second 19-year cycle was calculated rather than merely copied.

¹²⁷ The Godescalc Evangelistary, Paris, Bibliothèque Nationale de France, nouv. acq. lat. 1203 (Liège, c. AD 781), fo. 124v-126r, printed in K. Piper, *Karls des Grossen Kalendarium und Ostertafel* (Berlin, 1857), 32-5; Paris, Bibliothèque Nationale, lat. 7530 (Monte Cassino, s. viii⁴), fo. 284v-287r; Lyons, Bibliothèque de la Ville, lat. 788, (Lyons, s. viii⁴) fo. 28r-30r.

¹²⁸ Cologne, Dombibliothek, 83ii, fo. 76v-79r. See also Milan, Biblioteca Ambrosiana, H 150 Inf (Burgundy, 827) = PL cxxix.1366.

¹²⁹ Bede, *De temporum ratione*, 65, 460; McKitterick, *History and Memory*, 95.

¹³⁰ Brandes, 'Tempora periculosa sunt', 56-7.

Church by Adoptionism.¹³¹ Here again, then, anxiety is both present and attached to issues of church unity rather than time itself. The conclusion of *Additamenta*, with the citing of several different temporal reckonings, points to the sense that time was recognised as artificial. This reaffirmed Augustine's theological arguments in *De civitate Dei*, as well as the technical arguments of Bede who distinguished between human, natural and divine conceptions of time.¹³² The threat posed by ignorance and poor educational standards in general was real to the Franks, and the Adoptionist controversy reinforced that feeling to them. Where apocalyptic anxiety was a powerful force in the Frankish Church, it was not a matter of fearing dates or trying to suppress those who did; rather, it was a strong dynamic in encouraging people to engage with diverse sources and to work in search of unity. This is the important theme of Carolingian history revealed by the *Additamenta* specifically, and computus under Charlemagne in general.

It should by now be clear that the hypotheses associated with Borst on the one hand, and Landes and Fried on the other, require some revision. Borst had suggested that Charlemagne attempted to control time centrally, yet his voluminous and complicated evidence base reveals significant details about networks and cultural diversity with no clear signs of imperial intervention. AD 809 was still an important year in which computists in the Frankish Empire began to rethink their discipline, and theologians continued to be anxious about the divisions caused by debates on Christology, and inevitably the 'centre' – loosely defined – provided a forum for debate. Manuscript evidence, however, shows numerous responses to the Aachen inquisition, affected by both resources and networks. The single co-ordinated

¹³¹ *Additamenta Coloniensia*, I.2, ed. Borst, 781-2.

¹³² Bede, *De temporum ratione*, 2, 274.

project designed to produce a definitive encyclopaedia was either non-existent, a failure, or else it exposes ‘central authority’ to be more a matter of guidance than micro-managed control. The multiplicity of intellectual effort from a common trigger, simultaneously moving everywhere in similar directions and towards the same ends but with different resources and in different ways, is perhaps anyway what we might expect, to judge from the results of other studies of the Carolingian Renaissance and its ‘diversity within unity’.

At the same time, turning to the theories about apocalyptic chronologies, it seems that the diversity of computistical reforms meant that interest in a variety of AM-datings persisted. These were votes for or against any ‘de-eschatological’ Iro-Bedan reforms at the centre, but as parts of efforts to understand and calibrate different reckonings of time. Scholars were not passively marking time and remaining quietly oppressed about the significance of AM 6000. Landes once argued that the alleged silence concerning the passing of the year 6000 was similar to the mystery of the dog that did not bark.¹³³ And yet the dog often barked when other apocalyptically meaningful things occurred, particularly where heresy and uncanonical behaviour was concerned.¹³⁴ Maybe the date itself was not really as important to eighth-century figures as Gil or Landes had argued, rather than so important it could not be mentioned. Occam’s razor can be an easy thing to introduce; but development of chronological and computistical thought in the eighth and ninth century does seem to be fully explicable on its own terms, with debates about Easter tables and the synchronisation of historical data pushing forward the use of AD-dating and arguments about AM-dating. To reject the idea of a silent ‘consensus’ or ‘conspiracy’ at play is not to be a positivist about the

¹³³ Landes, ‘Lest the Millennium Be Fulfilled’, 202; A.C. Doyle, ‘Silver Blaze (1937)’, in *The Complete Sherlock Holmes* (New York, 2003), 399-417 at 415, and not ‘Hound of the Baskervilles’ as cited by Landes.

¹³⁴ A similar point is made for the earlier period by Markus, ‘Living Within Sight of the End’, 29-30.

sources – it is just to say that sometimes the sources mean what they say and that there is no need for analysis which relies on a *deus ex machina*.¹³⁵

Such conclusions about Carolingian chronology and computus should not be read as denying the significance of apocalypticism in the period in general. It is abundantly clear that there was hope and anxiety, and that tropes of apocalyptic rhetoric were a well-used resource, particularly by those engaged in Christological debates. The coming of Antichrist and the descent into ‘perilous times’ served to encourage the faithful and to warn dissenters about their behaviour. People did worry about what the (poor) health of an empire might mean. As the ninth century progressed and political divisions became established, particularly after 843, apocalyptic commentaries, visions and moods grew rather than dissipated.¹³⁶ Many writers may have really believed in the imminence of the End and acted in response to those beliefs; and indeed many aspects of the author-audience relationship when it comes to apocalyptic rhetoric would become puzzling if both sides were only pretending that imminence was an issue. In short, more work needs to be done on untangling the meaning of these traces of apocalypticism relative to their situational appearance, rather than as instances of a continuous and predictable ‘social discourse’ driven primarily by round-number years. One can already observe in the evidence cited in existing studies that it is the threat of instability and disunity which brought the various authors to their theme, not worries about abstract dating systems. Whenever that imminent Judgement came, be it slightly sooner or slightly later, the different networks and reformers of the Carolingian world would try to be prepared.

¹³⁵ The problem of ‘positivism’ in arguments about the Year 100 is raised in J. Fried, ‘Die Endzeit fest im Griff des Positivismus? Zur Auseinandersetzung mit Sylvain Gouguenheim’, *Historische Zeitschrift*, cclxxv (2002), 281-322.

¹³⁶ Fried, ‘Endzeiterwartung’, especially 406-10; McGinn, ‘Eriugena Confronts the End’, especially 3-13; Heil, ‘Timeless End’.

University of St Andrews

JAMES T PALMER