Timely secrets

KRISTEN LIPPINCOTT

Conceptualizing time is not an easy matter. We only know that time exists because we experience its passage. Nevertheless, philosophers, poets, theologians, scientists and artists have all spent countless hours trying to define – to capture – the essence of time. There is something deep in the Western psyche that constantly pushes us towards definition. The process begins with metaphor and the attempt to describe time in terms that pull it closer to our experience of other things. Is time like a river, like an old man, like a butterfly, like a cloud? Once the metaphor is established, the images follow. If time is like an old man, in what way is it like an old man and why? Does time move slowly or quickly? How does it move – with wings?

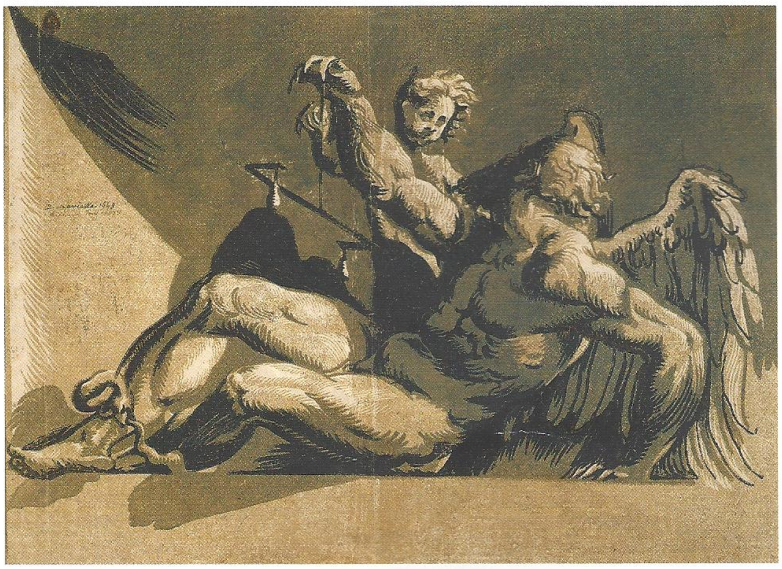
The ancient Greeks and Romans did not have a personification of Time *per se*. Instead, they depicted aspects of time in two different ways. The first was with the figure of *kairos*, a nude, winged youth who symbolised that brief, decisive moment during which one's fortune might change. A number of fragments depicting the god have survived, all of which are based on Lysippus's now lost bronze statue of *Kairos* – a winged nude youth, holding a pair of scales on a razor's edge.[1]

The second antique image of time seems to have been imported from Persia and became part of the mystery cults associated with the god Mithras.[2] This figure, alternately known through the figure of Aion or his Orphic counterpart, Phanes, symbolised the divine principle of the eternal, in which time itself was the source of all the world's creative forces. Depictions of Aion vary. The Persian Aion is generally a male figure with a lion's head. His body is entwined with a large snake and he holds a large key in his right hand. The classical figure of Aion, however, is wholly human and shown standing within the 'circle of time', formed by the ring of the twelve signs of the zodiac. Depictions of Phanes tend to centre on the figure of a male youth, shown bursting forth in flames from a primeval egg. He is winged and his body is also caught in the coils of an oversized snake and he holds a thunderbolt in his right hand. According to the Orphic tradition, the primeval god, Chronos (Time), gave birth to Aither (the air), Erebus (the dark) and Chaos. Next, Chronos fashioned in Aither an egg, which split in two as Phanes, the first-born of the gods, sprang forth. The name Phanes derives from the Greek, *phaino*, meaning 'I shine'. Phanes is variously identified as light itself, the sun or as the bringer of light to the rest of creation.

1 *Mithraic relief of Phanes/Aion*, Roman, *c.* 2nd-3rd century AD. Marble, 74 x 49 cm. Galleria e Medaglieria Estense, Modena. Photo: Galleria Estense, Ministero per i Beni e le Attività Culturali, Modena

The Relief of *Aion/Phanes* from the Galleria Estense in Modena is unique, because it incorporates aspects of all three traditions (Fig. 1).[3] He is male, winged, and stands within a circle of the zodiac. His body is encased in the coils of a serpent,

2 *Saturn* by Artus I Quellinus (1609-68), *c.* 1650-54. Terracotta, 95 x 50 cm. Amsterdams Historisch Museum. Photo: Amsterdams Historisch Museum/The City of Amsterdam



3 *Saturn/Chronos* by Niccolò Vicentino (fl. *c.* 1540-50) after a design by Giovanni Antonio Pordenone (1483-1539), *c.* 1531-32. Chiaroscuro woodcut.
Department of Prints and Drawings, The British Museum. Photo: © The British Museum

but his face is human. Shards of the Orphic egg appear at his feet and on his head. Finally, the placement of the figure within a zodiacal ring closely recalls a number of monuments dedicated to the personification of Aion, who symbolises the infinite bounty of time. Despite its seductive complexity, however, the figure failed to make much of an impact on the established hierarchy of the Graeco-Roman pantheon.

The origins of our Father Time can be traced back to the Greek fondness for word association. Their word for time ('*chronos*') was very close to the name of one of their oldest gods ('*Kronos*'). Kronos was the oldest of the Titans and the father of Zeus. He presided over the Golden Age of Man and featured primarily as an agricultural god. He is usually depicted as an old man with long hair and a flowing beard, holding a sickle (Fig. 2). The Greek writer, Plutarch, is the earliest surviving source to make the claim that the similarity between the words '*chronos*' and '*Kronos*' must be meaningful.[4] Since all the names of the gods are drawn from the primordial elements with which they have associations, he argues, then Kronos must be the god of time. The concept is often repeated and elaborated upon by later writers, but there is precious little evidence that classical artists ever depicted the old god specifically as a personification of Time.

The pictorial formulae of depicting Kronos – or Saturn as he came to be called in Latin – as a 'god of Time' is largely due to the encyclopaedists, commentators and grammarians writing during the early centuries of the middle ages. For example, one of the commentators on Virgil's works, the fourth-century grammarian Servius, is the first to suggest that Saturn's sickle is a symbol of the way in which time cuts through all things.[5] The mythographer Macrobius explains how his snake is actually a symbol of the year and the way in which it bites its own tale echoes the manner in which time devours itself (Fig. 3).[6] The well-known tale of how Saturn ate his own children was also interpreted by the later medieval mythographers as an image of how time eats everything in its path or, to quote Ovid, '*tempus edax rerum*' – time devours all things (Fig. 5).[7]

If one can imagine the later middle ages as filled with these ingeniously argued images, it is not hard to understand how, when artists came to search for ways to depict Time, the brief was already well-established. And, conveniently, it is during these years that one of the most potent descriptions of Time appears in a format that begged to be illustrated.[9] The Italian poet, Petrarch, composed his *Trionfi* or *Triumphs* in two stages between 1340 and his death in 1370. They described an allegorical procession of personifications, in which each successive figure triumphs over the previous one. The God of Love is the first to appear. He is subdued by the personification of Chastity. Death, in turn, conquers Chastity, Fame conquers Death, Time conquers Fame and, in the end, Eternity and the Catholic Church conquer the devastating effects of Time. Petrarch's *Trionfi* generated a whole industry of illuminated versions of the text, as well as innumerable large-scale frescoes and tapestries. Its themes were depicted on decorative plate, furniture, bridal giftware and clothing. Interestingly, however, Petrarch himself provides only the scantiest description of the image of Time, forcing the horde of illustrators and illuminators to turn to the formulae developed by the medieval mythographers for their clues. What is clear, however, is that Petrarch's version of 'Father Time' is no benign agricultural deity. He is a destroyer of Fame – a manifestation of the grim reaper who tramples over all human vanities. In the illustrations of Petrarch's *Trionfi*, Time is invariably depicted as an old and bent man, often standing only with the aid of crutches (Figs. 4 and 6). He is often winged to illustrate the fact that *tempus fugit* – 'time flies'. He carries either a sickle or a huge scythe, having evolved from the rather benign agricultural deity to the full-blown harvester of men. It is curious to note that it is also in these illustrations of 'The Triumph of Time' that the figure is first shown carrying an hourglass or clock. As hourglasses and sundials had existed as timekeepers for centuries, it is interesting to speculate why they should

4 *Mantel clock with Father Time,* French, mid-18th century, with later movement by Vulliamy. Boulle marquetry, tortoiseshell, gilt bronze and enamel, 44.3 x 78.1 cm. Her Majesty the Queen. Photo: The Royal Collection, © Her Majesty the Queen

have made a sudden appearance in the iconography of time at this point. This circumstance seems to support the suggestion that it was only during the early years of the renaissance that these instruments became associated with the concept of time as a force over which a wizened and hoary old man held sway.

Another way that time is captured by the artist, however, is in images based on different aspects or perceptions of time's traces: the 'now' of time, the transience of time, the effects of time's passing. Throughout the ages, artists have responded to time in ways that are both personal and culturally determined. If one were to write a potted history of the European representation of this aspect of time, it might start with a desire to represent the creation of time. This would then be followed by the ambition to depict the sequential narrative and the eternal – two basic elements of both pagan and Christian belief in the West. As soon as one creates a history, the need to find a way to represent the past arises. The depiction of the passage of time, however, develops relatively late. Perhaps not until the fifteenth century, with the rediscovery of how to utilise the effects of light and shade more precisely can one begin to recreate all those aspects of the natural world that evoke the temporal.

If one considers some of the earliest depictions of the creation of time, for example, one is struck by the extent to which the early Christians were not only the inheritors of the Old Testament, but also the heirs to the legacy of the Greek tradition of Socratic enquiry and the conviction that answers to all questions can be found if the method of enquiry is sufficiently rigorous. One of the issues that occupied their minds for over a thousand

5 Frontispiece to *Eigentlyke Afbeeldinge, van Hondert der Aldervermaedste Statuen…*by François Perrier (*c.* 1594-1649), 1638. Detached from a printed book. Department of Prints and Drawings, The British Museum. © The British Museum

years concerned the issue of the creation of time. In essence, when God created the universe, did he create it *in* time, or did he have to create the matrix of space and time before he created matter?[9] One of the main problems, it seems, was the sequence of events related in the opening lines of Genesis. For, as one anonymous medieval commentator remarked: '…before the creation of the Sun, there was neither time nor hour, because there was nothing which might make a shadow, that means by which time or hour would have been measured'.[10] From this logic, scholars such as the Venerable Bede argued that if it were agreed that the world began on 19 March, time *per se* could not have begun until 23 March, when God created the Sun.[11]

Following centuries of heated debate, the Fourth Lateran Council in 1215 established the offical Church doctrine that God created 'all things spiritual and corporeal, angelic and mundane' simultaneously out of nothing.[12] The next problem, however, was trying to establish exactly when the world had been created. For if the whole of everything had been created *in* time, there must have been a specific moment when the universe started.

During the previous centuries, speculation about the disposition of the stars and plants had also occupied the minds of the Greek and Roman philosophers. They

6 *The Triumph of Time*, Florentine, *c.* 1460-70. Engraving. Department of Prints and Drawings, The British Museum. Photo: © The British Museum

believed that there must have been a special celestial configuration that marked the beginning of time. This configuration was known as the *thema mundi* and was represented by a kind of horoscopic chart, in which all of the planets were placed 'in' specific signs of the zodiac at the moment the universe was created. The structure of the *thema mundi* was not consistent across the different cultures of the Mediterranean. Those civilisations which began their religious year in the summer, such as the Egyptians, tended to feature the zodiacal sign of Leo within their *thema mundi*. Those who centred a religious or civic year on the spring equinox tended to believe that the Sun was located in the zodiacal sign of Aries when the world was created.

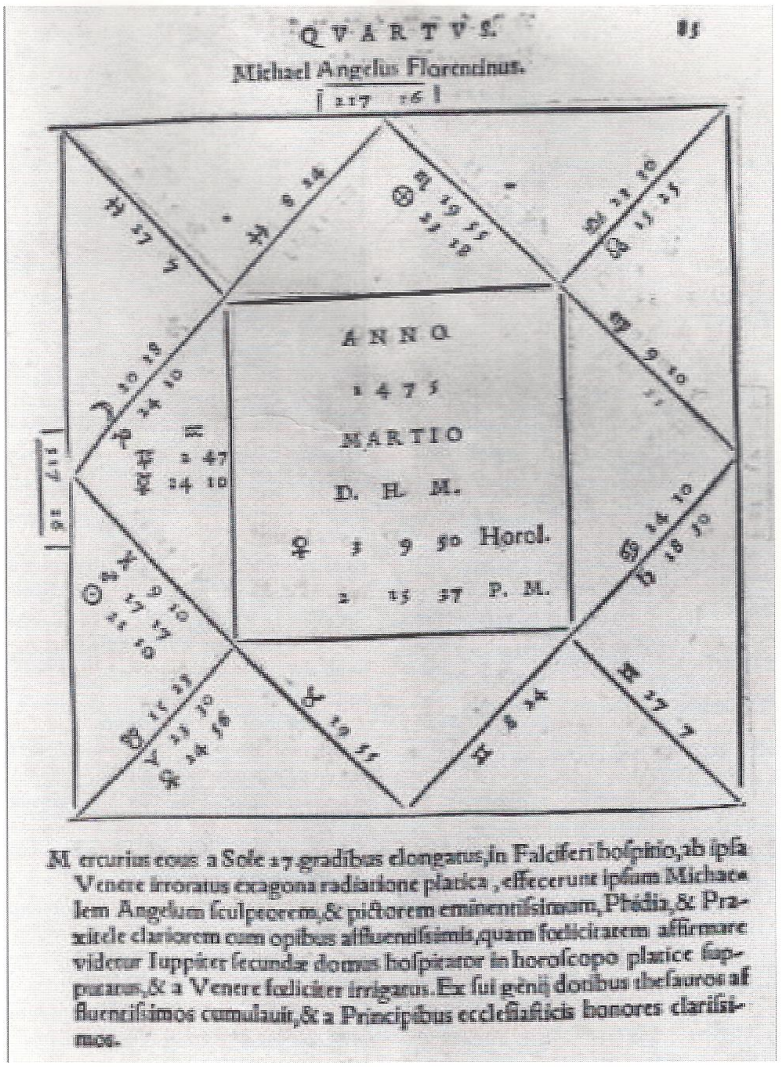
The Graeco-Roman tradition, drawn from Chaldean astrology, placed the beginning of the year at the spring equinox, claiming that the universe had begun when the sun was 'in' the sign of Aries. Virgil, for example, quite clearly states that the world began at the vernal equinox, when the sun was placed in

7 *Pontificale secundum ritum sacrosancte Romanae ecclesie*, Venice, 1520. Printed book. Department of Printed Books, The British Library. Photo: © The British Library

Aries.[13] This tradition was passed on to the early Christian Church and, perhaps not surprisingly, most Christian depictions of the *thema mundi* show God the Father creating a world in which the sign of Aries is featured (Fig. 7).[14]

Works of art not only help us to understand how past ages and non-Western cultures perceive and depict different aspects of time, they can also provide valuable clues as to how man's measurement of time has changed. For those of us who live by the modern clock, it is hard to imagine that the time-telling conventions we follow are a relatively recent development. Nevertheless, until the middle years of the nineteenth century, there were very few agreed conventions concerning how the hours might be divided, how many hours there were in a day or when the day began. Different systems for telling the time changed not only from town to town, but furthermore – depending upon the purpose – one individual might employ as many as four different time systems during the course of his daily routine.

In Europe, there were generally two different ways in which hours were divided: unequal and equal hours.[15] The length of each of the unequal hours changed throughout the year as the relative percentage of hours of daylight and night varied. Equal hours were much easier to calculate, but even here one has to be careful when trying to interpret any temporal notation and first ascertain which of at least four systems is being used. *Horae communes* (or 'common hours') was an equal-hour system also known as German or French hours.[16] These were divided into two groups of twelve: one beginning at



8 *Tractatus astrologicus* by Lucas Gauricus, 1552. Printed book.
Department of Printed Books, The British Library. Photo: © The British Library

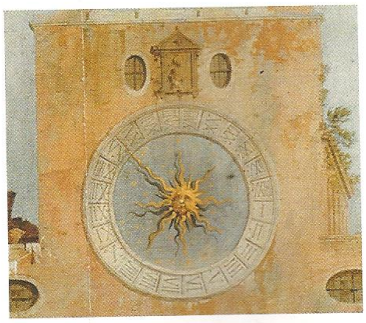
midday and the other at midnight. This system is the ancestor of our current system of 'AM' (*ante meridiem* or 'before Noon') and 'PM' (*post meridiem* or 'after Noon'). Italian, Bohemian and *'Welsch'* (foreign) hours were also equal hours. In Latin, they were described as being *horae ab occasu solis* ('hours calculated from sunset'). Zero hour was calculated at sunset (or, in certain towns, such as Siena, from half an hour before sunset) and the day was divided into twenty-four equal hours. The major disadvantage of this system was that it had to be recalibrated throughout the year as the time of sunset varies greatly from season to season. So-called Babylonian and Greek hours were calculated *ab ortu solis* ('from the moment of sunrise'). In instruments such as sundials, where only the hours of daylight are counted, a typical hour-scale for Babylonian hours would run from zero or one to sixteen. Finally, Nuremberg hours are a bewildering combination of both Babylonian and Italian hours. Daylight runs *ab ortu solis* (from one until sunset); and night time runs *ab occasu solis* (from one until the following sunrise).

As the only clearly measurable time of day is midday, when the Sun appears to pass across the local meridian, astronomers often used *horae communes* in their writings. But the day in which that hour might fall could be noted according to an altogether different system – the day could have been calculated *ab occasu solis* or from the previous midnight. Sometimes, we are helped by the inclusion of additional information – the notation of a feast day or some astronomical reading that could have only occurred on a particular date. Lucas Gauricus, for example, includes small astrological signs to indicate the days of the week in his temporal notations concerning the birth dates of great men and the foundation dates of great cities in his *Tractatus astrologicus* (Fig. 8).[17] But, more often than not, no additional information is included and it is wise to be extremely circumspect concerning what the date or the time included in a letter or document actually means.[18]

Throughout the middle ages and the renaissance, the year also began on different days in different cities. Among the city-states of Italy, for example, there were at least six different dates upon which the year could begin: 1) on 1 January, the Feast of the Circumcision of Christ; 2) 1 March, the *stile veneto*; 3) 25 March, the Feast of the Incarnation of Christ; 4) Easter Sunday, which was called the *stile della Pasqua* or the *stile francese*; 5) 1 September, a tradition which followed the Byzantine calendar; and 6) 25 December, the Feast of the Nativity.[19] In order to decipher the date on any Italian document, therefore, you have to know the origins of the author or the convention he has adopted in order to know the year in which it was composed. And when an Emilian is writing to a Florentine who is working in the Vatican for a Venetian cardinal – it is anyone's guess as to what the time, date or year might be![20]

The idea that these different timekeeping systems died out at sometime in the distant past is directly contradicted by a careful examination of Canaletto's *View of the Piazza of S Giacometto di Rialto*, the finest version of which is in the Gemäldegalerie Alte Meister in Dresden (Figs. 9 and 10).[21] The view clearly depicts the church's turret clock (the clock on the facade of the church). The 'modern' turret clock is derived from the late medieval mechanical clocks used in monasteries. Its primary purpose is to provide time for the community. For this reason, its characteristic feature is a large and clearly marked dial.

The dial is marked for twenty-four hours, rather than the twelve hour system most often used today. As can be seen from the placement of the Roman numerals, the first hour of the day is located at a position that would normally indicate three o'clock – at the right hand side of the dial. At the top of the dial (where twelve o'clock would normally be), there is the



9 Detail of Fig. 10

10 *Piazza of S Giacometto di Rialto* by Antonio Canale, called Canaletto (1697-1768), 1726-30. Oil on canvas, 95.5 x117 cm. Gemäldegalerie Alte Meister, Dresden. Photo: Gemäldegalerie Alte Meister, Dresden

Roman numeral XVIII. As in much of northern and central Italy, the so-called 'Italian day' was calculated to begin at sunset. Noon occured approximately eighteen hours after the day began (eighteen hours after the previous day's sunset at around five or six PM, depending on the time of year). The number XVIII is placed at the top of the dial following a long-established tradition in clockmaking showing noon at the top of the dial – a practice derived from the placement of noon in the centre of the splay of hour-lines in a sundial. The main inconvenience of having a clock keep 'Italian Hours' is that the time of sunset changes throughout the year. In practice, this meant that Italian clocks had to be recalibrated every five to ten days. Although few such documents have survived, each parish or town would publish a set of tables indicating on which days and by how much the clocks had to be reset to ensure that the church bells would ring at the right time and that the hand or hands would indicate noon when the sun was crossing the local meridian.

It is remarkable that, even though most of the public clocks in Venice, as well as many of those found in the surrounding Veneto, display Italian hours, it is never a feature described or discussed by local diarists or travel writers visiting the region from elsewhere. One can only surmise that those in the former category were so well-acquainted with the system that they did not feel it warranted mention. As for those in the latter category, is it possible that they just assumed that all the clocks in the Veneto were showing the wrong time?

The material in this article relates to the objects displayed in *The Story of Time* exhibition, held in the Queen's House at the National Maritime Museum, Greenwich between 1 December 1999 and 24 September 2000. Additional information and bibliography can be found in the book which accompanies the exhibition: K. Lippincott, *The Story of Time*, London, 1999.

[1] See A.B. Cook, *Zeus: A Study in Ancient Religion*, Cambridge, vol. II, part 2, 1925, appendix A, esp. pp. 859-68; F. Kiefer, 'The Conflation of Fortuna and Occasio in Renaissance Thought and Iconography', *The Journal of Renaissance Studies*, vol. IX, 1979, pp. 1-27; D. Levy, 'Il *Kairos* attraverso la letteratura greca', *Rendiconti della R. Accademia Nazionale dei Lincei. Classe di Scienze Morali*, vol. XXXII, no. 5, 1923, pp. 260; E. Panofsky, 'Father Time', in *Studies in Iconology: Humanist Themes in the Art of the Renaissance*, Oxford, 1939, reprinted New York, 1972, pp. 69-93; P. Moreno, *Lisippo: L'arte e fortuna*, Monza, 1995; G. Schwarz, 'Der lysippisches Kairos', *Grazer Beitäge*, vol. IV, 1975, pp. 245-66.

[2] For additional information, see L.A. Campbell, *Mithraic Iconography and Ideology*, London, 1968; F. Cumont, *Les Mystères de Mithra*, 3rd ed., Brussels, 1913; *Etudes Mithraiques: Actes de 2e Congrès International: Téhéran, du 1er au 8 septembre 1975*, vol. IV, Leiden, 1978, especially J. Hansman, 'A Suggested interpretation of the Mithraic Lion-Man Figure', pp. 215-28 and H. Von Gall, 'The Lion-headed and the Human-headed God in Mithraic Mysteries', pp. 511-26; W.K.C. Guthrie, *Orpheus and the Greek Religion*, London, 1935; R. Merkelbach, *Mithras*, Königstein, 1984; and M.J. Vermassen, *Corpus Inscriptionum et Monumentorum Religionis Mithriacae*, The Hague, 1960.

[3] For a discussion of this relief, see J. Bentini (ed.), *La Galleria Estense di Modena: Guida illustrata*, Bologna, 1987 pp. 167-68; M. Nilsson, 'The Syncrestist relief at Modena', *Symbolae Osloensis*, vol. XXIV, 1945, pp. 1 following; and A. Venturi, *La R. Galleria Estense in Modena*, Modena, 1883.

[4] Plutarch, *De Iside et Osiride*, 32.

[5] Servius, *Commentari in Virgilii Georgica*, Book I, line 406.

[6] Macrobius, *Saturnalia*, Book I, chapter 9, section 12.

[7] Ovid, *Metamorphoses*, Book XV, line 234.

[8] See the arguments presented in Panofsky, op. cit. For additional information concerning the illustrations of the *Trionfi*, see A.M. Hind, *Early Italian Engraving: A Critical Catalogue with Complete Reproductions of all the Prints Described…*, London, vol. I, 1938, pp.32-36 (A.I.22) and pp. 131-34 (B.II.5); Prince d'Essling, 'Etudes sur les Triomphes de Pétrarque', *Gazette des Beaux-Arts*, 2e pér, vol. XXXV, 1887, pp. 331*ff*, and vol. XXXVI, p. 25; and Prince d'Essling and E. Müntz, *Petrarch, ses études d'art, son influence sur les artistes*, Paris, 1902.

[9] For additional information on this argument, see K. Lippincott, 'Giovanni di Paolo's "Creation of the World" and the tradition of the "*thema mundi*" in late-medieval and renaissance Art', *The Burlington Magazine*, vol. CXXXII, no. 1048 (July 1990), pp. 460-68.

[10] '*Scholia et glossa*' to Bede's *De temporum ratione* cited in C. Migne (ed.), *Patrologia Latina*, vol. XC, column 318 D (where it is incorrectly attributed to Brythferth of Ramsay).

[11] Bede, *De temporum ratione*, Book VI.

[12] See H. Denzinger, *Enchiridon Symbolorum: Definitionum et declarationum de rebus fidei et morum*, revised ed. by A. Schönmetzer, Barcelona, 1963, p. 259, and J. Alberigo *et al* (eds.), *Conciliorum oecumenicorum decreta*, Bologna, 1973, p. 230.

[13] *Georgics*, Book II, lines 336-42.

[14] See, for example, the fresco by Giusto de'Menabuoi, painted in the dome of the Baptistery in Padua in 1376-78; the decoration of the Chiesa della Collegiata in San Gimignano painted by Bartolo di Fredi in 1367, the fresco in the Camposanto in Pisa painted by Pietro di Pucci da Orvieto in 1389-90 and Giovanni di Paolo's *Creation of the Universe and Expulsion of Adam and Eve from Paradise*, now in the Lehman Collection, Metropolitan Museum of Art, New York. For additional examples, see Lippincott, op. cit in n. 9 above.

[15] For a helpful resumé of timekeeping systems, see P. Gouk, *The Ivory Sundials of Nuremberg 1500-1700*, Cambridge, 1988, especially pp. 18-19.

[16] Humfrey Cole refers to them as 'the zodiac of oures' in the engraving on his altitude sundial now in the Science Museum (no. 1985-100). For an illustration and discussion, see Lippincott, *The Story of Time*, London, 1999, p. 121, no. 126, and Silke Ackermann (ed.), *Humphrey Cole: Mint, Measurement and Maps in Elizabethan England* (British Museum Occasional papers, no. 126), London, 1998, especially pp. 73-75.

[17] Lucas Gauricus, *Tractatus astrologicus*, Venice, 1552. See Lippincott, op. cit. in n. 16 above, p. 128, no. 141.

[18] As a result, there is still a good amount of controversy regarding the iconography of certain renaissance astrological cycles, such as those on the vaults of the *Sala di Galatea* in the Villa Farnesina in Rome. My understanding of these frescoes, which were painted for the Sienese banker, Agostino Chigi, is that they were intended to commemorate a time of birth calculated according to the Sienese version of Italian hours (see K. Lippincott, 'Two astrological ceilings reconsidered: The *Sala di Galatea* in the Villa Farnesina and the *Sala del Mappamondo* at Caprarola', *The Journal of the Warburg and Courtauld Institutes*, vol. LIII, 1990, pp. 185-207).

[19] The different systems are outlined in A. Cappelli, *Cronologia, cronografia e calendario perpetuo*, 5th ed., Milan, 1983.

[20] One should be equally careful when interpreting information supplied by an Italian born in the Marches about the birth date of a Florentine. See K. Lippincott, 'When was Michelangelo born?', *The Journal of the Warburg and Courtauld Institutes*, vol. LII, 1989, pp. 228-32, and idem, op. cit. in n. 17 above, p. 128, no. 141.

[21] Ibid., p. 146, no. 161.