

Glossary

Ascendant. The degree of the zodiac that appears on the eastern horizon at the moment for which a chart is cast, hence the sign and degree are termed the rising sign and rising degree. A planet between the lower meridian and the eastern horizon is ascending by virtue of the Earth's rotation but does not arrive at the Ascendant until it reaches the last degree of the nocturnal semi-arc.¹

Celestial equator. The earth's equator projected onto the celestial sphere in the same plane as the earth's equator.

Culmination. The highest point reached by a star or other celestial body in its rising arc.

Decans. The oldest texts on the decans come from coffins found in Asyut, Egypt, dated from the Ninth and Tenth Dynasty (2135 – 1986 BCE).² These early Egyptians mapped the sky onto constellations and divided the celestial circle into 36 segments. Originally used to mark nocturnal hours, these segments became known as decans when the Egyptians noted that different star groups rose at ten-day intervals.³ Manilius (fl. 1st century CE) defines it this way:

The name is derived from the numeral, since the signs, which consist of thirty degrees, enjoy a tripartite arrangement and allot ten degrees to each of the signs associating with themselves, the constellations one after the other providing a home for three signs each... The Ram claims the first decan for himself, the second portion falls to the Bull, the third decan to the Twins... The scheme works differently in the sign of the Bull... he bestows the first on the Crab, the middle on the Lion, and the last on the Maid. Yet the Bull's nature persists throughout his sign and blends his peculiar influences in every section.⁴

¹ Nicholas de Vore, *Encyclopedia of Astrology* (New York: Philosophical Library, 1947), p.13.

² O. Neugebauer and Richard A. Parker, *Egyptian Astronomical Texts. (1. The Early Decans. 2. The Ramesside Star Clocks. 3. Decans, Planets, Constellations and Zodiacs)*, 4 vols. (Providence: Brown University Press, 1960-1969), I, pp. 4-9, 16, 18.

³ O. Neugebauer, 'The Egyptian "Decans"', in *Vistas in Astronomy, Vol.1*, ed. A. Beer. Vol. 1 (London/New York 1995), 47-51, pp.47-51. I am indebted to Dorian Greenbaum for sending me her unpublished chapter on decans entitled 'Ambivalent Daimons and Astrology' as part of her PhD thesis for the Warburg Institute, September, 2008.

⁴ Manilius, *Astronomica*, trans. G.P.Goold, vol. 469 (Cambridge, Massachusetts: Harvard University Press, 1977), pp.245-247.

Manilius assigns the decans to the signs of the zodiac. These are often confused with faces (see Face).

Declination. The arc of measurement in degrees north or south of the celestial equator.

Degrees of the zodiac. The division of the zodiac — an imaginary band in the heavens described by the ecliptic that encompasses the apparent paths of all the planets — into 12 signs each of which extends 30⁰ of longitude

Ephemeris (pl. ephemerides). A table of values that gives the positions of astronomical objects in the sky at a given time or times. The position is given to astronomers in a spherical polar co-ordinate system of right ascension and declination or to astrologer in longitude along the zodiacal ecliptic, and sometimes declination. Astrological positions may be given for either noon or midnight.⁵

Equinox. Either of two times of the year when the sun crosses the plane of the earth's equator and day and night are of equal length.⁶

Face. One of the five essential dignities considered of the least importance or the smallest way in which a planet can gain dignity or strength from its zodiacal location.⁷ Guido Bonatti (c.1207–c.1296) defines it this way:

The faces of the signs are distinguished thus: each sign is divided into three equal parts, each of which is called a face. Each face consists of ten degrees. The first, which begins in the beginning of Aries and lasts until the tenth degree of the same sign is completed, belongs to Mars. The second face begins at the beginning of the eleventh degree and belongs to the Sun. The third face begins at the beginning

⁵ Neil F. Michelsen, *The American Ephemeris for the 20th Century 1900 to 2000 at Midnight* (San Diego: Astro Computing Services, 1980).

⁶ <http://wordnetweb.princeton.edu/perl/webwn?s=equinox> [Cited 19 June 2009].

⁷ Bernadette Brady, 'Four Galilean Horoscopes: An Analysis of Galileo's Astrological Techniques', *Culture and Cosmos, A Journal of the History of Astrology and Cultural Astronomy* 7, no. 7 (2003), 113-144, p.138.

of the twenty-first degree of Aries and lasts until the end of the sign Aries and belongs to Venus.⁸

Bonatti then continues through the rest of the zodiac. The system can be summarized by attributing the first face of Aries to Mars and then continuing to allocate 10⁰ of a sign to each of the planets in the Chaldean order (observed rate of movement of the planets) which is the Moon, Mercury, Venus, Sun, Mars, Jupiter, and Saturn.⁹

Heliacal rising. The term used to describe a star rising before the sun that is finishing its period of invisibility. This distinguishes it from the term ‘morning rising’ used when describing a star rising just before the sun, but which belongs to the Curtailed Passage phase and hence is *not* returning to visibility, as it never undergoes a period of invisibility. Thus the terms heliacal and acronychal to apply to horizon events which mark a change in the star’s relationship to the horizon.¹⁰

Houses. Astrological houses are formed from the equal division of a circle (the ecliptic, the equator, the Prime Vertical) into twelve segments and then, via a variety of different systems called house systems, those divisions are reflected back onto the ecliptic and this forms the circle of the horoscope.¹¹ The divisions may be time-based or space-based. The resulting twelve segments are termed the houses of the horoscope and they are said to represent different spheres of life, including physical surroundings as well as personal life experiences.¹² For astrologers, when a planet is located in a house, then that is the area of life in which that planet can best express itself. The preferred time-based house system of ancient astrology and medieval astrology until the seventeenth century was the Alcabitius (al-Qabīṣī) house system. House cusps in a chart using the Alcabitius house system may look unequal in size on a horoscope but they are equal in time.

⁸ Guido Bonatti, *Liber Astronomiae, Books 1, 2 and 3*, trans. Robert Zoller (Berkeley Springs: Golden Hind Press, 1994), p.15.

⁹ Brady, ‘Four Galilean Horoscopes: An Analysis of Galileo’s Astrological Techniques’, p.139.

¹⁰ Bernadette Brady, ‘Star phases: the naked-eye astronomy of the Old Kingdom pyramid utterances’, in *Skyscapes: The Role and Importance of the Sky in Archaeology*, ed. Fabio Silva and Campion Nicholas (Oxford: Oxbow, 2014 - forthcoming).

¹¹ James Herschel Holden, *A History of Horoscopic Astrology: From the Babylonian Period to the Modern Age* (Tempe, AZ: American Federation of Astrologers, Inc., 1996), pp.17-19, 63, 90-91, 119, 149-150, 183-186.

¹² Robert Hand, *Whole Sign Houses, The Oldest House System: An Ancient Method in Modern Application* (Reston, VA: ARHAT, 2000), p.5.

House cusps. The divisions between the houses of the zodiac. Each division is found by moving in an anticlockwise direction. The zodiac sign located at that cusp is considered to be the ruler of that house. As Robert Hand explained, ‘the cusp is the point where the symbolism of the house is expressed most intensely.’¹³

Ingress. The moment when the Sun enters a zodiacal constellation and its celestial longitude is 00° 00’ of that sign. The Sun makes an Ingress into the Cardinal Signs (Aries, Cancer, Libra, Capricorn) at the equinoxes and solstices.¹⁴

Meridian. An imaginary line encircling the earth at right angles to its equator and passing through its poles. The great circle of the celestial sphere that passes through its poles and the observer's zenith.

Nadir. The point below the observer that is directly opposite the zenith on the imaginary sphere against which celestial bodies appear to be projected.¹⁵

Paranatellonta. The full name of the original method of working with the sky’s diurnal movement of stars and planets used by Vettius Valens (120–175 CE).¹⁶ Allen defines it as: ‘The constellation north or south of the one of the zodiac that rose or set synchronically with it.’¹⁷

Precession. The ecliptic crosses the celestial equator at two points. The sun reaches these two crossing points at the time of the equinoxes. Precession, also known as the ‘Precession of the Equinoxes’ is the movement of these crossing points along the equator at the rate of 50.25 seconds of longitudinal arc per year. Thus the first point of the tropical zodiac, Aries, which is defined by the equinox, seems to move in a retrograde fashion against the backdrop of the fixed star constellations.¹⁸

Zenith. The point on the celestial sphere that is directly above the observer.

¹³ Hand, *Whole Sign Houses*, p.25.

¹⁴ Encyclopædia Britannica. 2009. Encyclopædia Britannica Online. 19 Jun. 2009
<<http://www.britannica.com/EBchecked/topic/288134/ingress>>.

¹⁵ <http://wordnetweb.princeton.edu/perl/webwn?s=nadir> [Cited 19 June 2009].

¹⁶ Vettius Valens, *The Anthology Book I*, trans. Robert Schmidt (Berkeley Springs, WV: The Golden Hind Press, 1993).

¹⁷ Richard Hinckley Allen, *Star Names: Their Lore and Meaning* (New York: Dover Publications, Inc., 1963), p.6.

¹⁸ Fred Gettings, *Dictionary of Astrology* (London: Routledge & Kegan Paul), p.252.

Appendices

Appendix 1 — Sky Dynamics

The Sun moves once around the earth through the course of a year. The path along which it travels is called the ecliptic and due to the tilt of the earth's axis, this ecliptic appears to be inclined to the earth's horizon. The acuteness of this incline will depend on the time of the year and the place on earth. The tilt of the earth's axis also means that over the course of a year life on earth is subject to the passing of the seasons, evidenced by changes in weather, hours of daylight, and differences in vegetation and fertility.

The ecliptic is divided into equal sections called degrees and there are 360^0 that make up the circle of the ecliptic. The rate of movement of the Sun along the ecliptic is roughly 1^0 per day. This unequal rate of movement of the Sun means that a year's travel covers the 365.25 days of the solar calendar year. However, although the sun appears to move—in actual fact, as we know, it is the earth that moves around the Sun—the background of fixed stars against which the sun travels appears not to do so, hence their name of 'fixed' stars, as opposed to the Sun and Moon (the luminaries or lights) and the planets (from the Greek *planetoi*, 'wanderers') which do move. These fixed stars of the ecliptic form a backdrop of unequally-sized zodiac constellations: Aries is relatively small, Pisces is relatively large, and so on. The Greeks 'neatened' this zodiac by making each zodiac sign 30^0 in length and they linked the zodiac with the seasons, thus forming the tropical or seasonal zodiac. The Greek horoscope with which we are now familiar in the modern world is composed of twelve zodiac signs made up of 30^0 each, thus 360^0 in total. Hence when the Sun travelled through the tropical zodiac sign of Aries, this correlated with the beginning of spring in the northern hemisphere; when the Sun travelled through the tropical zodiac sign of Capricorn, the northern hemisphere saw the beginning of winter.

Just as the Sun moves 1^0 a day along the ecliptic, so the point where the ecliptic cuts the plane of the horizon in the east—the Ascendant—will also move 1^0 . This means that for any given zodiac sign there will be thirty different possible degrees that can rise over the Ascendant and, over the course of a day, with 1^0 rising every 4 minutes, the ecliptic will move through the whole 360^0 of the zodiac ($4 \times 360 = 1440$ minutes = 24 hours).

Appendix 2 — Star Phasing

One of the foremost tools used to define the calendar, the seasons and the weather by those astrologers who watched the sky was to recognise when a star rose or set with the sun on a particular calendar date, the star's period of visibility in the night sky, and the star's period of invisibility when it was not present in the night sky.¹⁹ We have already seen an example of this in the Mercury rules Gemini 'chapter' with the constellation Canis Major and its most visible alpha star Sirius. To recap, when the sun was travelling through the tropical zodiac sign of Gemini, Canis Major rose at around 9:00 am and set with the sun at around 19:00, hence the constellation was not visible in the sky at that time of the year. After three months had passed and the sun had moved forward seasonally along the ecliptic and was travelling through the tropical zodiac sign of Virgo, the constellation Canis Major which had been invisible, then 'returned to visibility', being seen in the sky in the early hours and predawn. The exact date on which Sirius became visible again was known as its heliacal rising and for a time it then occupied this position as the helical rising star. This period of invisibility occurs for stars that are viewed in the northern hemisphere and which have southern declination (located south of the ecliptic), such as Sirius. When stars that are viewed in the northern hemisphere have northern declination (located north of the ecliptic), such as Boötes and its brightest star Arcturus, they will never become invisible but will be seen at some stage during the night all year round. Nevertheless they still go through star phasing as follows. At a particular time during the year they will rise at the exact moment that the sun sets — this is known as the acronychal rising — and they will not set before the sun rises, hence they will be visible all through the night and in the predawn sky. This occurred in Padua on 13 March 1309 (OS) as the sun ingressed into the tropical zodiac sign of Aries (the month prior to the 'chapter' under consideration here). Each successive night just after the sun sets, the stars of Boötes will then be seen in the darkening sky at a more advanced altitude, as if the stars are 'climbing' higher and higher in the sky each night. This is called a star's ascent, and to a viewer watching the heavens each night, and specifically Arcturus, the brightest star in the constellation Boötes, it appears as if the star is climbing a stairway up

¹⁹ Claudius Ptolemy, *The Phases of the Fixed Stars*, ed. Robert Hand, trans. Robert Schmidt (Berkeley Springs, WV: Golden Hind Press, 1994), p.iii.

to the heavens.²⁰ Finally there comes a time when the stars of Boötes are visible high in the sky as the sun sets but during the night the constellation moves closer to the western horizon and sets at the exact moment the sun rises. Then it is known as the heliacal setting star and this occurred in Padua on 2 June 1309 (OS). After this on successive nights, Boötes is visible in the sky after the sun has set but during the night it will set before the sun rises, hence it will not be visible at all in the early hours or predawn light.

²⁰ Bernadette Brady, 'The Egyptian ascension mythology of the Old Kingdom and the phenomenon of star phases', in *Current Research in Egyptology 2011, Volume 12*, ed. Heba Abd El Gawad, et al. (Oxford and Oakville: Oxbow, 2012), 40-47, p.45.

Appendix 3 — Detailed argument regarding the connection between Corpus Christi and St Thomas Aquinas

The scholarly debate as to whether Thomas did in fact compose the office, on the one hand cites the fact that Thomas' first biographer, Peter Calo writing between 1318 and 1323, did not mention Thomas as the author of the office, nor was the fact of Thomas' authorship presented as material for the process of Thomas' canonisation.²¹ Other scholars offer the testimony of Thomas' contemporaries — William of Tocco, first a pupil, then a biographer of the Saint; Ptolemy [Bartholomew] of Lucca, another pupil of the Saint, then his confessor, and later Bishop of Torcelli; John of Colonna, a contemporary who became Archbishop of Messina; Bernard Gui, historian, who joined the Order only five years after the death of the Saint; Henry of Hervorden, historian, who joined the Order in the early fourteenth century; St Antonius, Archbishop of Florence²² — all of whom unanimously upheld that Thomas *was* the author of the complete Corpus Christi office.

The question is also whether the writing of the Office of Corpus Christi might have been regarded as material evidence for Thomas' canonisation. It was Innocent III (head of the Roman Catholic Church from 8 January 1198 to his death in 1216), who established coherent investigatory principals for the two requirements for sainthood — 'works of piety in life and evidence of miracles after death.'²³ These took the form of the enquiry (*processus* or *informatio in partibus*), where commissioners were obliged to accurately record the evidential proof from sworn witnesses of the life and miracles of the saint under consideration in order to evidence the saint's reputation for sanctity (*fama sanctitatis*), and the collection of any authentic documents written about him or her,²⁴ all of which was placed into a judicial context in order to distinguish the true from the false.²⁵ Thus a fourteenth-century process of canonization could, as Leonardas V.

²¹ Barbara R. Walters, Vincent J. Corrigan, and Peter T. Ricketts, *The Feast of Corpus Christi* (University Park, PA: Pennsylvania State University Press, 2006), p.34.

²² William Bonniwell, *History of the Dominican Liturgy 1215-1945*, 2nd ed. (New York: Joseph F. Wagner, Inc., 1945), p.242.

²³ Andre Vauchez, *Sainthood in the later Middle Ages*, trans. Jean Birrell (Cambridge: Cambridge University Press, 1997), p.36.

²⁴ Vauchez, *Sainthood in the later Middle Ages*, p.39.

²⁵ Vauchez, *Sainthood in the later Middle Ages*, p.51.

Gerulaitis observed ‘be compared to a lawsuit between the pope and the petitioners.’²⁶ Evidence for Thomas presented in the summer of 1318 included notarised statements of his miracles, most of which were said to have occurred around his tomb, the requests for canonisation made by princes and universities, and a life-story written by William of Tocco, which has not survived, the edition that is in circulation being a redaction from around 1320.²⁷ André Vauchez has argued that Thomas’ sainthood was primarily predicated on his intellectual and doctrinal contribution, which included several dozen theological treatises, carefully listed by the logothete Bartholomew of Capua.²⁸ A contemporary example preceding Thomas in a similar vein was Louis of Anjou (1274–1297). The regulars claimed Louis’ intellectual activity in one so young was a gift from God and offered, as one example amongst many, Louis’ liking for *disputatio* of intellectual and doctoral questions. Given this importance attached to learning and intellectual capacity as a part of sanctity and saintliness in the early fourteenth century, and given that it was William of Tocco who unanimously upheld that Thomas wrote the complete Corpus Christi Office, and who then wrote Thomas’ life-story as evidence for his canonisation, I contend it is entirely possible that reference may have been made to Thomas’ authorship of the Office in William of Tocco’s original biography but which now, as mentioned earlier, only exists in redaction.

The debate regarding whether Thomas wrote the Office of Corpus Christi or not also appears to be engendered by the length of time between the feast’s announcement by Urban IV in 1264 until it gained universal acceptance within the Dominican Order in 1311. Although it was a decree, Urban’s successor took on the papacy amidst troubled times and made no reference to it; others saw no need for a special feast since Corpus Christi was celebrated by the daily Sacrifice of the Mass.²⁹ Over time the feast was gradually forgotten. Those standing on the side of a Thomist authorship also cite Thomas’s still-developing status that was not yet at its peak as reasons why the Thomist authorship of the liturgical composition passed from memory; some Dominicans at the time even opposed his teachings.

²⁶ Leonardas V. Gerulaitis, ‘The Canonization of Saint Thomas Aquinas’, *Vivarium* 5, no. 1 (1967), 25-46, p.31.

²⁷ Gerulaitis, ‘The Canonization of Saint Thomas Aquinas’, p.36.

²⁸ Vauchez, *Sainthood in the later Middle Ages*, p.347.

²⁹ Bonniwell, *History of the Dominican Liturgy 1215-1945*, p.240.

Rubin, however, pointed to the testimony of Thomas' disciple and confessor Bartholomew of Lucca (c.1236–c.1336) who was still alive when Corpus Christi was refounded in 1312-1317, and who defended the Thomist authorship on the basis of 'its most unique feature — the abundance of biblical material'³⁰ that was handled in a way that reflected Thomas's style and his thinking. According to R. J. Zawilla, 'material which was rarely used in Eucharistic contexts were [sic] deployed by Thomas in the office, creating a personal signature which can be traced in the *Summa* and in his writings during his second period in Paris (1269–72).'³¹ In particular Rubin noted that

the feast is highly stylised; like its prayers which move from past (Deus qui), to the present (Ecclesie tue), to the future tense (Fac nos). It is an office strong in eucharistic statements articulated in Aristotelian terms, offering a corporeal understanding of a sacramental substance, not veiled but real, which the sense cannot perceive, but faith can recognise. This eucharistic position diverges from a trend in eucharistic interpretation which we have encountered, one which stresses the symbolic and hidden nature of the eucharist, the position of Hugh of St Victor and of Bonaventure, and one from which Thomas differed.³²

³⁰ Miri Rubin, *Corpus Christi, The Eucharist in Late Medieval Culture* (Cambridge: Cambridge University Press, 1991), pp.185-186.

³¹ R. J. Zawilla. 'The Biblical Sources of the *Historia Corporis Christi* attributed to Thomas Aquinas: A Theological Study to Determine Their Authenticity.' PhD thesis, University of Toronto, 1985. See also Rubin, *Corpus Christi*, p.187.

³² Rubin, *Corpus Christi*, p.188.

- Allen, Richard Hinckley. *Star Names: Their Lore and Meaning*. New York: Dover Publications, Inc., 1963.
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