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The cover is a detail from a portrayal of the explorer Amerigo Vespucci mapping the Southern cross in 1501 (artist unknown.) Knowledge of the cross had been lost to Europeans since the time of the ancient Greeks because of the slipping of the constellation below the horizon caused by precession.

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As much as I delighted in the opportunity to be the first editor of this unique student journal, at first I worried that there would be very little to publish - after all, how much first-class work can have been done by just one group of students?

Turns out that there is a whole lot of it! Not only is that good for the journal, and a reflection of the high quality of the Cultural Astronomy and Astrology course itself, but it means that readers can be assured of the relevance and value of what they discover in the pages of the journal.

This second issue is a great example of that. Our cover is inspired by the fascinating research into the work of a fourteenth century astrologer by Chris Mitchell. Not only does it reveal the workings of a practising medieval astrologer, but it shows how assumptions by historians have distorted our understanding of such practice.

Readers with an interest in astrology will also find the research done by Melanie Sticker-Jantscheff into the attitudes towards astrology and other ‘non-scientific’ cosmologies by some contemporary astronomers and astrophysicists to be highly revealing.

Two articles are about research into the concept of sacred space in very contemporary settings: Reinhard Mussik takes a look at whether a new tourist ‘sky path’ in Saxony-Anhalt meets the criteria for sacred space, while Petra du Preez-Spaun’s enthralling research uses very contemporary theories of the sacred to see whether the modern home represents an ‘imago mundo’, a representation of the cosmos.

These articles touch the core of what the MA is about - yet they also only scratch the surface. In the issues ahead you will discover the remarkable font of original academic thinking has been ‘released’ in the students of this course. And on page 81 you’ll find Pam Armstrong’s report of the 2013 summer school where a few of them get to speak for themselves.

I’m excited to publish more articles of this quality on behalf of the centre, and look forward to more - and don’t forget, we welcome contributions from students of other, related MA courses, who just need to get in touch with me.

Rod Suskin

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Great cycles, the Conjunction of 1345, and the Black Death

by Chris Mitchell

Medieval astrology is often portrayed as being very “black and white” and involving making fatalistic predictions. While it is true that many of the texts available to us from the medieval period are essentially textbooks full of hard and fast rules, this doesn’t give us an insight into how astrologers of that period actually worked. However, one remarkable astrologer, mathematician, theologian, philosopher and rabbi - Levi ben Gerson - wrote a report, apparently for the Pope, about a Jupiter/Saturn conjunction of 1345 that grants us a rare insight into the techniques that he used as a working astrologer. This paper analyses those techniques, and shows how a combination of translation errors, theological differences and more recent assumptions by historians can skew the perspective that we have today of medieval astrology.

There is a common perception among contemporary astrologers that modern astrology involves learning about one’s self, and finding a path through life, while traditional astrology was much more black and white, focusing on prediction. Contemporary enthusiasts of traditional astrology refer to its ability to predict, such as the claim from Lee Lehman that the medieval English astrologer John of Eschenden, writing in 1345, successfully “predicted the Black Plague of 1348 from the Eclipse of 1345”.

While it is true that astrologers in the early fourteenth century were aware that 1345 would bring a significant astrological line-up – notably a triple conjunction of Mars, Jupiter and Saturn – and wrote on the subject (the date of 1345 had been noted as significant over two hundred years previously by Abraham bar Hiyya), it is worth considering the claims made on their behalf more critically. This paper focuses on one particular work, written by the Jewish philosopher Levi ben Gerson in 1344, and looks at his predictions for 1345 and analyses the sources from which he derived these predictions. This manuscript has been translated by Bernard Goldstein, and analysed by David Pingree in a 1990 paper entitled “Levi ben Gerson’s Prognostication for the Conjunction of
1345”, which includes the original Hebrew, the Latin translation (compiled from three surviving Latin manuscripts dating from the fourteenth and fifteenth centuries) and an English translation².

Levi ben Gerson, also known as Leo de Balneolis, Gersonides and “Ralbag” ("RLBG" being an abbreviation of “Rabbi Levi ben Gerson”, as written Hebrew doesn’t use vowels) was a Jewish philosopher born in 1288 in Provençe, France, who wrote in Hebrew on a number of topics, including biblical exegesis, mathematics, astronomy, astrology and theology. His most famous work is usually referred to in English as “The Wars of the Lord”³ and is a theological work that also outlines his philosophical perspective. In the introduction to *Prognostication for the Conjunction of 1345*, Goldstein and Pingree state that “Levi depended upon his own astronomical theories for the positions of the Sun and the Moon (and probably the planets as well), and upon Abraham ibn Ezra for astrological interpretations (though no astrologer is named in the text)”⁴. This is rather simplistic; while ibn Ezra would certainly have been a major influence, Gersonides’ astrological commentary is very detailed and borrows heavily from many authors of whom any Jewish scholar of the time would have been aware, and this paper will look at these ideas in more detail.

Gersonides was not the only medieval astrologer to have written about the year 1345; Abraham bar Hiyya wrote an eschatological treatise usually transliterated “Megillat ha-Megalleh”⁵ two centuries earlier in which the conjunction of Saturn and Jupiter in 1345 was said to herald a sequence of events culminating in the coming of the Messiah, and bar Hiyya himself was following many of the traditions of earlier Jewish astrologers, such as Abu Ma’shar and Masha’Allah. Indeed, at the time that Gersonides wrote his prognostication, there was interest in both the Christian and Jewish communities about this particular date and its possible significance. Nachmanides (1194-1270), the Spanish Jewish

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⁴ Goldstein & Pingree, *Prognostication for the Conjunction of 1345*, p.1

⁵ מגלה מהמלות lit. “Scroll of the Revealer”, no English translation available but a copy (in Hebrew) is available in *Sefer Megillat ha-Megalleh von Abraham bar Chija*, with introduction and notes by J. Guttman (A. Pozanski: Berlin, 1924)
philosopher, calculated the coming of the Messiah in 1358 in his commentary on Genesis 2:3, where Nachmanides relates each day of creation to a millennium on Earth, claiming the “Son of David” will come “118 years after the fifth millennium”\(^6\). According to Goldstein and Pingree, this agrees with the date that bar Hiyya had derived from his analysis some decades earlier\(^7\), although a careful reading of bar Hiyya’s work shows that he considered this to be the date that the “appalling abomination” mentioned in Daniel 12:11 was to come to pass; bar Hiyya’s actual date for the arrival of the Son of David was far later, in 1448CE or 1468CE according to an analysis by the author Shlomo Sela\(^8\). Gersonides’ contemporaries were exercised with the possible implications of the Saturn/Jupiter conjunction of 1345, and Iohannes de Muris (1320-1350) probably knew of Gersonides’ work as he makes reference to the fact that “it appears that the Jews will expect the Messiah before a conjunction of Saturn and Jupiter recurs”\(^9\) and argues against this. The English astrologer John of Eschenden claimed in retrospect to have predicted the Black Death on 20 March 1345 (two years before the Black Death ravaged Europe)\(^10\). Interest in Gersonides’ prognostication was therefore widespread, and the papal court at Avignon appears to have supported his research, since relations between the Jews of Provenç and the Popes in Avignon during the papacy of Benedict XII and Clement VI were good, as this quote from Goldstein shows:

For the cultural history of the Jews as well Provenç was of great importance. Under the rule of the counts of Toulouse and the house of Anjou, Provençal Jewry was for the most part protected, even favoured; and the popes in Avignon too had a benign policy toward the Jews\(^11\).

The idea that the conjunction of 1345 was to be significant was, therefore, in widespread circulation. However, the claims made of a successful prediction of the Black Death bear closer examination. It is certainly true that the conjunction was blamed for the Black Death after the event, as this report from the Paris Medical Faculty of 1348 shows:


\[^7\] Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.3


\[^9\] Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.37

\[^10\] Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.7

\[^11\] Feldman, Wars of the Lord, Ch. 2 p.31
We say that the distant and first cause of this pestilence was and is the configuration of the heavens. In 1345, at one hour after noon on 20 March, there was a major conjunction of three planets in Aquarius. This conjunction ... by causing a deadly corruption of the air around us, signifies mortality and famine... Aristotle testifies that this is the case... he says that mortality of races and the depopulation of kingdoms occur at the conjunction of Saturn and Jupiter

However, with the exception of John of Eschenden, who predicted “corruption in the air”, evidence of successful predictions of the plague is scanty. The warnings, though negative, were very general – for example, with Johannes de Muris predicting “accidents”. Gersonides himself is far more specific, and gives a list of expected events, the list including “diseases and death, and the evil will endure for a long time” but primarily focusing on the “destruction of a nation and kingdom by a nation of a different religion”.

The predictions that Gersonides made are quite detailed, although few of them appear to relate directly to the Black Death, so it is worth looking at these predictions more closely to see how Gersonides derived them. To do this, it is necessary to look at the historic context in which Gersonides was operating. He was Jewish, living in a Catholic country, and influenced by earlier Jewish and Arabic writers living in the Islamic world. By the time of Ptolemy (second century CE), the focus of astrology had shifted to the Hellenised world, although astrology continued to survive in Mesopotamia, with Persian astrology developing separately, while the founders of the third century Sassanian dynasty were patrons of learning, who:

sponsored the collection and translation of texts from the Byzantine empire and India, including astrological manuscripts. According to Nawbakht, who was to be one of the Caliph Harun al-Rashid’s astrologers, Ardashir I commissioned the translation of the works of Hermes the Babylonian, Dorotheus the Syrian, Cedros the Athenian, Ptolemy the Alexandrian and Farmash the Indian.

By 642CE, the Muslim armies had conquered the former Mesopotamia. As a religion, Islam was tolerant, both of astrology and of other religions with a

13 John of Eschenden, Prognosticationes de eclipsi universali Lune et de coniunctione trium planetarum superiorum que apparaverunt anno domini 1345, quoted in Goldstein and Pingree, Prognostication for the Conjunction of 1345, pp.7-8
14 Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.39
15 Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.15
16 Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.13
17 Campion, Nick, Cosmos: A Cultural History of Astrology (London: Hambledon and London, 2006). draft manuscript [hereafter: Campion, Cosmos], Ch. 11.
sacred text, which included Christianity and Judaism. This provided an environment in which astrology could thrive, and which incorporated elements from Hellenistic, Persian and Indian astrology. In addition to these astrological elements, the three monotheistic religions – Judaism, Christianity and Islam – had an eschatological component to them. In particular, Judaism and Christianity have a belief that world history is divided into one thousand year phases. Judaism bases this on various biblical references, most notably Psalms 90:4 which says “For a thousand years in your sight are like yesterday when it is past, or like a watch in the night” suggesting that divine timescales run at the rate of one day per thousand years. This is a concept that many Jewish philosophers have used, such as Nachmanides’ linkage of the six days of creation to a six-thousand year period. Whether this was intended by the original texts is dubious – the Hebrew word for one thousand used in the original Hebrew text, אָלֶף, also means “tribe” or “multitude” and can be used to indicate any large number. Christianity, likewise, has references to a literal millennium in the Book of Revelation – for example, in Revelation 20: “Then I saw an angel coming down from heaven, holding in his hand the key to the bottomless pit and a great chain. He seized the dragon, that ancient serpent, who is the Devil and Satan, and bound him for a thousand years”, a concept which found its way into Christianity from Zoroastrianism.

The idea of epochs was nothing new – in Plato’s *Timaeus* we see the concept of cycles, or the Platonic “Great Year” of vast timescales, where referring to the planets he says: “Only a very few men are aware of the periods of the others... None the less it is perfectly possible to perceive that the perfect temporal number and the perfect year are complete when all eight orbits have reached their total of revolutions relative to each other, measured by the regularly moving orbit of the Same”, taking a cyclic view of history. Campion, writing in his book *The Great Year*, argues that Plato was simply taking a cyclic view of history rather than defining a precise period, but that this misunderstanding “explains why the

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18 Campion, Cosmos, Ch. 11.
21 NRSV Rev 20:1-2
22 Campion, Nick, Astrology, History and Apocalypse (London: CPA, 2000) [hereafter Campion, Astrology, History and Apocalypse], p.90
23 Plato, *Timaeus* and *Critias*, (London: Penguin, 1977), Timaeus Ch. 7 p.54
‘Platonic Year’ of 36,000 years became a permanent feature of Islamic and medieval astrological historiography.”

The idea of cycles certainly became incorporated into medieval astrology, and by the time of the Persian astrologer Abu Ma’shar and the Jewish astrologer Masha’allah in the ninth century, the idea of the rise and fall of civilisations and religions based on planetary relationships had become established. In particular, Abu Ma’shar, using Plato’s idea of cycles, calculated a mythical “Grand Conjunction” of all planets at zero degrees of Aries and made the assumption – based on an Indian source – that they would return to their starting place after a “Great Year” of 360,000 years. A far easier cycle to calculate is that of the Jupiter/Saturn cycle. Jupiter makes a complete apparent orbit in approximately twelve years, while Saturn takes nearly thirty; this means that every twenty years they form a conjunction. Each subsequent conjunction takes place a little over 240° from the previous one, which means that for a long period each subsequent conjunction takes place in the same triplicity as the previous one. After about 240 years, the conjunction moves to a new triplicity, and after about 960 years the conjunction has move through all four triplicities. The closeness of the 960 year value (which is itself approximate) to 1,000 years gives a millennial flavour to this pattern and, indeed, Abu Ma’shar subscribed to the theory that each planet ruled 1,000 years of an historic period. The theory of the astrologers in the Islamic world that this Jupiter/Saturn cycle heralded major world events Campion calls “their most significant contribution” to astrology.

It is important to realise that Abu Ma’shar and Masha’Allah, when writing about Jupiter/Saturn conjunctions, were referring to a “mean conjunction” – the 240 year cycle is an average, whereas the actual period can vary from 238 years to 258 years. Masha’Allah wrote a book called On Conjunctions, Religions and Peoples, which has not survived intact; Pingree’s The Astrological History of Masha’Allah contains copies of the Arabic texts based on this, and Abu Ma’shar’s On Historical Astrology: The Book of Religions and Dynasties on the Great Conjunction.

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25 Campion, The Great Year p.354
26 Pingree, D, The Thousands of Abu Ma’shar (London: Warburg Institute, 1968)
27 Campion, Astrology, History and Apocalypse, p.46
30 Abu Ma’shar, On Historical Astrology: The Book of Religions and Dynasties on the Great Conjunction trans. Yamamoto and Burnett (Leiden: Brill, 2000) [hereafter Abu Ma’shar, Historical Astrology]
develops the ideas of Masha’Allah further. Masha’Allah takes as a fairly arbitrary starting point a conjunction that occurred “Five hundred and nine years, two months, and twenty-four days having passed of the thousand of Mars. It took place at seven degrees and forty-two minutes of Taurus.”\textsuperscript{31} This translates to a date of 3 November 5783BCE\textsuperscript{32}, give or take a day. The date is technically meaningless – modern computer programs don’t calculate planetary positions that far back; NASA doesn’t consider dates prior to 3000BCE to be meaningful when calculating planetary positions\textsuperscript{33} and even the Swiss Ephemeris, designed for astrologers, only interpolates as far back as 5400BCE\textsuperscript{34}. This is a minor detail, however – even the positions of the “mean conjunction” two thousand years ago bear little resemblance to the actual planetary positions of the time; it’s only as we approach the time that Abu Ma’shar and Masha’Allah were writing that we start to get approximate agreement between the mean positions and actual positions of the conjunctions. This lack of actual accuracy didn’t prevent Masha’Allah from drawing up a horoscope for “The Shift Indicating the Deluge”\textsuperscript{35}, a chart supposedly drawn up for the Vernal Equinox following the biblical Flood, with planetary positions given to the nearest minute in the text, although the actual positions are in many cases not only many degrees out, but even several signs out. “Masha’Allah is simply too sloppy a computer to be trusted at any point”, says Pingree\textsuperscript{36}.

Abu Ma’shar goes even further in using ridiculous levels of supposed accuracy:

If Saturn and Jupiter conjoin by mean motion at the beginning of a certain sign of the triplicity and their next conjunction occurs at the end of an arc which amounts to 242 degrees 25 minutes 17 seconds 10 thirds and 6 fourths and in each sign in which they conjoin\textsuperscript{37}.

In this statement, a third means one sixtieth of a second of arc, and a fourth one sixtieth of a third – roughly one ten-millionth of a degree! This level of accuracy is not only misleading, but is dubious anyway. Later, Abu Ma’shar goes on to say:

\begin{flushright}
\textsuperscript{31} Pingree, \textit{Masha’Allah} p.40  \\
\textsuperscript{32} I calculated the dates of all mean conjunctions on a spreadsheet using Pingree’s average values  \\
\textsuperscript{33} http://ssd.jpl.nasa.gov/horizons.cgi is the definitive NASA ephemeris, accessed 19 Dec 2006  \\
\textsuperscript{34} http://www.astro.com/swisseph/ accessed 19 Dec 2006  \\
\textsuperscript{35} Pingree, \textit{Masha’Allah} p.41  \\
\textsuperscript{36} Pingree, \textit{Masha’Allah} p.70  \\
\textsuperscript{37} Abu Ma’shar, \textit{Historical Astrology} Ch.1 sect.16 p.13
\end{flushright}
Between one conjunction and another there are 19 years 314 days 14 hours 23 minutes 37 seconds 18 thirds 6 fourths and 48 fifths by the mean solar year, which is 365 days without the addition of a quarter. If you multiply these 50 conjunctions by the time between one conjunction and another and its fractions, that amounts to 996 years\(^{38}\).

As the footnote in the translation of his book points out, his arithmetic is wrong. The correct calculation yields 993 years, 34 days, 23 hours, 41 minutes 5 seconds 5 thirds and 40 fourths\(^{39}\). When a result is in error by almost three years, a figure quoted to the nearest microsecond is rather pointless.

However, despite the meaningfulness of some of these calculations, the works of Masha’Allah and Abu Ma’shar highlight one vitally important technique used in medieval mundane astrology: the use of the chart of the Vernal Equinox. The conjunction of Saturn and Jupiter itself isn’t the significant moment, but the ingress of the Sun into Aries immediately following the conjunction is.

Looking at Gersonides’ prognostication, he starts with a comment that his investigation “will direct men to take counsel concerning evil so that it will not occur”, saying “This is the entire fruit of the science of judgements, and in this way it is possible for a man to change what is implied by the decree of the stars, namely things related to free will and secondly, things dependent on divine providence”\(^ {40}\), echoing a theme in his *Wars of the Lord*\(^ {41}\). He then calculates the date of the conjunction as 28 March 1345 at 1.18pm, though the Latin text gives 1.17pm\(^ {42}\). In fact, the original Hebrew seems quite clear, and doesn’t even involve any calendrical conversion – he’s using the European calendar and not the Jewish one. The original Hebrew uses the word מַרְס, which is pronounced “Mars” and is the French for March, as opposed to stating the date using the equivalent Jewish month and day. Numbers are represented as letters in Hebrew, and the Hebrew has as the time “one and [yod] [cheth] after the middle of the day” where [yod] is the letter י representing ten, and [cheth] is the letter ח representing eight – so meaning “one and eighteen”, or 1.18 in the afternoon. The mistranslation in the Latin is puzzling.

The general flavour from the position of the conjunction is that “the conjunction of Saturn with Jupiter signifies great and general events”, which he is getting directly from the works of Masha’Allah and Abu Ma’sar as mentioned above. “When it takes place in one of the airy signs, its impact is of great strength.

\(^{38}\) Abu Ma’shar, *Historical Astrology* p.13  
\(^{39}\) Abu Ma’shar, *Historical Astrology* p.13  
\(^{40}\) Goldstein and Pingree, *Prognostication for the Conjunction of 1345*, p.11  
\(^{41}\) Feldman, *Wars of the Lord*, Ch. 2  
\(^{42}\) Goldstein and Pingree, *Prognostication for the Conjunction of 1345*, p.10
When it takes place in a fixed sign, its impact will last for many days.” Pingree gives ibn Ezra as the reference for the longevity, and indeed ibn Ezra says “when a planet is in a fixed sign it indicates anything that is constant and lasting.” Pingree doesn’t give any reference for the “great strength” of air signs, and neither does ibn Ezra, who goes into detail for each sign but not for the triplicities; Al-Biruni, Ptolemy and Bonatti also have nothing to say on the subject of air signs implying great strength.

This generalisation out of the way, Gersonides then goes on to describe the “conjunction of the Moon and the Sun preceding the epoch of the year.” The technique of using the “epoch of the year” – the Sun’s ingress into Aries – is taken from the techniques of Masha’Allah, who refers to “…the form of the heavens at the entry of the sun into Aries for the year in which this conjunction [takes place]” when analysing a chart. Gersonides calculates the precise moment of the New Moon prior to the Aries ingress, which also happens to be an eclipse, making it of particular relevance in medieval astrology, following the rules of Ptolemy, who in the Tetrabiblos says “The first and most potent cause of such events [general conditions of countries] lies in the conjunctions of the sun and moon at eclipse,” and Masha’allah’s Book on Eclipses.

Drawing up the positions of houses in an astrological chart, essential for predictive techniques, was not entirely trivial. Most astrologers of the age used various available pre-calculated tables; Ptolemy’s Handy Tables were derived from his calculations in the Almagest, and by the fourteenth century astrologers in Europe were either using the Alfonsine Tables named after Alfonso X of Leon and Castile who sponsored the translation of many Arabic works, or in the Muslim world the Toledan Tables were used. Since tables are specific to a latitude, they do not travel well, and North describes the dangers of using the wrong tables. However, Gersonides had no such problem; an excellent mathematician and astronomer, he was recognised as a leading authority in the field. His treatise on trigonometry in Wars of the Lord was translated into Latin in 1342, and was known

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43 Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.11
45 Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.13
46 Pingree, Masha’Allah p.40
50 North, J.D. Horoscopes and History (London: Warburg Institute, 1986) p.97
by Regiomontanus\textsuperscript{51}. His astronomical tables were commissioned by several Christian clerics, and his accuracy for computing the mean conjunction and opposition of the Moon and Sun were renowned\textsuperscript{52}. For this reason, we can be confident about the house cusps that he calculated for the eclipse chart; unlike the computation of planetary positions, for which the mathematics is notoriously complicated, calculating the house cusps for any preferred house system is fairly trivial\textsuperscript{53}.

Gersonides lists the house positions – again, transcription and translation errors seem to have crept in as there are discrepancies between the Hebrew original and the Latin text. A glaring example is the positions he quotes for the fifth and eleventh houses. The Hebrew says “the fifth Ram [yod] [degrees] [mem] [cheth] [minutes]… the eleventh Scales [yod] [degrees] [mem][cheth] [minutes]”\textsuperscript{54}; the yod represents the number ten, mem is forty, and cheth is eight. Thus this means “5\textsuperscript{th} house: 10º48’ Aries, 11\textsuperscript{th} house: 10º48’ Libra”. The Latin, however, says “5e Arietis 6 gradus 48… 11e Libre 8 gradus 48”, which means “5\textsuperscript{th}: 6º48’ Aries, 11\textsuperscript{th} 8º48’ Libra”\textsuperscript{55}. Clearly, at least one of the cusps in this Latin translation is wrong since these two house cusps must be opposite each other. The Hebrew text may also be ambiguous since the symbol for ten (the Hebrew letter yod) is similar in appearance to the symbol for six (the Hebrew letter vav), so the Hebrew text could conceivably say 6º48”.

The house positions also pose another puzzle. Pingree goes into detail about a rather complex house system devised by North\textsuperscript{56} to make the published values of Gersonides’ house cusps match the calculated values based on his location in Provence. However, I was able to get a precise match to Gersonides’ house cusps – within a minute – with the exception of the 5\textsuperscript{th} and 11\textsuperscript{th} houses (which were an exact match to the 6º48’ figure given in the Latin version for the 5\textsuperscript{th} house), using the well-known Placidus house system. However, to do this I had to ignore the assumption made by Pingree that Gersonides must have drawn his tables up for the location of Avignon, which he did since it is widely assumed that Gersonides spent his entire life in the small town of Orange near Avignon. The only location where Gersonides’ house cusps work using Placidus (and the match is so precise that it would difficult to conclude that this was coincidence) is

\begin{itemize}
  \item \textsuperscript{51} Feldman, Wars of the Lord, Book 5 Part 1
  \item \textsuperscript{52} Feldman, Wars of the Lord, Ch. 99 Book 5 Part 1
  \item \textsuperscript{53} See for example, Meeus, Jean, Astronomical Algorithms (Richmond, VA: Willmann-Bell, 1998).
  \item \textsuperscript{54} Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.12
  \item \textsuperscript{55} Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.25
  \item \textsuperscript{56} Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.41
\end{itemize}
44°02’N, 7°38E. This is on the modern French/Italian border, in the region of Piedmont. The Jewish Encyclopedia says of Gersonides’ location:

Very little is known of Levi’s life beyond the fact that he lived now in Orange, now in Avignon, now in a town called in Hebrew עיר עוזוב "the city of hyssop" (comp. Isidore Loeb in "R. E. J." i. 72 et seq., who identifies the last-named town with Orange)\(^\text{57}\).

The word עוזוב in Hebrew means not only “hyssop”, but “marjoram”\(^\text{58}\). There was an active Jewish community in Piedmont which “spanned the Alps”\(^\text{59}\). A modern day website specialising in the cuisine of Piedmont and Liguria describes the dishes of the region as follows:

Zucchini, onions, eggplants, and green peppers are generally baked in the oven, enriched with bread crumbs, cheese, and flavours of garlic and herbs, especially marjoram.\(^\text{60}\)

I have no hard proof that Gersonides lived in Piedmont at any time, but it would fit the bill for the “City of Marjoram”, and the house cusps certainly appear to be calculated for that location.

Gersonides goes on to give further predictions based on the chart of the eclipse of 1345 (See Appendix One for the chart):

The three superior planets will be in one term and they will be very nearly in conjunction, and Venus is in aspect with them from the house of its enmity. According to [the planetary] configuration, it indicates the destruction of a nation and a kingdom by a nation of a different religion. This will begin to happen in the tenth year [after] the aforementioned conjunction according to this configuration because this conjunction will take place in the third house that signifies religions.\(^\text{61}\)

This is a fairly major prediction, but has very little to do with the Black Death. Venus is in Aries, so is considered weak by ibn Ezra as this is the sign of her detriment. In the eclipse chart, Mars, Saturn and Jupiter are conjunct, and Venus makes a 60° “sextile” aspect to them, which satisfies the conditions for ibn Ezra’s “harm of a planet when it is in a conjunction with malefic planets, or opposite them, or in a quartile, trine or sextile aspect... It is worse when one of


\(^{61}\) Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.13
the malefics is… in the 10th or 11th house relative to the place of the planet”62. Mars is the chart ruler, and Pingree claims that ibn Ezra says that the third house signifies religion63, but in fact ibn Ezra claims that the third house represents “knowledge of the Torah and the laws”64 while religion in general is given to the ninth house just as it is in modern astrology. The translation above says ‘knowledge’ of the Torah, but the word used in the Hebrew is אמונה meaning “fidelity”65 and usually associated with the idea of salvation. However, appealing to ibn Ezra as Pingree does isn’t sufficient to explain the “destruction of a nation”; we have a clue to the true nature of this eclipse in Masha’allah’s Book on Eclipses, where he says:

Masha’allah said that great events Occur on account of the conjunction of the outer planets because they are slow-moving. When the three outer planets are in one term or one decan and the sun is in aspect to them, it is an indication of the destruction of the nation, and the downfall of the kingdom, their motion from place to place, and ancient things according to the mixture of their strength, and the nature of the zodiacal signs. A great conjunction is an indication for the rising of prophets and seers, and the destruction of the climates, and more if one of the inner planets is in aspect to them. Know that the strongest among them is the significator. If it is one of the benevolent planets, it is an indication of good, but if it is malevolent, it indicates evil and confusion.66

The three outer planets are Mars, Jupiter and Saturn – and these three are all conjunct in the eclipse chart, and are all in the same “term” and “decan” (a term is an unequal division of a zodiac sign ruled by one of the five planets, and a decan is a ten degree segment of a zodiac sign). All three planets are in the terms of Jupiter, and in the second decan of Aquarius67. The conjunction is not a “great conjunction” (this is where the conjunction of Saturn and Jupiter change triplicity), but an inner planet – Venus – is in aspect to them; although Venus is a benevolent planet, she is in poor condition, in the sign of her enmity, Aries.

The reason for the ten year time span of which Gersonides writes is not clear – the usual method of prediction was based on “profections” and the concept of one sign per year, based on the complex rules outline by Abu Ma’shar68

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62 ibn Ezra, Wisdom, p.108
63 Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.46
64 ibn Ezra, Wisdom, p87
65 Brown, Driver, Briggs, Hebrew and English Lexicon (Peabody, MA: Hendrickson, 1996) p.53 (Strong’s concordance number 530)
66 Masha’allah, Eclipses, Ch IX
67 As calculated by the astrology computer program Solar Fire, and confirmed by reference to tables I used provided on Bernadette Brady’s Medieval Diploma Course by Astrologos.
68 Abu Ma’shar, Historical Astrology p.83
or the simpler “division” of one sign per year of Al-Biruni\(^69\). The eclipse takes place in the fourth house and will take ten years by profection to reach the Ascendant.

Gersonides also gives details of countries and directions (for example, that the north will beat the south) based on attributions of signs. “Since Aquarius has significance for the Land of Israel, Egypt, and the Land of Greece, most of these upheavals will take place there”\(^70\). Ptolemy introduces this concept in the *Tetrabiblos*\(^71\). Abu Ma’shar has a rather confused list of places, partially based on Ptolemy but some added from other sources. For Aquarius, he gives various places, including “Sawad, Kufa, the land of the Copts in Egypt”\(^72\). The idea of attacks coming from the North is from ibn Ezra, who associates Pisces (where the Sun/Moon conjunction takes place) with the North\(^73\), while the idea of wars are from the chart ruler, Mars, a malefic, being conjunct another malefic (Saturn) in “a sign of a strong human form”\(^74\), suggesting that the events will effect the human race (this is from Ptolemy\(^75\)).

Gersonides also looked at the conjunction of 9 March 1226, since this was the previous “Grand Conjunction” where the conjunction changed triplicity, as well as the lunar eclipse of 1345, and it’s clear to see that he made his predictions clearly and methodically using the rules of astrologers such as ibn Ezra, Ptolemy, Abu Ma’shar and Masha’Allah. The predictions made from the lunar eclipse certainly focused on violence, war and religion, rather than the possibility of plague\(^76\).

Iohannes de Muris, who arrived in Avignon shortly after Gersonides’ death in 1344 and may have helped translate Gersonides’ prognostication, wrote his own manuscript on the events. He seems to imply that Gersonides believed there would be the coming of the Messiah in 1355, and seems dubious because the conjunction is not “one of the greater ones” (in other words, it is not a Saturn/Jupiter conjunction that takes place in a new triplicity):

\(^{70}\) Goldstein and Pingree, *Prognostication for the Conjunction of 1345*, p.15
\(^{71}\) Ptolemy, *Tetrabiblos* II-5 p.163
\(^{72}\) Abu Ma’shar, *Historical Astrology* p.513
\(^{73}\) ibn Ezra, *Wisdom* p.73
\(^{74}\) Goldstein and Pingree, *Prognostication for the Conjunction of 1345*, p.15
\(^{75}\) Ptolemy, *Tetrabiblos* II-7, p.173
\(^{76}\) Goldstein and Pingree, *Prognostication for the Conjunction of 1345*, p.19
Therefore, although this conjunction of Saturn and Jupiter is not one of the greater ones and is not found in the third house of the revolution, yet because of the joining with Mars in a humid sign and in the third house both in the conjunction of the revolution and in the eclipse-causing opposition immediately following, as will be seen below, because also Saturn, being predominant there, has a great signification over the Jews and Aquarius over the Israelis and Egyptians, it appears that the Jews will expect the Messiah before a conjunction of Saturn and Jupiter recurs, which will be within 10 years, rather than at another time.77

Gersonides, however, was well aware that the 1345 conjunction was not a great one (indeed, he delineated the previous great conjunction of 1226 as part of the prognostication) and said nothing about the coming of the Messiah. He was certainly influenced by Nachmanides (in fact, he was a direct descendant of Nachmanides78), and he wrote a treatise on the Book of Daniel in 133879, noteworthy for its eschatological concerns and with Messianic speculations about the year 1358, thirteen years after the eclipse. The treatise based this date on a reading of Daniel 12:5 which says:

How long shall it be until the end of these wonders? …From the time that the regular burnt offering is taken away and the abomination that desolates is set up, there shall be one thousand two hundred ninety days. Happy are those who persevere and attain the thousand three hundred thirty-five days. But you, go your way and rest; you shall rise for your reward at the end of the days.80

This figure of 1,290 days is taken to mean 1,290 years and has nothing to do with the Saturn/Jupiter conjunction of 1345; this figure relates to 1,290 years after the destruction of the temple in Jerusalem, which was commonly believed to have taken place in 68CE (the currently accepted date nowadays is 70CE). Indeed, Gersonides was at pains to point out in the treatise that the coming of the Messiah had nothing to do with the stars, but with divine providence81.

Despite the fact that these two works were very separate, Feldman, in his introduction to Wars of the Lord, notes that at the arrival of the Messiah would be a time of conflict between Christianity (King of the North) and Islam (King of the South), with the former invading the Holy Land. “This apocalyptic war will end, Gersonides continues, in 1403 at which time resurrection of the dead will take place at the hands of the Messiah. All nations will recognise the dominion of the Lord and will abandon their false faiths and accept the Torah. The Kingdom of

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77 Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.37
79 Gersonides, דארלפרוט הספר ד (lit. “Commentary on the Book of Daniel”) (1338)
80 NRSV, Daniel 12:5
81 Goldstein and Pingree, Prognostication for the Conjunction of 1345, p.4
God will then become a universal reality.” The Book of Daniel tells the story of a noble Israelite who is forced to work for a foreign king, and has the gift of prognostication, and is able to tell the king of his downfall. The parallel between Daniel and Gersonides, a Jew who wrote prognostications and worked for the Pope, is fairly clear.

Thus there has been confusion on a number of fronts. Firstly, the dire predictions for the conjunction of 1345 made not only by Gersonides but by various astrologers of the time were only related to the Black Death in hindsight. Secondly, when looking at techniques from a contemporary perspective, errors in transcription and translation can creep in, although these wouldn’t affect the ability of the astrologers of the time to make a prediction. Thirdly, the calculations of the astrologers themselves weren’t always accurate; Gersonides was a particularly skilled mathematician and didn’t make the arithmetic mistakes that Masha’Allah and Abu Ma’shar made, but even his planetary calculations weren’t precise by today’s standards. Fourthly, astrologers of the time had a religious agenda to follow as well as purely following the method laid down, leading to confusion; there has been some mixing up of predictions in the case of Gersonides – his eschatological predictions derived from Daniel are separate to his astrological prognostications, but were lumped together by commentators at the time and subsequently, leading to assumptions that he predicted the arrival of the Messiah astrologically, a confusion that is further exacerbated when we try to analyse these works in a contemporary setting. Finally, other astrologers came up with different interpretations for the same events. Gersonides himself made no claims of precise prediction; indeed in *Wars of the Lord* he says:

> It is impossible for man to apprehend the Agent Intellect... Moreover, the Agent Intellect possesses complete knowledge of the necessary influences of the heavenly bodies upon the sublunar world, as shall be proven later in this book; but this knowledge is unattainable by man because of the small number of principles he has abstracted from sense perception. In general, it is impossible for man to know the [complete] truth of the sublunar world. This is nicely illustrated in astrology, where frequently false predictions are made. All the more so is it impossible for man to know the general order of the sublunar world by means of its causes so that his knowledge would be perfect.

So, far from medieval astrology being the purely black and white accurate predictive method that some contemporary astrologers paint it as, it was as rich, varied, open to interpretation and subject to failure as is modern astrology.

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83 Feldman, *Wars of the Lord*, Vol 1 Ch 12, p.219


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Could the new tourist route “Sky Paths” in Saxony-Anhalt with its archaeological sites be considered as sacred space?

by Reinhard Mussik

The tourist route ‘Sky Paths’, in Saxony-Anhalt, is a path connecting the world-famous archaeoastronomical sites of Nebra and Goseck, the State Museum of Prehistory in Halle (which houses the Nebra sky disc) and a little known archaeological site at Langeneichstädt. Using the example of this relatively new tourist route this article discusses the question if sacred space is a human construct. A consideration of the character of the ancient sites in the past will try to answer two questions: Can these sites be considered sacred today and can the modern pathway between them be considered a pilgrimage form of sacred site? This article shows that the ‘Sky Paths’ tourist route can be seen not only as a human construct but also as an important factor in a dialectical process in which human forms space and space forms human.

My investigation started with library and internet based studies about the sites and the tourist route ‘Sky Paths’. Since 2004 - before the establishment of the new tourist route – I’ve visited the individual archaeological sites and the Museum in Halle regularly. In 2012 I combined my library and internet based studies with fieldwork in Goseck, Nebra and Langeneichstädt. I took photos from the Goseck and Langeneichstädt and interviewed members of the Gosecker Heimat- und Kulturverein e.V. and the Warteverein Langeneichstädt e.V. In May and December 2012, I took part in an official guided tour of the Goseck site and on the 21st of December 2012, I visited the winter solstice-event in the Goseck circle. Furthermore, I visited the new visitor centre Nebra Ark in 2010 and 2012.

The idea to establish archaeological tourism on a tourist route called ‘Sky Paths’ was first presented in the Handbook of Tourism published in 2005 by the tourism-Department of the Ministry of Economics and Work of Saxony-Anhalt.¹ But in an official study about the potential of spiritual tourism in Saxony-Anhalt in

2006, only Christian pilgrimage and Christian sacred places were considered. The possibility of establishing pilgrimage routes to Pre-Christian sacred places, or places which could be important for a New Age spirituality, was not even considered. The official documents show clearly that a recreation of sacred space on the route, as well as the establishment of a new form of pilgrimage, was never intended by the creators of the new tourist route but that it was exclusively planned as a form of archaeological tourism.

I am going to compare the theories about sacred space from Mircea Eliade, Christopher Tilley, Ernst Cassirer and Emile Durkheim in my consideration of whether these sites could be seen as sacred today and if the modern pathway between them could be seen as a pilgrimage form of sacred site. The French sociologist Emile Durkheim (1858 – 1917), in his 1912 published book *The Elementary Forms of Religious Life*, analysed the relationship between religions and “the real.” A main element of Durkheim’s definition of religion was his sacred/profane dichotomy. Almost half a century later, in 1957, the Romanian philosopher and historian of religion, Mircea Eliade (1907 – 1986), sharply contrasted these two categories in his book *The Sacred and the Profane: the Nature of Religion*. The crucial points in Durkheim’s ideas about sacred space are derived from his differentiation between sacred and profane forces, and from his ideas about the development of categories like “space.” Categories like space come, according to Durkheim, from society and the very things these categories express are social too. Hence Durkheim claimed that the space society occupied provided

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3 Berkemann, "Spiritueller Tourismus in Sachsen-Anhalt, Potenzialanalyse Und Handlungsempfehlungen Für Eine Besondere Reiseform."
8 Mircea Eliade, *The Sacred and the Profane; the Nature of Religion. *
the raw material for the category of space.¹⁰ Like Durkheim, Eliade also differentiated between sacred space and profane space. However, for him, the sacredness of space is only important for religious people. Since only for them, the ‘spatial nonhomogenity finds expression in the experience of an opposition between space that is sacred – the only real and really existing space – and all other space, the formless expanse surrounding it.’¹¹ According to Eliade, the revelation of a sacred space possesses existential value for religious men because nothing can begin and nothing can be done, without a previous orientation.¹² Precondition of any orientation is the acquisition of a fixed point. Hence, from Eliade’s point of view, the ‘religious man has always sought to fix his abode at the “center of the world”. If the world is to be lived in, it must be founded – and no world can come to birth in the chaos of the homogeneity and relativity of profane space.’¹³ To act on the assumption of Eliade, people are not free to choose their sacred site. They can only search for it and find it by the help of signs.¹⁴ That means that for Eliade sacred sites are not a result of the forming of a social group or society, as Durkheim assumed. On the contrary, to find their sacred site is the precondition for the existence of this social group or society.

The German philosopher Ernst Cassirerer (1874 – 1945) was engaged in the definition of sacred space in his book, *The Philosophy of Symbolic Forms*.¹⁵ According to him, the sacred space ‘occupies a kind of middle position between the space of sense perception and the space of pure cognition, that is, geometry’.¹⁶ He stated that ‘we require a peculiar reversal of perspective, a negation of what seems immediately given in sensory perception, before we can arrive at the “logical space” of pure mathematics.’¹⁷ In contrast to the Euclidean space the visual and tactile space are both anisotropic and inhomogeneous.¹⁸ Starting from this comparison, Cassirer doubted that mythical space could be closely related to the space of perception and strictly opposed to the logical space of geometry.¹⁹ For Cassirer, mythical space and perceptive space are both ‘thoroughly concrete products of consciousness.’²⁰ According to the British archaeologist Christopher

¹² Eliade, *The Sacred and the Profane; the Nature of Religion*, p. 22.
¹³ Eliade, *The Sacred and the Profane; the Nature of Religion*, p. 22.
¹⁴ Eliade, *The Sacred and the Profane; the Nature of Religion*, p. 28.
¹⁹ Cassirer, *The Philosophy of Symbolic Forms, Vol. 2.*, Mythical Thought, p. 84.
²⁰ Cassirer, *The Philosophy of Symbolic Forms, Vol. 2.*, Mythical Thought, p. 84.
Tilley the meaning of space always involves a subjective dimension. He asserted that ‘the meaning of space cannot be understood apart from the symbolically constructed life-worlds of social actors.’ He also stated that space ‘has no substantial essence in itself. According to Tilley, space only ‘has a relational significance, created through relations between peoples and places.’ More aligned to Durkheim than to Eliade, Tilley asserts that, ‘Space is created by social relations, natural and cultural objects. It is a production, an achievement, rather than an autonomous reality in which things or people are located or “found.”’

But for him, ‘space is both constituted and constitutive.’ Place therefore, according to Tilley, is not only constituted by people, but ‘dialectically so as to create the people who are of the place.’

A helpful operational definition of a sacred site is given by Anthony Thorley and Celia M. Gunn. According to them, a ‘sacred site is a place in the landscape, occasionally over or under water, which is especially revered by a people, culture or cultural group as a focus for spiritual belief and practice and likely religious observance.’ Furthermore, a sacred site must also have one or more of nineteen characteristics catalogued by Thorley and Gunn; according to their definition, the archaeological sites on ‘Sky Paths’ could be considered to be sacred.

The Nebra sky disc was found at the plateau of the Mittelberg near the little village Wangen. In about 1,600 B.C. the bronze disc was buried there – and not simply lost or forgotten - by people of the Bronze Age. The Nebra sky disc was found 25 km from the Goseck circle. Both had some similar functions and could help to determine the summer- and winter solstices. The sky disc was not only buried on the Mittelberg, but it was aligned there. From the Mittelberg the summer solstice sunset can be seen exactly over the Brocken, the highest

21 Christopher Tilley, *A Phenomenology of Landscape*, p. 11.
22 Tilley, *A Phenomenology of Landscape*, p. 11.
23 Tilley, *A Phenomenology of Landscape*, p. 11.
24 Tilley, *A Phenomenology of Landscape*, p. 11.
That means this place in the landscape was especially revered by a people, culture or cultural group as a focus for spiritual belief and practice and likely religious observance, according to Thorley and Gunn’s stem definition. Furthermore, it has the following characteristics from the list of Thorley and Gunn: It is a natural topographical feature; a mountain, and it is embellished with man-made symbols or artefacts; in this case the burial place of holy or religious objects. Since June 2007 a multimedia visitors’ centre has been situated on the Mittelberg (Figure 1). This building takes the form of a floating golden barque, drawn from the ship element in the image on the sky disc. In the building the history of the sky disc and changing special presentations are shown (Figure 2). Furthermore, there is a planetarium where the visitor can learn about the function of the sky disk. On the plateau of the Mittelberg a colossal 31m-high peaked sundial was erected. At the exact location of the disc’s discovery the

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Figure 1, Wangen, The Nebra Ark, visitor centre
"Celestial Eye", a round mirror in which the sky could be seen, was built. The sight-axes fixed in the design of the sky disc become visible too on this place. \(^{34}\)

The next site on the ‘Sky Paths’ route is Goseck. Near the little village and the Goseck Castle was a Middle Neolithic circular ditch enclosure uncovered entirely from 2002-2004. The complex measured 75m in diameter. The wooden construction of two palisades was encircled by a V-shaped ditch and a wall. In the north, southeast and southwest three gates were found. These gates were clearly related to astronomical aspects. \(^{35}\) By observing the course of the sun on the horizon three important points for the farming year could be determined; the winter solstice, the summer solstice and the time at the end on April/beginning of

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Interestingly, the sunrise and sunset at the winter solstice, the most important events observed in this construction, are observable without the construction over landmarks too. This suggests the site was first discovered as a special place before the construction was built. On the basis of the archaeological material, the complex was assigned to the “Stichbandkeramik”, meaning the site dates back 7,000 years and was used for an estimated 250-300 years. This makes it the oldest known observatory in Europe. But, as the archaeologist François Bertemes pointed out, the construction in Goseck should not only be interpreted as a sun observatory. According to him, the archaeological findings suggest that the circular ditch enclosure in Goseck was a multifunctional monument which was primarily planned and used as a cult place and sanctuary. It was not only used to find the most important calendar dates

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36 Wolfhard Schlosser, "Astronomische Analyse Der Himmelsscheibe Von Nebra Und Des Kreisgrabens Von Goseck - Gemeinsamkeiten Und Unterschiede."
37 Official Guided Tour.

Figure 3, Goseck circle, the reconstructed ditch and palisades
but also a place for feasts and rituals\textsuperscript{41} with the site forming the cultural and/or religious centre for villages in a radius of 8km.\textsuperscript{42} The important role of the demarcation demonstrated, according to Bertemes, a sharply pronounced dualism between ‘the inside’ and ‘the outside’ and respectively ‘the sacred’ and ‘the profane.’\textsuperscript{43} Now this place has been reconstructed (Figure 3) using 1,675 oak trunks to rebuild the circular complex. Since the winter solstice of 2005, the site has been open to visitors and guided tours are offered on Saturdays, Sundays and holidays.\textsuperscript{44} Every year the winter solstice is celebrated in the reconstructed circle. During my visit at the Winter solstice sunset 2012 there were approximately 150 visitors (Figure 4).

\begin{figure}[h]
\centering
\includegraphics[width=0.4\textwidth]{goseck.jpg}
\caption{Goseck, winter solstice 2012}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=0.4\textwidth]{palisades.jpg}
\caption{Goseck, winter solstice 2012, procession between the palisades}
\end{figure}

A drummer and dancers simulated a “prehistoric” ritual in the centre of the construction round a bonfire (Figure 5).\textsuperscript{45} The drummer in the centre of the construction (Figure 6) could be heard all over the construction.\textsuperscript{46} The brilliant

\textsuperscript{42} Official Guided Tour.
\textsuperscript{43} Bertemes, "Die Kreisgrabenanlage Von Goseck: Ein Beispiel Für Frühe Himmelsbeobachtungen," p. 43.
\textsuperscript{44} Saale-Unstrut-Tourismus e.V., "Goseck – Go 7,000 Years Back in Time," \url{http://saale-unstrut-tourismus.de/web/en/content/content.php?arealD=9&menuID=34&contentID=448&active_menu=0&vhm=}.
\textsuperscript{46} A video that I made at the 21st December in Goseck to demonstrate the sound effects in the palisade circle: \url{http://www.facebook.com/photo.php?v=50590389431346&set=o.176867495700661&type=2&theater}
acoustic works only on behalf of the double-structure of the palisade.\textsuperscript{47} The visitors were merely families, interested in archaeology or history, no adherents of a pagan religion.\textsuperscript{48} This is an important distinction to sites in Great Britain like Stonehenge or Avebury where visitors come for entirely different reasons including the spiritual tourism of the “new-age”, Goddess tours and where Druids can be archetypal worshippers.\textsuperscript{49} But at some level the German solstice archaeo-tourists are engaging in a spiritual/religious activity too. They are memorialising a past tradition. In this sense, the participants of the winter solstice event are part of a living museum. They are carrying a sacred quality, even if barely acknowledged by themselves. Therefore, their visit could be seen as spiritual-religious observance too. Therefore, the circular structure in Goseck is, according to the above cited stem definition of Thorley and Gunn, a sacred place.\textsuperscript{50} Furthermore, it has the following descriptive characteristics form the list of Thorley and Gunn: It is founded upon a natural topographical feature, which means around a place where the sunrise as well the sunset at winter solstice could

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure6.png}
\caption{Figure 6, Goseck, winter solstice 2012, drummer and dancers}
\end{figure}

\begin{thebibliography}{10}
\bibitem{official guided tour} Official Guided Tour.
\bibitem{my own observation} My own observation and interviews with visitors and members of the Gosecker Sonnenobservatorium e. V.
\end{thebibliography}
be observed over prominent features in the landscape and it is embellished with a
man-made construction.\textsuperscript{51}

The next site on the ‘Sky Paths’ tour is the archaeological site Langeneichstädt. This extraordinary burial site from the Middle Neolithic period was discovered and excavated there in 1987.\textsuperscript{52} The tomb sheltered a menhir with a dolmen goddess carved into it, along with a number of pieces of jewellery.\textsuperscript{53} The condition of the stele allows certain conclusions concerning magical rituals of that time.\textsuperscript{54} The dolmen goddess is a fertility-goddess mainly found in Western and South-Eastern Europe and is very rare in the central German Middle Neolithic.\textsuperscript{55} The menhir with the dolmen-goddess carved into it was re-used as material at the burial site.\textsuperscript{56} Furthermore, the menhir was not simply used as construction material, but it was placed in such a manner that allowed a contact between the dead and the dolmen goddess.\textsuperscript{57} The archaeologist Detlef W. Müller who excavated the site asserted that the menhir with the dolmen goddess obviously should appreciate, venerate and magically enforce the buried.\textsuperscript{58} The menhir with the fertility goddess in the burial site should bring to mind that the chthonic powers were at the same time powers of fertility.\textsuperscript{59} Since the reconstruction in 1982 it is possible to visit the burial site and a replica of the menhir with the dolmen goddess which formed a historical ensemble with the

\begin{flushright}
54 Detlef Müller, "Die Göttin Mit Dem Stechenden Blick; Halle - Saale-Unstrut-Tourismus e.V., "A Small Place with Great Archaeological Significance."
\end{flushright}
Eichstädt, Warte, a medieval look-out. Every year on Whitsunday two birch trees are placed on the top of the watchtower (Figure 7). According to a member of the "Warteverein E.V. Langeneichstädt" - the association organising events and the guided tours at this place two times a year – this tradition is very old and nobody knows when in history it started. The tradition to place two birches on a tower at Whitsunday is only local but birches are a symbol of fertility throughout the region. That means that this place could have a special quality, a relationship to fertility which has transferred over the times. I visited Langeneichstädt twice, in December 2011 and in May 2012. It is the only place on the ‘Sky Paths’ tour which is not considered to have an archaeoastronomical meaning and the only site which is used for rituals up to this day. This site, according to the stem definition of Thorley and Gunn cited above, is a sacred place too. The additional characteristics from the list of Thorley and Gunn are the following: It is founded upon a natural topographical feature, on the top of

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60 Müller, "Grabkammer Vom Mitteldeutschen Typ Mit Menhir Von Langeneichstädt, Kr. Querfurt," p. 192.
one of the rare mountains in the region. The dolmen with the menhir are wholly
man-made (Figure 8), and are recognised as having a palpable and special energy
or power which is clearly discernible from that of a similar landscape or
surrounding. 63 Also, From time immemorial, only on this place, the local people
could feast and celebrate the “Whitsundays” as a fertility-ritual, which means the
site has a significant relationship with a calendrical phenomenon; with a seasonal

![Figure 8, Langeneichstädt, menhir with dolmen goddess and burial site](image)

festival at Whitsunday. 64

The last site on ‘Sky Paths’ is the State Museum of Prehistory in Halle. It
shelters one of the most important archaeological collections in Europe and is the
oldest building dedicated to prehistoric archaeology in Germany. 65 Displayed
there, amongst other findings, are the genuine dolmen goddess from
Langeneichstädt and the Sky Disc of Nebra. The place where the museum is
situated was probably never known as a sacred place, according to the Thorley

65 Halle - Saale-Unstrut-Tourismus e.V., "State Museum of Prehistory," [http://saale-
unstrut-tourismus.de/web/en/content/content.php?areaID=9&menuID=34&contentID=446&active_menu=0&vhm=](http://saale-unstrut-tourismus.de/web/en/content/content.php?areaID=9&menuID=34&contentID=446&active_menu=0&vhm=).
and Gunn stem definition, but a museum can be considered as sacred space too. According to David Chidester and Edward T. Linenthal ‘Museums are ritualized sites of memory, places that preserve, commemorate, and recreate the past, that “foreign Country,” in the present.’ Following Chidester and Linenthal, a museum can be classified under the Thorley/Gunn Definition as ‘a place especially associated with resource gathering and other key cultural activities’ and as ‘a memorial or mnemonic to a key recent or past event in history, legend of myth.’ Simon Coleman and J. Elsner state that the museum is ‘a more conventional goal for the secular pilgrim’ because many museums ‘are traditionally designed as if they were Greek temples, imbued with a classical rather than Christian sanctity, a holiness vested in the distant past.’ According to them, the ‘objects in a museum are enclosed within a series of frames which add to their sanctity like the relics in the treasury of a medieval cathedral. Symbols like the Nebra sky disc and the dolmen goddess from Langeneichstädt could be felt, according to Victor and Edith Turner ‘to possess ritual efficacy’ that means that they could be ‘believed to be charged with power from unknown sources, and to be capable of acting on person and groups in such a way as to change them for the better.’ Like the bodies of saints at a Christian pilgrimage site, these symbols could make the museum in Halle a sacred place too.

All the four sites on the tourist route ‘Sky Paths’ could be considered sacred sites. This now raises the question of whether the modern pathway between them could be considered a pilgrimage form of sacred site. According to Simon Coleman and J. Elsner ‘Pilgrimage in a context of secularisation or pluralism is a radically different phenomenon from religious travel in an age when atheism was virtually inconceivable.’ As Simon Coleman and John Eade asserted the most influential text in the anthropology of pilgrimage is possibly *Image and Pilgrimage*...
For the Turners, pilgrimage is characterised by attributes like the release from mundane structure, the homogenization of status, the simplicity of dress and behaviour and communitas. Other important factors are renewal, ordeal, reflection on the meaning of religious and cultural core-values, and a ritualized re-enactment of correspondence between a religious paradigm and shared human experience. According to the Turners, individuality posed against the institutionalized milieu during pilgrimage. The tourists on the ‘Sky Path’ could be seen as pilgrims too. According to David Chidester and Edward T. Linenthal the idea that tourism itself could be a form of pilgrimage, and tourist attractions modern pilgrim sites, was first expressed by Dean MacCannell in 1976. But, according to Erik Cohen pilgrimage and tourism differ in terms of the direction of the journey undertaken. The “pilgrim” and the “pilgrim-tourist” peregrinate toward their socio-cultural centre, while the “traveller” and the “traveller-tourist” move in the opposite direction.

One guide book, in two volumes, about the modern tourist route ‘Sky Paths’ has been published so far. It describes hiking and cycling tours around Querfurt and includes trips to Goseck, Langeneichstädt and Nebra. This book does not describe a pilgrimage from site to site on ‘Sky Paths’. But on the 15th of June 2013 the ‘Sky Paths-Run’ featuring different routes will start. The hardest route, The Run of the Heroes, will connect all the sites on the ‘Sky Path’ with a 120

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km triple-marathon on the 16th of June 2013. According to a broad definition from Alexia Petsalis-Diomidis, pilgrimage should be seen ‘primarily as a journey undertaken for religious reasons, but also including nonreligious journeys motivated by a strong personal desire.’ The Run of the Heroes clearly should be seen as modern form of pilgrimage. Another hint that the ‘Sky Paths’ tourist route could be seen as a modern form of pilgrimage is the fact that this route includes museums and visitor centres in which the visitor will be confronted with a specially constructed and idealised version of the identity of a community or society. There, like in parochial pilgrimage centres, the visitor can often find an idealised picture of a society presented, which corresponds to the particular vision of its powerful donors and its dominant clientele. According to Coleman and Elsner, this ‘picture, in both museums and places of pilgrimage, is defined by its particular construction of a mythical past, a “squeamish” selection of “ancestors.”’ The shop in one visitor centre in Goseck or Wangen or at the museum in Halle certainly would be connected the purchase of some souvenirs: postcards picturing the monuments, replicas of the sky disc, watches encompassing the sky disc and books about prehistory. These objects represent a particular selection of that which is most significant about the site. According to Coleman and Elsner these souvenirs are similar to Pilgrim Tokens.

The ‘Sky Paths’ route in Saxony-Anhalt is a path connecting sites which could be clearly defined as sacred. Even if we do not have written record from the time when the structures in Langeneichstädt, and Goseck and the Nebra sky disc were built, the archaeological findings suggest that the sites and the objects found there were constructed as sacred sites and objects in the Neolithic and the Bronze Age. All of these sites could be seen as sacred sites today and as sacred sites they should be protected, conserved and maintained. The modern pathway, or ‘Sky Path’, between them is not really used for pilgrimage from site to site but it helps to make the site public and to lure more “Modern Pilgrims” – tourists – to the sites. The sacred sites and the pilgrimage route are constructed by humans but a visit of this site and a trip on the ‘Sky Paths’ tour can also help to change the

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84 Coleman and Elsner, *Pilgrimage Past and Present in the World Religions*, p. 220.
human consciousness. Hence the sacred space on the ‘Sky Paths’ tour should not only be seen as a human construct but as an important factor in a dialectical process in which human forms space and space forms human.

**Works cited**


e.V., Halle - Saale-Unstrut-Tourismus. "A Small Place with Great Archaeological Significance." [link]

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Official Guided Tour. 27.05. and 21.12. 2012.


Defining Magic: A Reader by Otto and Strausberg is a compilation of key contributions to the scholarly treatment of magic. Extracts begin with the work of Plato, Pliny and Plotinus at one end of the time scale and end with specially commissioned contributions from five contemporary scholars at the other. Each extract has accompanying notes providing context and highlighting significant points. The book is divided into four, each section with an further introduction summarising the scholarly work in this field and locating the presented material within the scholarly frame. ¹ A General Introduction to the volume introduces the concept of magic and summarises the academic debate. The first section covers historic contributions, so showing the reader how ‘the academic debate inherited ideas and valuation patterns from former pre-academic discourses.’ ² Section two covers contributions from the theorists who laid the ground for the scholarly treatment of magic and explores that early work. Section three moves to the later twentieth century

¹ A list of the contents can be found here: http://www.acumenpublishing.co.uk/display.asp?K=e2012121911335322
and the subsequent work which built on the initial material showcased in the second section. Section four brings us the specially commissioned articles mentioned above.

This volume brings key texts within easy reach, provides excellent accompanying notes and reduces the size of the pile of reference books necessary to get to grips with the subject. This is an excellent book to begin an investigation of what might be meant by magic. The real gold here is that Otto and Stausberg do not attempt to define magic for you. They outline the scholarship of the field, draw your attention to the salient points and then leave you to think things through and draw your own conclusions. The selection of texts is well balanced and representative of the contributions to the subject.

Selection for the final list was based on which texts ‘significantly shaped the subsequent discussion.’

The section introductions mention other works and highlight their position in the on-going scholarly treatment. This provides indications of further reading and sets out an overview of the significant milestones in the debate. This is not a book which spoon-feeds the reader but it certainly lays out the pieces of the jigsaw ready for you to assemble. However there is no picture on the front of the box, no guaranteed number of pieces and nothing to say that all pieces are present but this is the nature of the debate. What this book allows you to do is build a firm foundation to participate in the next round of that debate.

Claire Chandler has completed the MA in Cultural Astronomy and Astrology at the University of Wales, Trinity Saint-David, focusing on magic in Greco-Roman Egypt and is awaiting her results. Her website is www.clairechandler.com.

Dear Editor

It may interest your readers to know that for thirteen years, there was another Spica in Great Britain! In March of 1961, Brigadier Roy C. Firebrace (1889-1974) founded an astrological journal called Spica: A Review of Sidereal Astrology. He started the journal after resigning his post as the first president of the Astrological Association of Great Britain, which he co-founded with John Addey in 1958. Over the course of his astrological career, Firebrace worked very closely with Irish astrologer Cyril Fagan, who pioneered the modern Western Sidereal movement. Spica became a leading force in the promotion of Western Sidereal astrology. Firebrace served as the editor until his death in October 1974, after which the journal was discontinued. Shortly thereafter, the siderealist movement also went into decline.

--Jenn Zahrt, PhD

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What are the attitudes of astronomers and astrophysicists regarding non-scientific cosmologies?

by Melanie Sticker-Jantscheff

This paper describes a small interview study into the attitudes of astronomers and astrophysicists regarding non-scientific cosmologies. Questions covered were: their motivation for doing science, their attitudes regarding religion and spirituality as representing non-science, and their opinions about astrology, based on the fact that the development of astronomy and astrology in the course of history is closely intertwined. The study sheds some light on how these astronomers and astrophysicists operate between scientific curiosity, with its occasional need for freedom from culturally imposed restrictions, to question existing assumptions about the nature of a research subject on one side, and the integration of research findings into a culturally meaningful context on the other. It also shows that attitudes regarding non-scientific world views are nuanced and multi-layered.

Introduction

An examination into the attitudes of astronomers and astrophysicists regarding non-scientific cosmologies, whereby cosmology is defined as an ‘understanding of the organization and evolution of the universe’, necessarily needs to take into account that no absolute definition of scientific versus non-scientific exists: The term science derived from the Latin word scientia, meaning ‘knowledge’, originally knowledge which could be gained through either experience, both practical as well as inner and subjective, or experiment.¹ It was not until the 19th century, that scientific mainly took on the meaning of a method perceived of as being applied by human beings as neutral observers towards

nature as external object and set in contrast to subjective areas like religion, art, psychology and values.\(^2\) Despite this distinction, however, no consensus exists up to this day about what exactly ‘the scientific method’ is and, as Steven Shapin writes, ‘[d]isunity theorists doubt that there are any methodical procedures held in common ... which are not to be found in non-scientific forms of culture’.\(^3\) Against this backdrop, I conducted a small interview study with five academic astronomers and astrophysicists. My questions covered their motivation for doing science, their attitudes regarding religion and spirituality as representing non-science, and their opinions about astrology, based on the fact that the development of astronomy and astrology in the course of history is closely intertwined.\(^4\) This paper sheds some light on how these astronomers and astrophysicists operate between scientific curiosity with its need for freedom from culturally imposed restrictions, to question existing assumptions about the nature of a research subject on the one side, and the integration of research findings into a culturally meaningful context on the other. It also shows that attitudes regarding non-scientific world views are nuanced and multi-layered.

**Literature Review**

The question of what actually motivates scientists to do science has been the subject of academic research and can provide useful hints about the attitudes of scientists towards non-scientific areas of life.\(^5\) Apart from the hypothesis that scientists work for money and status just like ‘everybody else’, Hagstrom, as well as Mulkay and Turner promoted recognition-exchange theory as the main force of motivation, whereas Gustin, based on Shils’ theory of the charismatic nature of science, argues that science provides ‘a link between an individual and the cosmos’, thereby satisfying the need for meaningful order.\(^6\)

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\(^2\) Williams, *Keywords*, p. 279
Some older proponents of secularisation theory claim that an increase of scientific knowledge will gradually lead to a general decline of religion. As Robert Wuthnow says, these scholars have ‘tended to view science as an unquestionable description of fact’, in contrast to religion which relies on belief without need of proof, resulting in the ‘proverbial “warfare” between reason and faith’. According to Wuthnow, there is evidence, however, to view science more as an activity dealing with ‘a precarious reality’, in need of setting itself apart from traditional, dogmatic and ‘reality-maintaining’ religious views. Elaine Howard Ecklund has also challenged a simplistic understanding of secularisation theory with regard to the relationship between science and religion. Ecklund draws on the sociological concept of boundary theory to argue that ‘science and religion might actually overlap or influence one another’ because scientists engage in ‘negotiat[ing] boundaries’ between the two fields. This view contrasts Stephen Jay Gould’s opinion that science and religion belong to ‘non-overlapping magisteria’. An additional perspective is offered by Fred Grinnell who adds art as a third means of human expression besides science and religion, in order to create a holistic world view.

The discipline of ‘Cultural Astronomy and Astrology’ is located at the interface of science and religion - astronomy today being one of the natural

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9 Wuthnow, ‘Science and the sacred’, pp. 194, 199
10 Ecklund and Scheitle, 2007
sciences and astrology considered a belief system in the widest sense.\textsuperscript{14} As Nicholas Campion has shown, no consensus definition of what astrology actually is exists among practising astrologers, leading him to suggest that it might actually be better to speak of ‘astrologies’ in the plural.\textsuperscript{15} By contrast, publications from scientists voicing their objections against astrology unanimously define astrology as an anachronistic belief in direct physical influence and therewith deterministic effect of planets and stars on human life on earth.\textsuperscript{16}

**Methodology**

The present small case study was designed within the framework of the MA study course in Cultural Astronomy and Astrology at the University of Wales, Trinity Saint David. Drawing on my own professional background as a scientist, a biologist, with profound interests in seemingly non-scientific subjects, among them astrology, I sent a personally addressed e-mail to fifteen faculty members, thirteen men and two women, at four different universities/research institutions in Switzerland and Germany. I explained the scope of my research in a few sentences, attached my CV and also sent a link to the university’s web page in case they might be interested in further information. Two professors immediately agreed to my interview request, one of them, upon a further request, also allowing me to contact some of his associates for an interview. I therefore contacted two postdoctoral fellows in this research group who both agreed to an interview. A third professor forwarded my e-mail to one of his postdoctoral fellows and this person then contacted me to schedule an interview. Two other professors answered my e-mail, one by saying that he would not be available for an interview, but without naming a specific reason and the other one by saying that he just started his position. Ten faculty members did not send any answer. In the end, I was able to schedule interviews with two professors, both around sixty years old, and three postdoctoral fellows, in their early thirties, all of them male and of three different European nationalities. Apart from the interview with R., which was conducted in English, the interview language was German. The semi-structured interviews took place within a period of three weeks in March and April 2013, were conducted face-to-face at the interviewees’ respective


\textsuperscript{15} Campion, *Astrology and Popular Religion*, p. 1; chapters 12 and 13

workplaces and varied in length between thirty and forty minutes.\textsuperscript{17} They were recorded with the permission of the interviewees and subsequently transcribed in full length.

Concerning my position as an insider and/or an outsider in relation to my target group, I was an outsider based on the fact that I did not know any of my interviewees before the interview and I approached them as a researcher. In addition, I did not expect my interest in astrology to be shared by my interviewees, based on the fact that I have never met any scientist with knowledge of the subject, added to my position as an outsider. On the other hand, I was also an insider, based on shared professional activity in the natural sciences and my own personal motivation for this research project, with its roots in the tension between science and non-science as outlined in the introduction. During the interviews I tried to avoid asking leading questions and instead encouraged interviewees to ‘speak in their own terms’ in order ‘to discover the range of meanings given’ to their subject of interest.\textsuperscript{18} Lynda Measor calls this the possibility for interviewees to ‘ramble’ and Alan Bryman, in explaining Measor’s method, says ‘rambling is interesting because it may reveal a matter of importance’.\textsuperscript{19}

**Findings and Discussion**

In order to explore the attitude of astronomers and astrophysicists regarding non-scientific cosmologies, I considered it necessary to first take a look at their attitude regarding science, what was their motivation for becoming engaged in science, to continue to do science and their understanding of what science is. When I asked about their motivation, all interviewees referred back to their childhood and schooldays. They reported a fascination with as diverse things as the starry sky at night, ‘the beauty of pure [mathematical] logic’, space travel or science fiction adventures, but for all of them it was this fascination, and enthusiasm to further explore, which lead them to study physics.\textsuperscript{20} B., a professor, who as a youth already had become an amateur-astronomer and ‘even tinkered a telescope’ to observe the night sky, said that being an astronomer for him is ‘[the fulfilment of] a childhood dream’.\textsuperscript{21} He explained his fascination with ‘a deep

\textsuperscript{17} See appendix for an outline of the interview questions
\textsuperscript{20} [original text: ‘die Schönheit der reinen Logik’]
\textsuperscript{21} [original text: ‘und ich habe dann sogar ein Fernrohr gebastelt’; ‘um so eigentlich meinen Bubentraum oder –wunsch zu erfüllen’]
psychic predisposition or longing, which [he thinks] most people have ... but which some take more seriously than others' and, referring to Pythagoras' and Plato’s cosmological models, expressed his growing conviction that ‘there is a point to the ancient vision of a connection between sky and soul’.22

F, the second professor I interviewed, with his fascination for logic and mathematics from early on, had come to work in astrophysics in a roundabout way. He had grown up in a very industrial area ‘where one could never see the stars’, as he told me with a laugh, the first time he ‘consciously [watched] an absolutely clear starry sky, where one had the feeling the stars are within one’s reach’, was at the age of thirty in California, while holding his first postdoctoral position.23 He described this as ‘an incredibly powerful experience’ and went on telling me about how he sometimes enjoys arriving at his weekend house located in an area ‘with absolutely no light pollution’ and that this, had also lead him to learn about the constellations.24 He described himself as a logical person and for him the fascination of the observational experience is inextricably linked with his scientific knowledge. He said, ‘to watch and to know, this is a star of that category, and this is a red giant, and that one needs some other billions of years before it explodes, and this one will end one day as a planetary nebula’.25

Though B. was inspired to become a scientist by an emotional experience of interconnectedness, ‘resonance’ as he called it, and F. by his fascination for ‘mathematics and mathematical proof and, if you so want, the beauty of pure logic’, both connect their professional choice to something outside of science.26 This finding lends support to Gustin’s theory that scientific activity ‘seems to or is thought to [bring a scientist] into contact with what is essential in the universe’.27

In Gustin’s opinion, ‘what is essential’ is ‘a fundamental principle which has a

22 [original text: ‘Und ich denke, das ist eine ganz ganz tiefe psychische Veranlagung oder Sehnsucht, die die meisten Menschen haben, ...glaub ich, die dann halt gewisse Leute ernster nehmen oder eben dann versuchen, umzusetzen, ...es ist etwas ganz Tiefes, denke ich, weil ich selbst immer mehr überzeugt bin, dass diese uralte Vision, dass Himmel und Seele zusammengehören...dass da was dran ist’.]
23 [original text: ‘da hat man natürlich nie die Sterne gesehen’; ‘So richtig bewusst, so einen absolut klaren Sternenhimmel, wo man das Gefühl hat, man könnte die alle greifen, habe ich in Kalifornien gesehen, bei meinem ersten Postdoc im Jahre 1981.’]
24 [original text: ‘Und das war ein unheimlich beeindruckendes Erlebnis.’; ‘da gibt es keine light pollution, nix’]
25 [original text: ‘und dann aber dahin zu gucken und zu wissen, das ist ein Stern dieser Gattung, und das ist ein roter Riese, und der braucht noch soundso viele Millionen Jahre, bis er explodiert, und der wird irgendwann mal als planetarischer Nebel enden’]
26 [original text: ‘Mathematik und mathematische Beweise, und wenn man so will, die Schönheit der reinen Logik’]
27 Gustin, ‘Charisma’, p. 1124
determining, ordering significance’, and it can be argued that both the feeling of resonance and the discovery of mathematical logic fulfil this criterion.\textsuperscript{28} The thesis of a functional ‘similarity between science and religion’, based on the ‘centrality of charisma to both’, in Gustin’s words, is therefore supported by the statements of these interviewees regarding their motivation.\textsuperscript{29}

M., a postdoc, told me that apart from the fascination with ‘astrophysical objects ... of course, as a schoolboy one has this dream to become famous one day and one of the most renowned researchers, but one realises quite fast that there are a lot of good people around and it is difficult to get on. ... There is certain disillusionment’, which has no influence however on his general enthusiasm for the field of study.\textsuperscript{30} According to Price, who found ‘that most scientists ... actually publish very little [and] do not receive formal recognition ... from the scientific community’, this postdoc’s statement illustrates well the reality of working within the scientific community.\textsuperscript{31} Still, these scientists continue to be motivated to do science. In this light, the recognition-exchange theory proposed by Hagstrom, Mulkay and Turner changes its meaning – publication and peer-recognition, though important for professional survival, are not always a source for motivation to do science. Instead, as Grinnell, who describes ‘the everyday practice of science’ so well, put it, they are important to gain ‘credibility – convincing peers that the new findings are correct’.\textsuperscript{32}

O., another postdoc, stressed the importance of ‘curiosity, to find something new, ... the freedom to follow one’s interests’ for his motivation.\textsuperscript{33} He told me with enthusiasm that ‘each answer leads to three more questions, it is a never-ending story’ whereas the actual field of study is of lesser importance to him.\textsuperscript{34} In this context, interestingly, two other postdocs reported a change in their understanding of what physics is during their studies. As R., the third postdoc I interviewed, said:

\textsuperscript{28} Gustin, ‘Charisma’, p. 1125
\textsuperscript{29} Gustin, ‘Charisma’, p. 1131
\textsuperscript{30} [original text: ‘aber dann träumt man natürlich schon irgendwie als Schüler davon, dass man dann mal irgendwie, also, ganz bekannt wird, einer der weltweit wichtigsten Forscher wird, und so, und man merkt halt dann schon schnell, dass es eine Menge guter Leute gibt auf dem Gebiet und, ja, dass es halt auch sehr schwer ist, vorwärtszukommen, und das ist dann schon auch eine gewisse Ernüchterung’]
\textsuperscript{32} Grinnell, ‘Doing Science’, pp. 205
\textsuperscript{33} [original text: ‘die Neugier, etwas Neues herauszufinden... eine gewisse Freiheit, seinen Neigungen nachzugehen’]
\textsuperscript{34} [original text: ‘Jede Antwort wirft drei neue Fragen auf, es ist eigentlich eine nicht endende Geschichte’]
I must say, it was not really easy, in the sense, that I was quite disappointed ... One of the feelings I had, or one of the revelations I had ... is, that actually nothing in physics is really exact. So whatever we do is an approximation of what happens in nature and we don't have exact descriptions of anything. So whatever we measure, whatever we think of things, are just approximations. This was a kind of drawback somehow, at the very beginning.

And M., who indicated that questions like ‘where does humanity come from [and] how the cosmos came into being’ had constituted ‘a significant aspect’ for his motivation to study physics, reported

physics is one possibility to describe our environment, on a certain level, ... but it is only a limited part of the whole, not reality as such, ... it is only an image. ... At the beginning of my studies this was not yet clear to me, back then I thought, ok, with physics you can explain anything and it provides the answers to all questions, but meanwhile I don’t see it like this anymore.35

These statements provide evidence for Wuthnow’s suggestion to view science as an activity dealing with ‘a precarious reality’ rather than ‘an unquestionable description of fact’.36 It can be argued therefore, that in the eyes of these scientists, a scientific cosmology is tentative and ever unfinished, in a sense it is under constant revision by the scientific activity. At the same time and causing some kind of tension, these statements also show the wish for final answers or, again in Gustin’s words, the ‘fundamental principle which has a determining, ordering significance’.37 How this tension is met or if it is perceived at all, will influence a scientist’s definition of and attitude towards ‘non-science’ and, as I would argue, depends on individual personality characteristics and life experiences.

How, then, do the astronomers and astrophysicists I interviewed relate to non-scientific cosmologies? I was aiming at as broad as possible an understanding of non-scientific cosmologies and not limiting it to mainly the Christian religion as the predominant European tradition. To this end and following the approach of Ecklund, I first asked my interview partners to provide me with their definition of

35 [original text: ‘und ein wesentlicher Aspekt war da auch schon halt so...äh...ja...also, wo die Menschheit herkommt und wie unser Kosmos entstanden ist’; ‘Physik ist halt eine Möglichkeit, wie wir unsere Umwelt beschreiben können, auf einer bestimmten Ebene, ... dass es auch nur ein beschränkter Teil ist davon und nicht die Realität an sich. ...es ist ein Bild, das wir uns machen’; ‘das war mir am Anfang von Studium noch nicht so bewusst, das war noch nicht so relevant, da dachte ich, ok, mit der Physik kann man alles erklären, und die liefert die Antwort auf alle Fragen, die existieren, und das sehe ich eigentlich mittlerweile nicht so.’]
36 Wuthnow, ‘Science and the sacred’, p.194
37 Gustin, ‘Charisma’, p. 1125
religion and spirituality and how they perceive the relation of these with science, and then for their personal attitude.\textsuperscript{38}

There was a tendency among the interviewees to relate religion with structure, organisation and church institution, whereas spirituality was perceived as something personal and individual. R. called religion ‘an old structure ... outdated, in a sense. And it has not made any attempt to get up to date, with the actual, within nowadays situations and social behavior. ... And they still want to impose some kind of rules which are not useful these days at all. [It is] even an industry’. This postdoc could not relate to the term spirituality either, but added that ethics ‘is something mandatory and it should be to some extend the substitute for religion’, suggesting the importance of a value system outside science.

O., who had made a distinction between religions in general and the related institutions, told me about the latter: ‘to put it bluntly, these institutions just abuse [people’s] spirituality for their own ends’.\textsuperscript{39} He then defined spirituality as seeking answers to ‘questions like “Who am I?”, “Where do I come from?”, “Where do I go?”, “Why am I here?”, “What is my responsibility?”’, questions which he considered as just part of being human.\textsuperscript{40} This postdoc argued that many people outside science perceive a conflict between religion and science based on a misunderstanding of science. ‘Scientists - or science - do not want to answer any spiritual questions’, but instead aim to understand the world in which we live.\textsuperscript{41} He considered himself an atheist and spiritual in the sense mentioned above and could not see any conflict of the latter with being a scientist – a finding which is in line with Ecklund’s description of the ‘spiritual atheist’.

The same was true for F., who considered himself an agnostic and not deeply spiritual – ‘for me it would simply be nice to perceive some abstract meaning...some logic...with this I would be content ... I don’t need things wrapped in spirituality’, as he put it – religious and spiritual questions in general clearly belong to a different realm than science.\textsuperscript{42}

\textsuperscript{38} Elaine Howard Ecklund and Elizabeth Long, ‘Scientists and spirituality’, Sociology of Religion, 72 (3), 2011, pp. 259-260
\textsuperscript{39} [original text: ‘die Kirche, oder halt andere Weltreligionen, und das sind dann, also, in meinen Augen sind das dann halt, die Institutionen, also, um es böse zu sagen, die dann diese Spiritualität missbrauchen für ihren eigenen Selbstzweck’]
\textsuperscript{40} [original text: ‘die Frage: Wer bin ich? Woher komme ich? Wohin gehe ich? Warum bin ich hier? Was ist meine Aufgabe?’]
\textsuperscript{41} [original text: ‘die Wissenschaftler, die Wissenschaft, möchte ja eigentlich gar keine Antworten auf diese spirituellen Fragen geben, sondern sie möchte Antworten auf die Welt, in der wir leben’]
\textsuperscript{42} [original text: ‘für mich wäre schön, ´nen Sinn zu sehen...und ´ne Logik...und dann wäre ich zufrieden... Muss nicht noch ´ne Spiritualität drumrum sein.’]
These two interviewees’ opinions are therefore in agreement with Gould’s theory of ‘non-overlapping magisteria’: no conflict but also no overlap between religion or spirituality and science is perceived because one is dealing with separate levels of being.\(^{43}\) For B., however, his knowledge that the cosmos outside - stars, planets, galaxies – is composed of the same physical material as human beings on earth, gives rise to what he names ‘resonance [which is] a form of spirituality [and] in complete accordance with ancient [Greek] philosophy’.\(^{44}\) In contrast to my other interview partners who, to the extent that they add importance to it, keep their search for values or meaning confined to their private lives, this professor engages in creative public expression of both his scientific and non-scientific interests. A few years ago, he published a book about his view on the analogies between the medieval world view, as it was masterfully narrated by the medieval Italian poet Dante Alighieri in his ‘Divine Comedy’, and modern scientific cosmology.\(^{45}\) He also regularly gives interdisciplinary public lectures and seminars touching on religious and spiritual themes, one of which I attended shortly after our interview. When, during the interview, I asked him to tell me about his motivation for his non-scientific engagement, he referred to the ‘freedom to create a new world view, because a world view is nothing fixed’ and the prevailing world view for him seems to be a remnant from the 19\(^{th}\) century.\(^{46}\) He added that he is aware of doing this as a philosophical lay person, ‘it should be the task of philosophy, but somehow they don’t do it, maybe they don’t have enough scientific understanding, or they don’t dare’.\(^{47}\) On the other hand, he also emphasised that his book is neither a scientific nor scholarly work, but that he ‘had used scientific knowledge as starting material to create something’, in the

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\(^{43}\) Gould, ‘Nonoverlapping Magisteria,’ pp. 16-22

\(^{44}\) [original text: ‘diese Resonanz, …, das ist für mich schon eine Form der Spiritualität, auch das ganz im Einklang mit antiken Meinungen und Philosophie, dass es diesen Zusammenhang gibt.’]


\(^{46}\) [original text: ‘und ich habe ja auch diese Freiheit mir genommen,…, man darf sich ein neues Weltbild daraus bilden,…, dass das gängige Weltbild, das wir haben, eigentlich nichts fixes ist’]

\(^{47}\) [original text: ‘das wäre eigentlich die Aufgabe der Philosophie, aber die machen es irgendwie nicht, weil sie vielleicht die Naturwissenschaft zu wenig verstehen, oder sie sich nicht getrauen’]
sense an artist would do. It can be argued therefore, that for this professor, science and non-science, let this be religion or spirituality, do not belong to ‘non-overlapping magisteria’, but can be combined and expressed through creative and artistic activity.

Grinnell explained the ‘artistic attitude’, in contrast to science’s quest for credibility and religion’s for truth, in paraphrasing Fineberg, as ‘the individual offers through art his or her momentary vision of the world’. According to Grinnell, ‘a single individual can practice the world as science, religion, or art depending upon the attitude that he or she brings to the project’ and should aim at, as Niels Bohr suggested according to Grinnell, ‘complementarity’, accepting the different approaches ‘as they are, creating a state of holistic, dynamic tension’.

Coming to the last topic covered during my interviews, I was especially curious to learn about astronomers’ and astrophysicists’ opinions and attitudes regarding astrology, since even among practising astrologers, no consensus exists as to what astrology actually is and some rather polemical attitudes have been published by scientists.

When asked what they associate with the term astrology, interviewees mentioned the horoscope, newspaper sun-sign columns, astrology TV-shows and the idea that ‘the stars influence human life on earth’. The opinion that astrology is based on a belief in direct physical influence from stars and planets on human life and the lack of any scientific evidence for such a belief, was the main reason for my interview partners to dismiss astrology as a subject worthy of investigation. F. mentioned the phenomenon of the precession of the equinoxes caused by the movement of the earth’s rotational axis as proof that astrology is based on false assumptions. Three of my interview partners speculated about the possibility that instead of the constellations, it might be the influence of the seasons, weather and temperature, during the first few months of life that cause perceived similarities of character in people born at the same time of the year. As to the reasons why astrology, understood as believing in the advice and

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48 [original text: ‘freieren Umgang mit naturwissenschaftlichen Erkenntnissen. Man kann etwas damit machen, das machen Künstler sowieso, die nehmen das quasi als Material, als Stoff, mit dem sie was machen’]
51 Campion, ‘Astrology and Popular Religion’, p. 1; Bok and Mayall, ‘Scientists Look at Astrology’; Bok, ‘Objections to Astrology’
52 [original text: ‘der Einfluss der Sterne auf die Menschen auf der Erde’]
predictions of sun-sign columns or astrology TV-shows, is popular, the main reason speculated about, was that people like to know the future because it gives them a feeling of security. ‘For normal people, it is easier to understand astrology than astronomy’, and people are gullible, as R. said, mentioning a paper by Bertram Forer.\(^{53}\)

Though the existing practice of astrology, as it appears to these astronomers and astrophysicists, cannot be taken seriously, B. told me that he ‘does take seriously the motivation to do it’, because in his opinion, it is rooted in the ancient Greek idea of the interconnectedness of everything within the cosmos, something of which he is convinced of himself.\(^{54}\) In O.’s opinion, in general, ‘a scientist actually should not regard things as nonsense before knowing anything about them’. Regarding the polemics against astrology as being a danger, with which neither he nor the other interviewees were familiar, he suspected power games as being the reason behind it, an idea that makes sense in the light of Thomas Gieryn’s study on ‘Boundary-work and the Demarcation of Science from Non-science’.\(^{55}\)

My interviewees’ opinions regarding astrology were mainly based on their impression that astrology is about the belief in physical influence of the stars and planets on human life on earth, a concept that, as Campion notes with some surprise, is also prevalent among a high percentage of practicing astrologers.\(^{56}\) As current scientific knowledge does not provide any explanation for this idea and rather disproves it, in my opinion it is understandable that astronomers and astrophysicists dismiss it as an outdated concept. In addition, such an understanding of astrology with its inherent determinism and the need to believe in it, in the eyes of the scientists I interviewed, can only be attractive to people who either cannot or do not want to think – whereas thinking, that is questioning assumptions, is a most important activity for a scientist.

These findings, I would argue, point to the core problem: astrology lacks credibility among the scientists I interviewed, because they have no knowledge about on what other theories people using it base their practice, even though a

\(^{53}\) Bertram Forer, ‘The Fallacy of Personal Validation: A Classroom Demonstration of Gullibility’, 1949, pp. 118-123

\(^{54}\) [original text: ‘aber was ich ernst nehme, ist eben quasi die Motivation dazu, weil, das ist dann wieder dasselbe, nämlich, dass wir verbunden sind mit dem Himmel’]

\(^{55}\) Gieryn, ‘Boundary-work’; [original text: ‘Also, für einen Wissenschaftler, der sollte eigentlich nicht sagen, das ist Quatsch, ohne davon eine Ahnung zu haben.’]

\(^{56}\) Campion, ‘Astrology and Popular Religion’, p. 182
variety of theories exist. Campion mentions definitions of astrology as ‘a psychological tool’, ‘a religion’, ‘a healing art’, to name just a few. Brady describes some astrologers as those whose beliefs are deeply embedded in classical philosophy, as well as others, who might ‘seek to delude their victims’. Only B. was familiar with another concept of astrology, namely ‘an astrology ... which is not based on influence but rather on synchronicity in terms of C. G. Jung’s understanding’, and one, as he carefully admitted, he ‘might be able to take seriously’.

Based on Grinnell’s analysis, gaining credibility for scientists is of major importance in the scientific process and their attitude regarding astrology, if not simply seen as a system one needs to believe in, it can be argued, is in no way different from their attitude regarding any novel or yet unknown scientific theory: upon first encounter it will be met with skepticism.

Conclusion

This paper presents findings I obtained within the framework of a small interview study among five academic astronomers and astrophysicists, examining their motivation to do science and their attitude regarding non-scientific cosmologies as represented by religion, spirituality and astrology. I would like to emphasise that no generalising conclusions can be drawn from such a small study, all the more, that no information is available as to the motives of the large group of non-responders to my initial request for an interview. Nonetheless, qualitative results as obtained from a study like this one do provide valuable information for potential further research, because each person can be seen as exemplary for a larger group of individuals.

The findings presented support Gustin’s argument of a functional ‘similarity between science and religion’ as a search for an ordering principle, an argument based on Shils’ theory of the charismatic nature of science. Furthermore, they illustrate the tension between the scientific enterprise, which requires freedom from culturally imposed restrictions to challenge established assumptions about the nature of things, and the need for a meaningful context

58 Campion, ‘Astrology and Popular Religion’, p. 178
59 Brady, ‘Theories of Fate’, pp. 296-297
60 [original text: ‘die Form der Astrologie, die ich noch ernst nehmen kann, ist die, die eben nicht von einem Einfluss spricht, sondern von Synchronizität, im Sinne von C.G. Jung’]
61 Grinnell, ‘Doing Science’, p. 206
62 Gustin, ‘Charisma’, p. 1131; Shils, ‘Charisma’
and reliable structures within to live one’s life. This is in line with Wuthnow’s thesis of science dealing with a ‘precarious reality’. The astronomers and astrophysicists I interviewed objected to fixed or non-disputable world views, as, in their eyes, represented by some forms of religion and also astrology, but did not dismiss individual forms of spirituality in general. Thus, their attitude to non-scientific cosmologies depended on their personality and, presumably, life experiences, and in general was characterised by a reflective and nuanced approach.

**Works cited**


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63 Wuthnow, ‘Science and the sacred’, pp. 194, 199


If sacred space is a human construct, does the notion of “home” in the contemporary world represent an *imago mundi*?  
*by Petra du Preez-Spaun*

This essay explores the concept of the contemporary home as sacred space, by comparing and contrasting traditional and historical notions of the home as sacred space with current considerations and theories of the sacred. It does so in order to explore whether the contemporary home represents an *imago mundi* - a representation of the cosmos and/or the heavens and hence a sacred space. It furthermore focuses on particular components of the home to discuss their possible sacred content and it also examines the ideas of various theorists to conclude whether or not the contemporary home is an *imago mundi*.

Previous work related to the topics of home environments and sacred space are: Mircea Eliade’s *The Sacred and the Profane*, David N. Benjamin’s, *The Home: Words, Interpretations, Meanings, and Environments*; Irwin Altman and Carol M. Werner’s *Home Environments*; Mihaly Csikszentmihalyi and Eugene Rochberg-Halton’s, *The Meaning of Things: Domestic Symbols and the Self*; and Christopher Alexander’s, *A Pattern Language*.

**Methodology**

The methodology employed is a combination of literary-based material, quantitative research in the form of a questionnaire and qualitative research through encouraging respondents to express their opinions by answering open-ended questions and by viewing these responses as a form of written interviews. Respondents were given the choice to either remain anonymous or to provide their names and email addresses for the purpose of future research.

**The questionnaire, aim of the research and target group**

Twenty questions were posed to respondents in a questionnaire, of which some questions were open-ended, whilst others were selected from a previous

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research project, as conducted by Csikszentmihalyi and Rochberg-Halton. The questionnaire and the results of the questionnaire can be found in Appendix A. The aim of the research was to gain a cultural perspective on how people experience the phenomenon of home, in order to gain insight into the relevance of home as a sacred space. The target group are subscribers to a weekly newsletter that is circulated by email, by the editor of a South African website for women. 205 questionnaires were completed and returned over 5 days. Most of the respondents (41.9%) were between 30-39 years of age. In a previous interview, the editor of the website said that the typical profile of a subscriber is a woman who lives in an urban area, falls in a high income group, is as likely as not be married, is as likely as not to have children. The questionnaire was designed so that those respondents who had not previously built or renovated their own properties (43.9%) were not expected to answer questions 4 to 9, whereas the rest of the respondents had the option to answer all the questions. However, all respondents were given the choice to skip any questions.

The house as cosmos

Gaston Bachelard is of the opinion that our house is our corner of the world and he regards it as our first universe, a real cosmos in every sense of the word. David G. Saile says that the home satisfies a fundamental human need to live in an ordered and consecrated microcosm. Lord Raglan has the theory that houses were originally neither shelters nor dwellings, but temples; in other words, buildings erected for ritual purposes. For Mircea Eliade, all symbols and rituals concerning temples, cities and houses are finally derived from the primary experience of sacred space. He says that religious man’s desire to live in the sacred is the reason for elaborate techniques of orientation, which are techniques for the construction of sacred space. Eliade distinguishes between two methods of ritually transforming the dwelling place into cosmos, which in his opinion,
gives it the value of being an *imago mundi*: by the symbolic installation of an *axis mundi* and repeating, through a ritual of construction, the paradigmatic acts of the gods by which the world came to birth.\(^8\) Graeme J. Hardie says that the South African Tswana’s organisation of space in the layout of a settlement and individual houses is closely intertwined with their cosmology.\(^9\) Hardie cites other researchers who also emphasised the influence of a society’s cosmological view on the way in which cities, towns and houses are designed. Rapoport, for example, has shown that the Dogon lay out their towns as a model of the universe. Similarly, Bordieu suggests that to the Berber, the house is a microcosm organised according to the same principles that govern the entire universe.\(^10\) Hardie quoted Clare Cooper:

> It seems that consciously or unconsciously … many men in many parts of the world have built their cities, temples, and houses as images of the universe … Our house is seen, however unconsciously as the center of our universe and symbolic of the universe... Primitive man sees his dwelling as symbolic of the universe with himself, like God, at its center. Modern man apparently sees his dwelling as symbolic of the self but has lost touch with this archaic connection between house-self-universe.\(^11\)

**House-self-universe**

Contrary to what Cooper says, it can be argued that this "archaic connection" may not be that archaic and that it was a fundamental principle of the sixteenth century building tradition. Robert D. Sack says that with reference to the late Middle Ages and the Renaissance, “…we have evidence that rooms, houses, memory theatres, theatres, and churches were in part deliberately designed as giant talismans to be in sympathy to the heavens…”\(^12\) According to Sack, parts of houses may have been designed and embellished on magical principles and used to facilitate memory, even by such noted philosophers as Francis Bacon. Sack says that Renaissance mystics in particular, favoured the work of the Roman architect Vitruvius, especially his design of the theatre, in which much attention was paid to the role of astrology. Mary Quinlan-McGrath writes that it was common practice in the Renaissance to produce a horoscope for the foundation ceremony of a great

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\(^8\) Eliade, *Sacred and Profane*, p. 52.


\(^10\) Hardie, *Tswana house*, p. 216.

\(^11\) Hardie quoting Clare Cooper, in Hardie, *Tswana house*, p. 216.

structure, such as the foundation horoscope for St Peter’s Basilica in Rome, which was designed by the architect Donato Bramante and completed by Michelangelo.\textsuperscript{13}

**The psyche and soul of the contemporary home**

Another system of orientating space according to the heavens or the cosmos is found in the Chinese geomancy principles of *feng-shui*\textsuperscript{14} and in the Hindu geomancy principles of *vaastu*.\textsuperscript{15} The principles of *vaastu* embody the house-self-universe connection as a symbol of the body that is overlaid onto the grid, the *Vaastu Purusha Mandala*, which determines direction and orientation.\textsuperscript{16} The popularity of these two practices in the Western world can only be speculated upon. The respondents were asked whether they followed any particular procedures (rituals) before, during or after the construction or renovation of their homes. Of the 71 respondents, 6 held a ground breaking ceremony, 4 had *feng-shui* consultations, none had a *vaastu* consultation, 1 considered design according to the Golden Section, 7 had roof topping ceremonies, 1 celebrated crossing the threshold, 1 had a pagan cleansing ritual and 40 had a housewarming party. As far as the orientation of their homes were concerned, more people were interested in maximising natural light (23), desired privacy (19), wanted views (18), than were concerned with orientation according to the cardinal points (9). Yet, the majority of respondents agreed (30.2% of respondents agreed strongly, 25.6% agreed moderately, 36% agreed, 1.2% disagreed moderately and 8.1% had no opinion) with the following statement by the contemporary Finnish architect Juhani Pallasmaa:

> We architects are concerned with designing dwellings as architectural manifestations of space, structure, and order, but we seem unable to touch upon the more subtle, emotional, and diffuse aspects of home. Yet, it is the capacity of the dwelling to provide domicile in the world that matters to the individual dweller. The dwelling has its psyche and soul in addition to its formal and quantifiable qualities.\textsuperscript{17}

The respondents attributed the home’s psyche and soul to the people who inhabit the space, the relationship between the inhabitants, a sense of harmony

\textsuperscript{13} Mary Quinlan-McGrath, *The Foundation Horoscope(s) for St. Peter’s Basilica, Rome, 1506: Choosing a Time, Changing the Storia*, (Isis, Vol. 92, No. 4, 1976) p. 716.


\textsuperscript{16} Anath, *Vaastu*, p. 92.

between inhabitants and the presence of family and pets in the home. Csikszenmihalyi says that the home is not only a material shelter, but also a shelter for those things that make life meaningful and that household objects become signs of a wider network of meanings that embrace the whole “world”, i.e. the cosmos.\textsuperscript{18} When given a list of special items, similar to, but not the same as that used by Csikszenmihalyi, the respondents rated the items on a scale of least cherished 1, to most cherished, 5. Photographs (57.9%), followed by pets (51.4%) and then books (43.8%) were the most cherished items. In response to the question, what these items, taken as a whole, mean to them; some of the meanings described were: memories, identity, family, heritage and what makes a house a home, with memories being the most popular choice. This seems to confirm Bachelard’s theory that the house is one of the greatest powers of integration for the thoughts, memories and dreams of mankind.\textsuperscript{19} Bachelard favours the term oneiric house to describe the dream house of the mind.\textsuperscript{20} Pallasmaa says that the characteristics of the dream house of the mind might be culturally conditioned, but that the image reflects universal constants of the human mind. He criticises modern architecture for having contributed to modern man’s arrogant rejection of history and the subsequent rejection of psychic memory attached to primal images.\textsuperscript{21}

**Ritual and the home as living thing:**

Carol M. Werner says that the Pueblo Indians who live in tightly knit communities in the southwestern United States, view home as a "living" thing and that it is regarded as a sacred place.\textsuperscript{22} Raglan also comments that in the minds of the Hidatsa Indians, the centre posts of their houses are living beings and they hold them sacred.\textsuperscript{23} Saile is of the opinion that through the ritual processes involved in the transformation of inert physical and spatial fabric into living, participating, and richly experienced home places, the physical environment is transformed, as well as the human participants and their relationship with the changed place.\textsuperscript{24} This philosophy also underpins the work of architect and theorist, Christopher Alexander, whose fundamental premise is to create living

\textsuperscript{18} Csikszenmihalyi, meaning of things, p. 139.

\textsuperscript{19} Bachelard, Poetics of space, p. 6.

\textsuperscript{20} Bachelard, Poetics of space, p. 17.

\textsuperscript{21} Pallasmaa, Intimacy and Domicile, p. 133.


\textsuperscript{23} Raglan, Temple, p.10.

\textsuperscript{24} Saile, Ritual Establishment of Home, p. 87.
neighbourhoods. Brian Walker describes Alexander’s, A Pattern Language, as: “… a compendium of patterns which Alexander and his colleagues believe to be the likely convergence points for a population deliberating on the construction of the built environment.”25 Alexander is furthermore of the opinion that people can, if given the necessary tools and patterns, design and build their own houses. The replies from the respondents seem to suggest that in building or renovating their own homes, the majority (78.6%) relied on their own design ideas, whilst only 22.6% took professional advice. Alexander sums up his approach: “It is shown that towns and buildings will not be able to become alive, unless they are made by all the people in society, and unless these people share a common pattern language, within which to make these buildings, and unless this common pattern language is alive itself.”26 Alexander cites an example of the effect of modernization in Peru: the traditional way of entering a Peruvian home was to enter through a porch, then into a room that hosted visitors (the sala), then into the family room (comedor-estar) before entering other private domains within the home. However, he found that the newly built apartment buildings did not cater for this cultural function and this disrupted long-established cultural patterns of visiting and sociability.27 The pattern in the Pattern Language that describes this function is called "Intimacy Gradient", pattern 127, which should be read together with pattern 130, "The Entrance Room", which is recounted as: “At the main entrance to a building, make a light-filled room which marks the entrance and straddles the boundary between the indoors and the outdoors, covering some space outdoors and some space indoors.”28 What these two patterns elude to is the sanctity of the threshold.

The sanctity of the threshold

Bachelard cites Porphyry as writing in the third century that the threshold is a sacred thing.29 Hardie’s view of the importance of the threshold mirror’s Eliade’s view, which says that the house, like the temple or shrine, was sanctified by ritual, with special emphasis on the threshold. The entrance was, and still is regarded as the dividing line between the sacred and the profane and is suitably embellished to ward off evil spirits that might attempt to enter the inner sanctum. The threshold of the house is thus regarded as one of the most important dividing

27 Alexander, Pattern Language, p. 611.
29 Bachelard, Poetics of space, p. 223.
lines between the inner private space and the outer public world. Eliade furthermore says that it also signifies the paradoxical space where the two worlds of the sacred and the profane communicate. Numerous rites accompany the passing of the domestic threshold, one such rite being the Jewish custom of placing or affixing a mezuzah to a doorpost. J. Trachtenberg explains that this originated as a protective device to exclude demons from the home. Similarly, the elephant-headed Hindu deity, Ganesha, is considered as the guardian of thresholds in Hindu homes. Eliade argues that within a sacred precinct, the profane world is transcended. He says that on the most archaic level of culture, the possibility of transcendence is expressed by various images of an opening. Therefore, places of passage between heaven and earth are referred to as the “doors of the gods.” Douglas J. Porteous points out that “the rituals involved in entering the home of another, such as knocking on the door, ringing the bell, or using the more elaborate apartment-house intercom, have been compared to the recognition ceremonies of nesting birds.” The door as a symbol of the transition between the sacred and the profane, the inside and the outside, the public world and the private world carries great significance, which Leach explains as being the possible origin of very elaborate doorways.

**Home as centre of the universe**

Eliade comments that religious man wants his own house to be at the centre of the world, to be an *imago mundi*. Eliade explains that nothing can begin or be done without a previous orientation and that any orientation implies a fixed point, a centre. Says Eliade: “Revelation of a sacred space makes it possible to obtain a fixed point and hence to acquire orientation in the chaos of homogeneity, to ‘found the world’ and to live in a real sense.” He is also of the opinion that the symbolism of the centre is as much involved in the building of towns as it is of houses and that any new human establishment of any kind, is a reconstruction of

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34 Eliade, *Sacred and Profane*, p. 27.
36 Leach, *Gatekeepers*, p. 249.
38 Eliade, *Sacred and Profane*, p. 33.
For the new dwelling to last and to be real, it must be projected into the "centre of the universe" by means of a construction ritual. Belk, Wallendorf and Sherry observe that sacralisation through ritual is evident in their informants’ descriptions of the process of moving into a new house and turning it into a home. Home is viewed as sacred space that provides separation from the profane everyday world and they name ground breaking ceremonies, burials and house-warming parties as some of the rituals that may sacralise a place. House warming parties are evidently popular in contemporary society, since 56.3% of respondents report to have held such a celebration, compared with 8.5% of respondents who had a ground breaking ceremony, whilst 9.9% of respondents had a roof topping ceremony. Eliade furthermore says that every dwelling, by the paradox of the consecration of space and by the rite of its construction, is transformed into a "centre". Therefore, all houses stand in the self-same place, the centre of the universe. Yet, he says that it is a transcendent space that allows for the existence of a multiplicity and even an infinity of "centres." The creation of multiple and "strong" centres underpins the ideas of Alexander to create what he denotes as buildings with life. “In order to understand life as a phenomenon, it is necessary to define something which I call ‘the wholeness’ and also certain crucial entities which I call ‘centres,’ the building blocks of wholeness.” When asked which room/area symbolises the centre of their homes, 74 out of 141 respondents replied the lounge/living/family room and 32 out of 141 replied the kitchen. However, when asked where in their homes they feel most at home, 53 out of 147 said the bedroom and 45 out of 147 said the lounge/living/family room. In answer to the question what about this space/place/area/corner makes it special, the answers varied, but those who answered the bedroom listed relaxation, privacy, views, closeness to nature, amongst their answers. Those who answered lounge/living/family room cited family gathering, socialising and a connection to the outside, amongst their answers.

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Sacred Fire

Barbara A. Weightman says that when a traditional Hindu home has been completed, a fire altar is set up in a central room, which serves the purpose to centre and orient their devotees in the spatiotemporal landscape of the sacred and the profane, defining sacred place as home and home as sacred place. She also says that apart from fire being a critical modality in evoking the sacred, by its orientation of facing eastwards to the rising sun, the fire altar signals a new beginning. Eliade says that this altar is consecrated to Agni, the Vedic god of fire. He furthermore says that the erection of such an altar is on the microcosmic scale a reproduction of the Creation. The water in which the clay is mixed represents the primordial water, the clay represents the earth, the lateral walls represent the atmosphere (air) and naturally, the fire represents itself. Plato (c. 428 – 348 BCE) describes a similar cosmogony in the Timaeus:

Hence the god set water and air between fire and earth, and made them as proportionate to one another as was possible, so that what fire is to air, air is to water, and what air is to water, water is to earth. He then bound them together and thus he constructed the visible and tangible universe. This is the reason why these four particular constituents were used to beget the body of the world, making it a symphony of proportion.

It can be said that fire has mesmerised mankind through the ages. Bachelard writes that amongst eighteenth-century thinkers the idea of the feeding of the stars by fire was still quite prevalent. He quotes Guibelet as saying: “…all the stars are created from one and the same celestial substance of subtle fire.” Pattern number 181 in Alexander’s, A Pattern Language, is “The Fire” and his opening paragraph simply states: “There is no substitute for fire.” His pattern description reads: “Build the fire in a common space - perhaps in the kitchen - where it provides a natural focus for talk and dreams and thought. Adjust the location until it knits together the social spaces and rooms around it, giving them each a glimpse of the fire…” In South Africa, the term used for cooking food outdoors over an open fire, is a braai (barbeque). Such is the South African fervour

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45 Weightman, Phenomenon of Light, p. 62.
46 Eliade, Sacred and Profane, p. 30.
49 Alexander, Pattern Language, p. 839.
50 Alexander, Pattern Language, p. 842.
for "braaing" (80.4% of respondents confirmed that they have an outdoor braai facility) that in 2005, Heritage Day, which is celebrated annually on 24 September, was proclaimed as National Braai Day; with the esteemed Archbishop Desmond Tutu as its patron. The etymology of the word "holiday" is given as "hāligdæg" or "holy day" in the Oxford English Dictionary. It is debatable whether or not the holy or sacred connotation of public holidays in contemporary South African society carries the same meaning as was originally intended, but that by inference, braaing can be considered a sacred activity.

The sanctity of nature

Pallasmaa writes that authentic architecture is always about life and that mankind’s existential experience is the focal subject matter of the art of building. David N. Benjamin, on the other hand, says that the way in which homes are marketed worldwide, does not reflect any kind of integration with local tradition or the ecological premises of the site. Alexander addresses both these concerns. Of local tradition he says that: “...it must be a shared vision of a group of people, very specific to their culture, able to capture their hopes and dreams, containing many childhood memories, and special local ways of doing things.” Regarding the ecological impact, he is adamant that something should not be built in isolation and that the world around it should be repaired so that the larger world at that place, becomes more coherent and whole, so that what has been built, takes its place in the web of nature, as it is made or built. Thomas Berry is of the opinion that the “historical realism of Western civilization and our later scientific empiricism have weakened the conscious presence to the natural world, that once guided and supported the psychic dimension of our lives.” Similarly, Belden C. Lane cites Max Weber as having argued that the freeing of nature from its intense religious associations by the insistent rejections of pagan animism has resulted in the "disenchantment" of the world. Lynn White Jr. says that by destroying pagan animism, “Christianity made it possible to exploit nature in a mood of indifference to the feelings of natural objects.” The result of this, says Lane, “has been a rampant secularization of nature and activism of spirit in western life,

52 Pallasmaa, Intimacy and Domicile, p. 142.
55 Alexander, Pattern Language, p. xiii.
leaving us exhausted in our mastery of a world stripped of magic and mystery.”

This paints a bleak picture in comparison with Frances Yates’ view of sixteenth century traditions in Europe:

Renaissance Hermetic man believes that he has divine powers; he can form a magic memory through which he grasps the world, reflecting the divine macrocosm in the microcosm of his divine *mens*. The magic of celestial proportion flows from his world memory into the magical words of his oratory and poetry, into the perfect proportions of his art and architecture.

Sack laments the fact that the twentieth century Western worldview is predominantly scientific. He expresses his dismay when he says: “Without the sixteenth century episteme to nourish them, thoughts about a grand magic controlling the environment in a lost age stand naked and vulnerable in the light of twentieth century science and technology.”

Eliade’s voice is more hopeful and he speaks of that which makes mankind invulnerable to what he terms "becoming beyond time": the analogy of absolute existence and the irreducibility of the sacred. Sack does suggest, however, that over time, many of the magical principles of the hermetic tradition, like harmony, proportion and shape, became new standards for taste and proportion. As the distinction between magical and symbolic design blurred, Sack says that possibly, these ideas were simply absorbed into the aesthetic context of the age.

**Conclusion**

The evidence suggests that in traditional societies, and even in Europe up to the sixteenth century, the notion of home as sacred space is much more evident than in contemporary society. Some reasons for this have been ascribed to the predominantly scientific Western worldview, whilst others have blamed the role of modern architecture. However, it has been argued that even in the twenty first century, home components like the sanctity of the threshold, the home as centre of the universe and the sacred fire, are universally regarded as sacred symbols. It has also been argued that the contemporary home is a receptacle for memories and that sacralization through ritual, also affords the home to be a sacred space. The respondents predominantly agreed that their homes have a psyche and a soul and that the cherished objects of the home are revered as having special meaning. Leonard N. Primiano describes this reverence as a vernacular religion. “Vernacular religion is, by definition, religion as it is lived: as human beings

encounter, understand, interpret, and practice it.” It can thus be argued that the evidence suggests that the contemporary home is an imago mundi - a representation of the cosmos and hence a sacred space. Saile comments that homemaking material is largely ignored in environment-behaviour studies and may allow insights into popular notions of home and the patterns of ritual required by domestic custom. He also says that in addition to research using largely literary sources, there is a need for more direct observation and recording of the making, use, and experience of home. Apart from accentuating the need for future research in this field, it also emphasises the importance of the ideas of architects like Dennis A. Mann and Christopher Alexander. Mann calls for an approach to vernacular architecture that straddles traditionalism and modernism, whilst Alexander calls for a philosophy of building that goes beyond a mechanistic view of the world and allows for a union of human beings with what the world is made of. Alexander said: “What is ecologically appropriate, what is socially and psychologically valuable, what is beautiful to the eye, what is comforting to the soul - these are all wrapped together in the global judgement of wholeness.” It can be argued that what Alexander refers to here, but does not say explicitly, is a recognition of the home as imago mundi and the sanctity of all life, so that one can see, in his words: “…the light of the universe shining there.”

Works cited


63 Leonard N. Primiano, Vernacular Religion and the Search for Method in Religious Folklore, (Western Folklore, Vol. 54, No.1, 1995), p. 44.
64 Saile, Ritual Establishment of Home, p. 106.
66 Alexander, Phenomenon of Life, p. 364.


Appendix A - Home environment survey

Questionnaire results

1. What is your gender?
   Female 99.5% (202)
   Male 0.5% (1)

   Answered question 203
   Skipped question 2

2. Please indicate your age group.
   Under 20 0.0% (0)
   20-29 16.3% (33)
   30-39 41.9% (85)
   40-49 21.7% (44)
   50-59 15.8% (32)
   60-69 3.9% (8)
   70 and over 0.5% (1)

   Answered question 203
   Skipped question 2

3. Have you ever had the opportunity to build or renovate your own home?
   Yes, built 10.7% (22)
   Yes, renovated 38.0% (78)
   Yes, built and renovated 7.3% (15)
   No, never built or renovated 43.9% (90)

   Answered question 205
   Skipped question 0

4. In planning the design and layout of your home or renovation, how many designs/layouts did you contemplate before settling on the final plan?
   One 26.7% (23)
   Two 37.2% (32)
   Three 6.3% (14)
   More than three 19.8% (17)

   Answered question 86
   Skipped question 119

5. Please indicate the inspiration behind the design of your home or renovation project.
   Own ideas, gathered from books, magazines, etc. 78.6% (66)
   Design based on an existing house I have seen 13.1% (11)
   An architect's suggestion 4.3% (12)
   In consultation with more than one architect 1.2% (1)
   Collaboration between different parties, for example: your self, an architect and an interior designer 8.3% (7)
   Input from friends 11.9% (10)
   Other (please specify) 0.0% (0)

   Answered question 84
   Skipped question 121

6. How the orientation of your house was decided upon:
   To maximise the views 21.7% (18)
   To be parallel to the adjacent road 6.0% (5)
   According to the four cardinal points of east, west, north, south 10.8% (9)
   Limited or no choice, due to the constraints of the existing building 43.4% (36)
   To maximise natural light 27.7% (23)
   With privacy in mind 22.9% (19)
   Other (please specify) 0.5% (1)

   Answered question 83
   Skipped question 122

7. Did you consider any of the following procedures before, during or after the construction or renovation of your home?
   Ground breaking ceremony 8.5% (6)
   Feng Shui consultation 5.6% (4)
   Vaastu consultation 0.0% (0)
   Design elements incorporating the Golden Section (also known as the golden mean) 1.4% (1)
   Roof topping ceremony 9.9% (7)
   Crossing the threshold 1.4% (1)
   Housewarming party 56.3% (40)
   Spring cleaning 49.3% (35)
   Other (please specify) 0.0% (0)

   Answered question 71
   Skipped question 134

8. Please indicate to what extend you agree or disagree with the following statement by the Finnish architect Juhani Pallasmaa: ‘We architects are concerned with designing dwellings as architectural manifestations of space, structure, and order, but we seem unable to touch upon the more subtle, emotional, and diffuse aspects of home. Yet it is the capacity of the dwelling to provide domicile in the world that matters to the individual dweller. The dwelling has its psyche and soul in addition to its formal and quantifiable qualities.’

   Strongly agree 30.2% (26)
   Moderately agree 25.6% (22)
   Agree 36.0% (31)
   Disagree 0.0% (0)
   Moderately disagree 1.2% (1)
   Strongly disagree 0.0% (0)
   No opinion 8.1% (7)

   Answered question 86
   Skipped question 119

9. In your opinion, what contributes to the psyche and soul of your home?

   Answered question 72
   Skipped question 133

10. Which room/area symbolises the centre of your home?
   Kitchen 22.7% (32)
   Living room 40.4% (57)
   Pool area 0.0% (0)
   Patio 2.8% (4)
   Television area 10.6% (15)
   Fireplace 0.7% (1)
   Study 0.7% (1)
   Bedroom 9.2% (13)
   Family room 12.1% (17)
   Bathroom 0.0% (0)
   Outdoors 0.7% (1)
11. Where in your home do you feel most at home?

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>The entrance hall</td>
<td>0.0% (0)</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Answered question 141
Skipped question 64

12. What about this space/place/area/corner makes it special?

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Answered question 144
Skipped question 61

13. Which of these rites/celebrations are of importance to you?

<table>
<thead>
<tr>
<th>Event</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birthdays</td>
<td>89.6% (129)</td>
<td></td>
</tr>
<tr>
<td>Christmas</td>
<td>75.7% (109)</td>
<td></td>
</tr>
<tr>
<td>New Year</td>
<td>38.2% (55)</td>
<td></td>
</tr>
<tr>
<td>Easter</td>
<td>48.6% (70)</td>
<td></td>
</tr>
<tr>
<td>Anniversaries</td>
<td>44.4% (64)</td>
<td></td>
</tr>
<tr>
<td>Weddings</td>
<td>38.9% (56)</td>
<td></td>
</tr>
<tr>
<td>Funerals</td>
<td>22.2% (32)</td>
<td></td>
</tr>
<tr>
<td>Eid</td>
<td>6.3% (9)</td>
<td></td>
</tr>
<tr>
<td>Passover</td>
<td>3.5% (5)</td>
<td></td>
</tr>
</tbody>
</table>

Other (please specify)

Answered question 144
Skipped question 61

14. Please indicate which of these items you regard as the most cherished in your home on a rating scale of 1 = least cherished and 5 = most cherished:

<table>
<thead>
<tr>
<th>Category</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Furniture (chairs, sofas, tables, etc.)</td>
<td>5.5%</td>
<td>9.6%</td>
<td>37.0%</td>
<td>30.1%</td>
<td>21.2%</td>
</tr>
<tr>
<td>Visual art</td>
<td>11.7%</td>
<td>19.7%</td>
<td>24.1%</td>
<td>27.7%</td>
<td>19.7%</td>
</tr>
<tr>
<td>Photographs</td>
<td>3.4%</td>
<td>4.8%</td>
<td>13.1%</td>
<td>23.4%</td>
<td>57.9%</td>
</tr>
<tr>
<td>Books</td>
<td>4.1%</td>
<td>7.5%</td>
<td>21.2%</td>
<td>26.0%</td>
<td>43.8%</td>
</tr>
<tr>
<td>Music</td>
<td>3.4%</td>
<td>9.6%</td>
<td>28.1%</td>
<td>33.6%</td>
<td>28.1%</td>
</tr>
<tr>
<td>Digital media</td>
<td>1.4%</td>
<td>16.1%</td>
<td>35.7%</td>
<td>26.6%</td>
<td>21.7%</td>
</tr>
<tr>
<td>Television</td>
<td>9.9%</td>
<td>12.7%</td>
<td>32.4%</td>
<td>28.9%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Musical instruments</td>
<td>38.1%</td>
<td>15.7%</td>
<td>17.9%</td>
<td>16.4%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Sculpture</td>
<td>34.8%</td>
<td>21.0%</td>
<td>22.5%</td>
<td>13.8%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Plants</td>
<td>16.8%</td>
<td>14.7%</td>
<td>22.4%</td>
<td>26.6%</td>
<td>23.1%</td>
</tr>
<tr>
<td>Jewellery</td>
<td>10.4%</td>
<td>18.1%</td>
<td>27.1%</td>
<td>29.2%</td>
<td>17.4%</td>
</tr>
<tr>
<td>Heirloom</td>
<td>9.5%</td>
<td>13.9%</td>
<td>18.2%</td>
<td>23.4%</td>
<td>35.8%</td>
</tr>
<tr>
<td>Pets</td>
<td>19.3%</td>
<td>3.6%</td>
<td>11.4%</td>
<td>16.4%</td>
<td>51.4%</td>
</tr>
<tr>
<td>Motor Vehicle</td>
<td>5.6%</td>
<td>6.3%</td>
<td>25.7%</td>
<td>36.1%</td>
<td>28.5%</td>
</tr>
</tbody>
</table>

Answered question 147
Skipped question 58

15. What do all these special items, taken as a whole, mean to you?

Answered question 131
Skipped question 74

16. In addition to the stove/hob/cooker/oven/microwave that you use for daily cooking, which of these fire-related facilities do you have access to?

<table>
<thead>
<tr>
<th>Facility</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indoor fireplace with chimney to burn wood/coal</td>
<td>27.3% (39)</td>
<td></td>
</tr>
<tr>
<td>Outdoor portable braai</td>
<td>54.5% (78)</td>
<td></td>
</tr>
<tr>
<td>Outdoor built-in braai</td>
<td>25.9% (37)</td>
<td></td>
</tr>
<tr>
<td>Home pizza oven</td>
<td>1.4% (2)</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td>21.0% (30)</td>
<td></td>
</tr>
</tbody>
</table>

Other (please specify)

Answered question 143
Skipped question 62

17. Please indicate your affinity for lighting a fire, either for cooking purposes or for heat during winter:

<table>
<thead>
<tr>
<th>Affinity</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has a fireplace in my home, but it is purely ornamental</td>
<td>6.0% (8)</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td>21.0% (30)</td>
<td></td>
</tr>
<tr>
<td>Has no special meaning</td>
<td>4.1% (6)</td>
<td></td>
</tr>
<tr>
<td>Being at one with nature</td>
<td>14.4% (21)</td>
<td></td>
</tr>
<tr>
<td>Contemplative/Meditative</td>
<td>19.2% (28)</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td>0.7% (1)</td>
<td></td>
</tr>
</tbody>
</table>

Other (please specify)

Answered question 134
Skipped question 71

18. Gathering around the fire, inside or outside, is a symbol of:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family togetherness</td>
<td>60.3% (88)</td>
<td></td>
</tr>
<tr>
<td>Socialising with friends</td>
<td>61.0% (89)</td>
<td></td>
</tr>
<tr>
<td>Relaxation</td>
<td>54.1% (79)</td>
<td></td>
</tr>
<tr>
<td>Has no special meaning</td>
<td>4.1% (6)</td>
<td></td>
</tr>
<tr>
<td>Being at one with nature</td>
<td>14.4% (21)</td>
<td></td>
</tr>
<tr>
<td>Contemplative/Meditative</td>
<td>19.2% (28)</td>
<td></td>
</tr>
<tr>
<td>None of the above</td>
<td>0.7% (1)</td>
<td></td>
</tr>
</tbody>
</table>

Other (please specify)

Answered question 146
Skipped question 59

19. Approximately how many times have you moved home since your turned 18?

<table>
<thead>
<tr>
<th>moves</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>36.3% (53)</td>
<td></td>
</tr>
<tr>
<td>4-6</td>
<td>31.5% (46)</td>
<td></td>
</tr>
<tr>
<td>7-9</td>
<td>18.5% (27)</td>
<td></td>
</tr>
<tr>
<td>10-12</td>
<td>4.8% (7)</td>
<td></td>
</tr>
<tr>
<td>13-15</td>
<td>3.4% (5)</td>
<td></td>
</tr>
<tr>
<td>more than 15</td>
<td>5.5% (8)</td>
<td></td>
</tr>
</tbody>
</table>

Answered question 146
Skipped question 59

20. Name and email address requested. Respondents were given the option to leave this blank.

Answered question: 95
Skipped question: 110
Individual responses to questions:

Question 5. Please indicate the inspiration behind the design of your home or renovation.
1 I'm a gifted person
2 in conjunction with the man of my dreams
3 Spoke to 2 contractors

Question 6. How the orientation of your house was decided upon:
1 BASIC IMPROVEMENTS
2 TO OPEN UP THE LIVING AREA
3 Suggestions of the architect
4 Budget
5 more social spacing requirements & privacy

Question 7. Did you consider any of the following procedures before, during or after the construction or renovation of your home?
1 Pagan cleansing Ritual
2 NONE
3 kitchen warming party
4 Nothing but a big sigh of relief!
5 None of these
6 I anointed my house and asked GOD to bless it and everyone that enters it.

Question 7. In your opinion, what contributes to the psyche and soul of your home?
1 The people that inhabit it as well as the animals. The use of natural colours and space also lends to tranquillity.
2 I believe the fabric of the home can be contributed to textures, colours, lighting, tangible things as well as the people who we open our home to.
3 The people and pets who live in the home makes the house a home.
4 Space, sunshine, serenity, the smell of the sea.
5 It's the people living in the house that makes it a home.
6 It needs to fit the function of the family - we have small children - I really wanted them to have their own lounge. I wanted a study for myself and my husband for us to spend time on our own interests.
7 home is were you are
8 Colour, comfort, attractiveness, and of course those that dwell therein.
9 The family in it
10 The atmosphere creates by the persons living in it, the colours of your home and whatever living things e.g. Plants/animals/human traffic in your home
11 The inhabitants, the content and its placement, natural light, free space, the external environment
12 What you bring to it - your personal touches, artwork, colours, photos, objects from travel. It is your personality rather than design that really contributes to the soul of a home. Without that personal touch, even the best designed home can feel soulless and empty.
13 The warmth and the 'looks-like-it-is-lived-in' look
14 our family and pets, garden, comfort.
15 Colour, harmony and aura.
16 THE RELATIONSHIPS BETWEEN THE INHABITANTS
17 The people in the home.
18 I believe it is the people living in a home. If everyone lives in harmony & is content, the contentment shows when you have visitors, because they feel the love & harmony, & feel welcome and at home.
19 The sense of space on top of a koppie, lots of light and elements of 'boer-maak’n plan’ in a farm house.
20 The energies and laughter in it. Also there has to be a certain degree of imperfection in a home.

21 great atmosphere good colours
22 The inhabitants - your furniture, ornaments and the small touches that make a house a home.
23 IT'S A HOME - NOT A HOUSE
24 The flow and space utilisation
25 The people and pets in it.
26 Personal items that reflect our tastes, loves, and travels. These things make our home more than a house. And, books, loads and loads of books.
27 The people in it
28 colour, space use and furniture
29 personalisation, e.g. painting and photos
30 the extra space and the free flow of energy
31 Ease within the home with regard to all aspects of living!
32 The memories that are being created there.
33 not sure
34 Whatever energy and objects and life experiences unfold in the house contributes to the psyche and soul of a home
35 your comfort & easiness in your environment
36 The interior design and the personalities within.
37 the psyche and soul of a home is created by the people who inhabit it. Their combined energies and interests contribute to the atmosphere one encounters when entering their space.
38 Being yourself rather than following a fashion or trend.
39 relationships
40 a family makes a home and the soul is in our love for each other.
41 Colour, natural light, water, flow of air, natural materials, use of space, storage so as to minimise clutter
42 Love, Peace and tranquillity in the home
43 That I feel comfortable in it, and at ease.
44 Surrounded by furniture and finishing’s that suit my taste and lifestyle. Peace and tranquillity of my family unit.
45 Modern rustic interior makes it soulful without being over the top.
46 The rooms have got big windows & doors leading into a Cottage style garden flowers, herbs, vegetables, shrubs and fruit trees. I make a point of going barefoot into the garden first thing in the morning to feed the wild birds & get charged by the earth's positive field. I named my house Tree Cottage.
47 The people living in the home - my family.
48 The bond and love between the people who live in it and the ability to do whatever makes you happy in it.
49 the furniture
50 Me
51 your personality and the presence of God in your home.
52 I feel that it depends on a number of aspects
1. The creative character of the primary occupant
2. Whether the primary occupant has a positive view to life and the home contributes to the psyche and soul of a home
3. Whether the primary occupant is always keen to improve and beautify their living space.
42 The nature surrounding the home which is visible from each room through large windows, the fact that we love coming home and being home and just living there gives it so much soul.
53 The people in it; the atmosphere created by furniture, lights and pictures.
54 The people who live in it
55 Strong, healthy relationships between the dwellers and the love of God.
56 My believe in God and my love for my partner I believe Love; Peace, Goodness, Kindness is being fruits of the Spirit, envelopes everything.
57 The love that we show it
58 The people who live in it
59 the way the household is run and the people living in it.
60 Design and surroundings
61 it is a reflection of your character & soul requirements to live the life we hope to achieve & portray of ourselves to the world out there.
62 how the the people, animals, plants and personal elements (paintings, books etc) interact with the hard structures.

75 SPICA • BEGINNING • CONTENTS
63 Friends, family, food & wine
64 The happiness of the people living in it.
65 The people who live in the house give the input that makes the house great.
66 The inhabitants... and not the "things"
67 The relationships between the people living there, and also the people coming in and out of the home.
68 Its light, view and easy on the eye flow.
69 The people living in the house give the input that makes the house great.
70 The inhabitants... and not the "things"
71 the people living in it
72 The people who live in it

Question 10. Which room/area symbolises the centre of your home?
Other (please specify)
1 kitchen
2 The open-plan kitchen / living room / dining room area
3 the kitchen and dining room are open plan as is the lounge
4 Open plan living room and kitchen
5 Dining Room
6 open-plan kitchen - eating area - family -room
7 open plan kitchen/dining/sitting/tv area with fireplace

Question 11. Where in your home do you feel most at home?
1 My living room
2 Lounge
3 Lounge
4 Living Room
5 My Bedroom
6 kitchen, bedroom
7 My Room
8 In the TV room
9 in my bedroom
10 Kitchen
11 My kitchen
12 bedroom
13 The living room
14 everywhere - I think I have almost slept in every room - just not the bathrooms
15 bath
16 Lounge
17 everywhere
18 living room
19 Lounge
20 bedroom
21 Lounge
22 My bedroom
23 My bedroom
24 My bedroom, just loooove my kingsize bed and my corner bath bathroom
25 bedroom
26 In the living room - on the couch looking out over the mountains, with many colours from the pillows, the carpet, the painting on the wall
27 Garden
28 kitchen
29 Bedroom and kitchen
30 Kitchen
31 bedroom
32 living room
33 BEDROOM
34 Living Room
35 Living Room
36 my bedroom
37 lounge
38 My lounge
39 My room
40 Family Room
41 Kitchen and Lounge area
42 Bedroom & Patio
43 lounge
44 My bedroom
45 my bedroom
46 Open plan kitchen, dining-room, tv room area
47 Bedroom
48 in my bedroom
49 Bedroom and bathroom
50 kitchen & lounge
51 Bedroom
52 Bedroom
53 Bedroom
54 Bedroom
55 Bedroom
56 SUN ROOM
57 kitchen or family room
58 bedroom
59 Kitchen
60 bedroom
61 Bedroom
62 My bedroom
63 My bedroom
64 In my bedroom
65 Lounge
66 my bedroom
67 living room
68 Bedroom
69 Bedroom
70 bedroom
71 Family room
72 bedroom
73 Living room
74 everywhere
75 garden
76 Living room and bedroom
77 dining room
78 Lounge
79 Bedroom
80 All rooms embrace me, but in different ways.
81 bedroom
82 family room
83 My living room on my coach
84 Living room
85 Study and / or kitchen
86 bedroom
87 My bedroom
88 Living room
89 Living Room
90 living room
91 My study
92 Bedroom
93 Lounge
94 Living Room
95 living room
96 Lounge
97 My bedroom
98 my bedroom
99 In the bedroom.
100 no-where specific
101 Bedroom
102 Kitchen
103 Every where- I love my home. My favourite place is my veranda on hot summer evenings, overlooking my pool, sipping a glass a wine!
104 Lounge
105 Living Room
106 bedroom
107 everywhere, if I have to choose I would say my bedroom
108 My Bedroom
109 My kitchen
110 Television Area
Question 12. What about this space/place/area/corner makes it special?

1 The lounge and TV
2 Feels cozy
3 Family area
4 Just the sofas and TV makes it Home, as I relax by my Living Room
5 It's all mine, I don't have to share this space with anyone!!
6 comfort
7 The colour on the walls and the easy going use of furniture and fittings. It is a comfortable room.
8 its completely mine, I have the only say in how it should look or feel
9 It's where the family gathers.
10 This is the place that my husband and cook together talk about the children and food, we my children help me in the kitchen preparing food and helping with the dishes
11 it is my private space
12 The living room is generously proportioned and ideal for relaxing and reading. It also has gorgeous golf course views and is dappled in sunlight
13 the surrounding greeneries, the vast spaces inside
14 me time
15 the comfortable chairs and TV. Nice to just chill
16 I like my whole house, but I love cooking so the downstairs kitchen / living room / dining room is a great place to socialize while cooking
17 warmth
18 It is where I relax
19 privacy
20 The whole family will gather

21 Everyone is always there for some reason, don't really know what is the attraction
22 It is where I can relax and simply be myself

23 Quiet, uncluttered and open with lots of natural light
24 my bed where I can relax
25 It is a reflection of me - a comfortable space, with a structured couch, warm colours, a place to sit with friends, enjoy the view, enjoy the changing colours of the sky and a great window sill for a glass of wine to rest.
26 Outdoors, privacy, nature
27 the smells coming from the kitchen. Children come and sit & talk in the kitchen.
28 Our coming together place
29 It's where I bake and spend time with family and friends while cooking and baking.
30 comfortable, relaxing, spacious, breezy, natural light
31 MY SPACE – PEACEFUL, COMFY
32 Just relaxed. Nothing fancy.
33 The TV unit with special photographs holding special memories
34 calm
35 it connects to the kitchen, dining room and French doors leading to garden and pool area
36 The view and the way it opens up to the outside
37 I relax on my bed, reading, with the TV on
38 lots of space to kuier and entertain
39 it is a gathering area...
40 Its warm and comfortable
41 things I like and love are here
42 Large, airy, spacious, comfortable, good lighting, has my stereo set.
43 I can be quiet and at peace after a hectic day
44 Big windows, lots of light, sunny corner spot in winter, pretty views, lots of energetic family traffic flow
45 It's my own, to do whatever I feel like doing
46 its the one place where I can unwind, relax, exhale and be me
47 I can change it into whatever mood I'm in... With candles, cushions, music, etc
48 it's communal and there’s always a large gathering of friends and family in it
49 It's peaceful and serene
50 Privacy, isolation, comfort and peace
51 Comfort
52 The one whole wall is a bookcase and it really defines the space.
53 private
54 A COMBINATION OF INDOOR / OUTDOOR FEELING
55 the size
56 its MINE
57 I love cooking
58 furnishings & paintings
59 Comfortable
60 Its large and spacious
61 This is my hidey-hole from the world - a place where I can relax, read, chat to my Hubby, a place of warmth and love
62 It's my sanctuary.
63 Cosy and are able to have a nice time in that specific area.
64 me time
65 The ambience
66 I have all the privacy
67 It's very large and open with two glass doors going outside, just makes me feel closer to nature.
68 warm
69 Its huge and well lit
70 it is contained and my books are there
71 its comfortable
72 its a part of my comfort zone
73 area
74 Couch and bed
75 I can work at my dining room table and socialise with those in the lounge or watch TV / DVD's at the same time
76 Everybody gathers there for most of the time
77 Calming colours
78 Each room has its own energy and feel.
79 my bed and the serene tranquillity and the chirping of the
birds in the garden makes it special
80 relaxing
81 It is the view outside the window. I love looking out
through my window at the view and it is cosy for me to sit
and have my breakfast and tea in my living room area.
82 It houses elements that personify US
83 My books, our computers, and the fact that our cats and
dogs gather there with us.
84 It's comfortable and I can relax
85 the colour scheme of linen and furnishings.
86 It is where the family gets together.
87 It's a place where the family gather and socialise.
88 the whole family gathers in this room
89 I am surrounded by inspirational books and magazines,
mementos from my
Travels and my laptop with Internet that allows me to
connect with the world.
90 Place for rest
91 Comfortable, external lighting
92 Cosy, Safe, and where everyone gathers to talk.
93 the kudu leather suite
94 Chair, door to garden
95 The colour
96 the peaceful view and the quietness
97 It's where I am able to relax.
98 the whole house is special to me
99 Privacy and I have all my things with me. It's the one
room in the house that I get to decorate the way I wish.
100 It is my space to be creative and be in control.
101 Quiet, peaceful, and my animals just loving me being
outside.
102 Comfortable, cosy
103 Comfy couches and a play area for my little boy!
104 living room
105 I love relaxing and reading, or listening to music, cd's
106 Great views of the garden
107 This is where I prepare sustenance for my family, this is
where I can gather my troops and bake up a storm. There is
no better feeling than walking into a home where the aroma
of freshly baked cookies or a home cooked meal greets you
first.
108 The decorations and French doors which open on the
stoep.
109 It is my home and I am happy in it.
110 it's got a great view of the garden
111 It is my private alone space
112 it has a fireplace and cosy furnisher. You can put your
feet up and relax
113 get together with family, eat, chat, visit
114 It is comfortable and sunny and has some of my
favourite things, like our big TV, a comfy couch as well of
photo's and memories. It is where we relax and entertain.
115 Comfy bedding
116 Place to relax
117 the light streaming in & the fact that I relax when i'm
there (well most of the time)
118 I can throw myself on the couch
119 Family and friends gatherings
120 does not face where the sun comes in. the TV vision
becomes clearer
121 I can go there to be calm and think about everything
122 the place where people can feel free to mingle and
socialized with each other
123 people, relaxed no tasks atmosphere
124 There is lots of space for other people to join me and help
with prep or merely to chat.
125 The smells
126 relaxing, sunny and bright
127 My family + animals being there
128 Sitting with my kids (and animals) and watching and discussing TV.
129 my house is small
130 BIG SPACE, THE COUNTER IT LIKE OUR
ENTERTAINMENT PLACE
131 It's where I spend time with my loved ones
132 it has my bed LOL
133 Love watching TV and movies with my fiancée
134 Relaxing
135 its mine, and I can read and listen to tunes as and when I
want
136 The size, colours and decor
137 Where we eat, watch TV, drink coffee and chat together
138 The warm earthy colours and the texture of fabric.
139 Comfy, warm and relaxing
140 its quiet...
141 its the centre of the house, warm in winter, cool in
summer
142 cozy and conveniently laid out
143 Functional and our living space where the whole family
spends time
144 I spend most of my time here and I’ve set it up exactly as
I want and enjoy it. It’s my space.

Question 13. Which of these rites/celebrations are of
importance to you?
Other (please specify)
1 Valentines Day!
2 First night's meals home from Boarding School
3 Diwali
4 Diwali
5 Valentine’s Day
6 None of the above. Through the years, they have lost their
significance. In my opinion, they are merely ‘ordinary days’. It
how one treats one’s fellow man that is
of significance.

Question 14. Please indicate which of these items you regard
as the most cherished in your home on a rating scale of 1 =
least cherished and 5 = most cherished.
Other (please specify)
1 kist - 5, macro wave
2 My son
3 Kitchen appliances, esp the coffee machine
4 OWN CRAFT - MOST CHERISHED
5 we value everything in our home, even if it costs very little
6 my scrapbooking stuff
7 Craft work
8 Paintings
9 cosmetics/perfume

Question 15. What do all these special items, taken as a
whole, mean to you?
1 Special and sentimental
2 Familiarity
3 Love and family
4 Interior Deco
5 Once it's gone, it can’t be replaced. 6 good times
7 It has taken a long time to build up and my tastes have
evolved over time. Quite
Interesting to see the changes.
8 collection of memories
9 It’s my memory bank.
10They are who I am because it is part of inheritance
11 it has sentimental value. Pics of my late son & best friend
are my most prized
12 They are memories of something special
13 they signify our interests, our family history (photos)
14 our way of living and being able to entertain ourselves
without having to spend money to go out.
15 Home
16 They are what portray my personality.
29 CONTRIBUTE TO MAKING MY SPACE A PLACE TO
RELAX UNWIND ETC
30 This is my memories, my life
31 They all contribute to and bring about fond memories.
They also symbolise life, ethnicity, culture and lifestyle.
32 lots, we worked our butts off to earn them
33 Who I am.
34 Most I can do without, some I can’t
35 Warmth, cosy, mine
36 Love and entertainment
37 what I have worked for and enjoy
38 These are the things I love and that define me
39 Security, comfort, sense of “coming home”, history and growth
40 Good memories Items bought with my own hard earned money
41 some are part of my growing up, some have sentimental value
42 Represents my journey and me so far...
43 My life
44 It symbolizes who I am and represents home
45 Shows about who I am and what I value
46 Identity
47 They resemble the things that we enjoy, that give us comfort and make us happy.
They make our house truly ours.
48 IT SYMBOLISES MY HOME
49 the creation of a relaxing space
50 all together they define my family and me
51 They make up my home and life.
52 They are personal and irreplaceable.
53 My life, my history my future
54 These are the things that give me joy in life and should there be a fire - the dogs.
And the photos would be the first to be grabbed! :)
55 Its all the things that bring happiness into my life just having them around me.
56 I try to look after what I have got. They are all old or second hand but they are just materialistic
57 accomplishments on my own
58 My possessions.
59 All these items as a whole is what keeps me close with my family, we spend a lot
Of quality time together via these items.
60 sentimental value
61 Celebration of life
62 a happy existence
63 these are items that are a part of who my family & I are.
64 A feeling of belonging and happiness.
65 I can amuse myself without spending a fortune, I am safe at home with my daughters and expressing my creativity
66 they make up my life
67 Only material Goods
68 Part of my identity and they make me happy.
69 my home, part of my life
70 good memories, milestones
71 good living: Sentimental
chat - it’s just the perfect getaway and I don’t even have to go on holiday for that:-)
120 my accomplishments
121 The history of my life and what I love most
122 Comfortable memories
123 my life and memories and living in the moment
124 Memories, creativity and great meaning.
125 Security
126 For the fact that I love a room with art and sculptures as they give the flair. Always love watching movies on big screen with surround sound.
127 Life Love
128 both my partner and I started out with nothing and we love and appreciate what we have accomplished thus far
129 our whole life
130 luxury
131 It makes our home the way it is.

Question 16. In addition to the stove/hob/cooker/oven/microwave that you use for daily cooking, which of these fire-related facilities do you have access to?
Other (please specify)
1 Indoor /Patio Braai built in braai (busy building)
2 Gas heater and gas braai / stove
3 none of the above
4 Indoor Braai Room
5 portable gas one plate cooker
6 Weber
7 Portable gas bottle and cooker attachment
8 Indoor built-in braai
9 Separate braai room

Question 17. Please indicate your affinity for lighting a fire, either for cooking purposes or for heat during winter.
Other (please specify)
1 NONE OF THE ABOVE
2 I was a girl guide - fires are my speciality :O)
3 I don’t have a fireplace, but would love to have one.
4 I light a fire purely for braai
5 28 of 32I almost never light a fire. I do burn candles though :)
6 I don’t mind lighting a fire when necessary, but I am wary of gas and flame
7 Would like to if I had a fireplace
8 Do not have a fire
9 I would love to have a fire place
10 Only make fire for Braaiing

Question 18. Gathering around the fire, inside or outside, is a symbol of:
Other (please specify)
1 The perfect end to a social evening
2 warmth and comfort
The Sophia’s 2013 Summer School was the best attended yet. Thirty five students gathered from far and wide, Rod Suskin travelling the furthest, hailing 9,100 miles from Cape Town. Other long haulers included New Yorkers Gaia Somasca and Dorian Greenbaum along with Bostonian Kate Namous. Those who travelled furthest in Europe included Neslihan Ayanoğlu’s from Istanbul (and Moscow resident Karine Dilanyan). The shortest journey was John Booker’s. He writes that “according to Google Earth” he covered a full 64 miles to get from Southampton to Bath.

As always on the first day, the Duncan Room in Bath’s Royal Literary and Scientific Institution buzzed as friends re-connected and newcomers began their first up close and personal Sophia experience.

Tutor’s lectures included Nick Campion on “Sky and Psyche”, Chrystal Addey talking about “Cosmology Magic and Divination” and Bernadette Brady introducing the new module, “Heavenly Discourses”.

When talking about her translation of PGM 50, Dorian Greenbaum emphasised the importance of using primary sources. PGM 50’s tattered parchment has been misunderstood by previous classicists, but Dorian led us through the deductive process it took to reclaim this ancient fragment for astrology. The fragment’s fragile surface and tantalising lacunae were forensically explored to reveal a discourse on planetary movements.

Fabio Silva, newly established as the Sophia’s first Archaeoastronomy lecturer gave a talk entitled “Archaeoastronomy: from Material Culture to Cosmology” and reassured us that his is not a Math’s based subject, but is instead fundamentally ethnographic.
Student presentations were carefully themed and were followed by panel discussions.

Paula van Kersbergen’s dissertation is on “The divine feminine and astrology against the background of the New Age in the Netherlands”. She is researching astrologers involved in the Dutch Goddess temple, trying to find out whether the value systems reflected in ancient cultures emerge in these women’s current practice.

Liz Henty described how her PhD topic finally emerged after she had had been unable to complete a purely archaeoastronomical thesis she originally planned. Archaeologists had resisted talking to her so she turned instead to an exploration of both archaeology and archaeoastronomy and their comparative histories. Invoking contested space, Liz wants to find out why archaeoastronomy has been sidelined in mainstream university education.

John Booker gave a presentation on “Astrological Influences in Graeco-Roman Medical Texts”, explaining that his dissertation’s focus on both natural and judicial astrology and how they influenced the medicine of Hippocrates and Galen.

Chris Mitchell’s PhD asks “What have the Arabs done for us?” and he talked about what the Islamic world may have contributed to early medieval astrology as the practice spread into Christian Europe.

Margot Dierderen had an interesting experience. Her dissertation asks “Is the gap between science and astrology diminishing in the postmodern era?” Just hours before her presentation, she fundamentally changed the direction of her research. Courageously ploughing on, Margot generously allowed us to listen in as she marshalled her tentative new ideas and her talk was all the more fascinating as we watched from the sidelines an enquiring mind showing grace under pressure.

Maria Papp’s dissertation looks at “The use of outer planet cycles in modern astrology as a survival of Zoroastrian astrological history,” and she mentioned how useful organising her material for presentation at the Summer School had been. Feed-back about her talk had been particularly important for her.

This issue of feed-back underpins one of the Summer School’s major attractions. A survey of this year’s attendees shows it is the real time, face to face communication which so appeals. And it isn’t just students who report this, tutors do too. Those surveyed wrote that they value the “inspiring presentations, “personal contact with staff”, “new ideas”, “sharing thoughts” and “beautiful Bath Spa”.

One student in particular reported that in order to choose between modules, lectures at the Summer School gave an invaluable “overview of the
MA’s different pathways”. A PhD student appreciated the intensive networking which fed back into their research. A first timer wrote, “Everything was new and wonderful for me.”

Talking of wonderful, the Oxford field trip was a highlight. Anthony Thorley’s “the Oxford landscape speaks” set us up for the field day, Nicolette Ruigewaard pointing out “it is really nice to have a trip, and not only ‘school’ “.

Geraldine Heil appreciated “the wonderful historical books in the Bodleian.” Indeed the Bod’ was a favourite with many, Gaia Somasca writing that she loved “walking in the silent rooms filled with ancient books”. Maria Paap wistfully wrote she “would like to live in that library for a month.”

Ada Blair, Dorian Greenbaum and Andrej Henrique were especially drawn to the ‘Magical Books’ exhibition.

Anna Estaroth writes that she “could equally have spent the whole day in the Ashmolean”, John Booker particularly valuing its Egyptian section.

Neslihan Ayanoğlu was enchanted by the Divinity Hall, though for many including Melanie Sticker their highlight was the Science Museum’s astrolabes. Chris Mitchell could barely believe that there was “an astrolabe that was nearly 1,000 years old which looked as though it had come out of a workshop yesterday.”

Like most, Stevi Gaydon enjoyed the “Bodleian and having fun at that lovely pub on the river.” Paula van Kersbergen summed up the trip as simply, “a great day.”

Perhaps best capturing the spirit of this year’s day trip Nicolette Ruigewaard wrote, “it is great to see that astrology/astronomy/cosmology is ‘everywhere’ and at ‘all times’.”

Indeed it is.