

MA in Cultural Astronomy and Astrology
Introduction to Cultural Astronomy and Astrology
Astronomy and Culture
Week Description
Nick Campion

Purpose of the week

The question which runs through the whole MA is the extent to which humanity's images, representations and uses of the sky, and people's feelings, thoughts and dreams of the sky are conditioned by culture – or genuinely in tune with something deeper or real. This week we focus on the emerging discipline of astronomy in culture.

The work in this week will be continued through much of the rest of the MA, but especially in the Heavenly Discourses and Skyscapes, Cosmology and Archaeology modules.

Tasks this week

- Do the required reading, check some of the recommended reading.
- Read the PPTs and PDFs from Nick, Darrelyn and Bernadette.
- Read the weekly discussion paper by Clive Ruggles
- If you can't read all the required reading, download it for later.
- Work on your sky journal and second essay

Preparation for next week

- Prepare for the discussion on fate by reading Bernadette's PPT.
- Read Darryn Lehoux *Tomorrow's News Today* to prepare for discussion
- Read Nick's PPT on fate to prepare for discussion
- Work on your sky journal and second essay.
- And a reminder: pace yourself and don't take on too much

Class Description

The class addresses a crucial question for the entire MA in *Cultural Astronomy and Astrology*. We will consider what is meant by the term 'Cultural Astronomy'. Is it an academic discipline? Or a subject area drawing on different disciplines? Or is it the practices and beliefs that a culture holds about the sky? I have defined Cultural Astronomy as the study of the application of beliefs about the stars to all aspects of human culture, from religion and science to the arts and literature. It includes the new discipline of archaeoastronomy - the study of astronomical alignments, orientation and symbolism in architecture, ancient and modern within a cultural context. An expanded definition of the term could include the politics of the space race, UFO cults and popular astrology. Can we talk about 'cultural astrology' and, if so, as with 'cultural astronomy', does it refer to the practice, or the academic study of the practice?

There is little theoretical writing on 'cultural astronomy', although it increases year by year. The earliest is the article by Elizabeth Chesley Baity which, though, consists of little more than an uncritical list of previous research. However, by defining the discipline

of 'ethnoastronomy', Baity explicitly argued that it is not enough to use astronomical evidence in isolation as evidence for past astronomical (or, we could say, astrological) practices and beliefs. The two short pieces by Campion offer a definition of cultural astronomy and a concise history of the discipline's development.

The basis of the discipline is that the sky is a vital feature of human culture. As Timothy Darvill wrote, 'If, as Jimi Hendrix once suggested, we could kiss the sky, how would it feel? How would it taste? And what sounds would we hear?'¹ He added,

Whether in relation to the structuring of daily or seasonal routines, geomantic guidance for the location and position of special places, divination and prediction, or simply the evidential base underpinning mythical narratives and cosmologies the sky was an important domain that archaeology needs to understand better.²

This is from Clive Ruggles – a very important figure in the development of the discipline:

The sky is of universal importance. Cultural perceptions of the sky are vital in fulfilling humankind's most basic need to comprehend the universe it inhabits, both from a modern scientific perspective and from countless other cultural standpoints, extending right back into early prehistory. They form a fundamental sect of people's conceptions of their own cultural identity. Developing an understanding of these perceptions is a crucial component of Western anthropologists', archaeologists' and historians' efforts to comprehend human conceptions and actions both in the past and in the present.³

And this is from George Gumerman and Miranda Warburton:

Researchers who have made a study of past cultures' interest in and conception of the heavens have often treated the topic narrowly, rather than in the context of the

¹ Darvill, Timothy, 'Afterword: Dances Beneath a Diamond Sky', in Fabio Silva and Nicholas Campion (eds), *Skyscapes – The Role and Importance of the Sky in Archaeology* (Oxford: Oxbow, 2015), pp. 140-8 (p. 140).

² Darvill, Timothy, 'Afterword: Dances Beneath a Diamond Sky', in Fabio Silva and Nicholas Campion (eds), *Skyscapes – The Role and Importance of the Sky in Archaeology* (Oxford: Oxbow, 2015), pp. 140-8 (p. 147).

³ Ruggles, Clive, 'Pushing back the frontiers or still running around the same circles? 'Interpretative archaeoastronomy' thirty years on', in Clive Ruggles (ed.), *Archaeoastronomy and Ethnoastronomy: Building Bridges between Cultures*, Proceedings of International Astronomy Union Symposium 278, (Cambridge: Cambridge University Press, 2011), p. 15.

entire culture...to truly comprehend a culture we must have some sense of its cosmology – the group's conception of themselves in relation to the heavens.⁴

And again:

the sky played a key role in the whole system of ancient people's ideas of nature and society. ... In ancient men's notions of celestial bodies and laws of their transit[s], links of their cosmic and terrestrial rhythms [sic], positive knowledge and mythology are inseparable. Not a single ancient culture can be understood without studying all of these notions.⁵

This description of Cultural Astronomy and its priorities was recently written by Anthony Aveni, who is both an astronomer and a physicist, and an astronomer and sociologist:

In contrast to the kinds of questions astronomers ask about their predecessors, questions that address the things and processes in the sky, those addressed by the archaeologists and anthropologists focus on what another culture's astronomy tells us about its people's religion, their belief in an afterlife, their politics and their concept of history. Thus cultural astronomy has more to do with what people believe about celestial happenings than the happenings themselves. Rather than simply labelling their beliefs religious, astrological, superstitious, or non-scientific, taking *their* perspective seriously allows us to hold up a mirror to nature, and to see our faces in that mirror set against a background of other faces, and the minds behind them, minds that construct worldviews and meanings other than our own that make sense to them.⁶

The insistence that we understand other cultures on their own terms, not on ours, is a requirement of anthropology. Of course, this applies to all of us. If we want to understand the cultural astronomy of any group of which we are not a part we have to try to understand it on that culture's own terms. For example, scientific astronomers may constitute a culture. For example, this is from a text book on astronomy:

Science is a very human endeavour, and the science that a particular culture produces is in part a reflection of the characteristics of that culture. In astronomy the human aspects of science are very visible.⁷

⁴ Gumerman, George J., and Miranda Warburton, 'The Universe in a Cultural Context: An Essay', in Fountain, John W., and Rolf M. Sinclair (eds.), *Current Studies in Archaeoastronomy: Conversations Across Time and Space*, Durham NC.; Carolina Academic Press, 2005, pp. 15-24. p. 15.

⁵ D.S. Raevsky, "Ancient astronomy as the mirror of the history of culture." *Astronomical and Astrophysical Transactions* 15, no. 1-4 (1998), pp. 299-305.

⁶ Aveni, Anthony, *In the Shadow of the Moon: The Science, Magic and Mystery of Solar Eclipses*, Yale and London: Yale University Press: 2017), p. 249.

⁷ Koupelis, Theo, *In Quest of the Universe*, 7th edition (Burlington MA., Jones and Bartlett Learning), p. 39.

It helps to know how the discipline originated and developed as a result of the boom in archaeoastronomy in the 1960s. A number of works, most notably (because of its public impact) Gerald Hawkins' *Stonehenge Decoded*, established the idea that ancient monuments might have been built to contain astronomical alignments. Some, such as Stonehenge, were described as 'observatories'. However, having discovered apparent alignments the next question was whether these were coincidental, or intentional (deliberately intended by the builders). It was quickly concluded by many of the researchers in the field that wider cultural factors had to be taken into account and so the terms ethnoastronomy and cultural astronomy came into use.

Critiques of most studies in archaeoastronomy as lacking wider cultural, intellectual or scholarly context, or relationship to wider environmental (in landscapes, seascapes, waterscapes, skylscapes, taskscapes* or inscapes**) has led to the alternative use of the term 'skyscape archaeology' and the foundation of the *Journal of Skyscape Archaeology*.⁸

*A taskscape is created by human engagement with the environment.

** An inscape is the inner landscape, embedded in the mind and/or body.

Sometimes 'cultural astronomy' appears to be used as a synonym for archaeoastronomy, although it should always refer to wider contexts. Most work in the area looks at ancient or non-western material. Jarita Holbrook is one scholar challenging this convention by urging the sociological study of modern astronomy and astronomers. One of Holbrook's starting points is that most astronomers are men and, in the USA (where she was born) they are almost all white men. Thus, for her, patently locates the discipline of astronomy in a sociological context. Nick Campion also challenges the convention by asking whether modern western astrology can be considered as a form of 'cultural astronomy'. As Clive Ruggles wrote,

The problems of recovery and interpretation of archaeological data pertain to the dominant set of beliefs that left a physical pattern retrievable from the material record. We should not forget, however, that these may have coexisted with other systems of belief that are much less likely to have produced recoverable or identifiable physical remains. In addition, a culture may have had more than one system of classification or belief operating side-by-side. For example, an official ideology may have coexisted with a local folk tradition, as happens in the western world today with scientific astronomy and astrology.⁹

⁸ Fabio Silva, 'Defining Skyscape', 22 April 2017, <https://sophiacentrepress.com/2017/04/22/defining-skyscape/>

⁹ Ruggles, Clive and Nicholas Saunders, 'The Study of Cultural Astronomy', in Clive Ruggles and Nicholas Saunders, ed. *Astronomies and Cultures*, NiwotCA: University of Colorado Press, 1993, pp. 1-31 (p.15).

What is Astronomy?

The standard modern definition of astronomy varies little from text book to text book or website to website. For example:

Astronomy is the scientific study of celestial objects (such as stars, planets, comets, and galaxies) and phenomena that originate outside the Earth's atmosphere (such as the cosmic background radiation).¹⁰

One of the earliest definitions is Claudius Ptolemy's from the second century: astronomy deals firstly with the movements of the sun, moon and stars and, secondly, with the changes they cause. The second part of Ptolemy's astronomy is now considered to be astrology, there is no contradiction between either part of his definition and modern astronomy,

Historians, though, looking at the wider history of astronomy and astrology, sometimes take a broader view. This is Steve McCluskey, a distinguished historian of both astronomy and astrology, from an email in 2009:

Astronomy is any attempt to account for phenomena in the heavens. Sometimes these accounts are quantitatively descriptive, sometimes they're mathematically predictive, sometimes they're physically causal, and sometimes they're even supernaturally causal.¹¹

We are developing the notion of 'skylscapes' as an umbrella term for the kind of work we cover.

Cultural expectations affect our knowledge of scientific astronomy in various ways. For example, astronomy suffers from the same problem which affects scientific publication as a whole, namely the tendency to favour positive results over negative ones.¹² Such issues have led to the study of the philosophy of astronomy. Steven J. Dick outlined six areas of inquiry which he considered could be gathered under the general area:¹³

¹⁰ 'Astronomy', Science Daily, <https://www.sciencedaily.com/terms/astronomy.htm> [accessed 25 March 2019].

¹¹ Steve McCluskey, 'Re: Is astronomy the oldest science?', email to 'History of Astronomy Discussion Group', 06 April 2009 02:09

¹² Julia Heuritsch, 'Reflexive Behaviour: How Publication Pressure Affects Research Quality in Astronomy', MDPI, Vol. 9 issue 4, pp. 1-23, <https://www.mdpi.com/2304-6775/9/4/52>

¹³ Steven J. Dick 'Critical Issues in the Philosophy of Astronomy and Cosmology', American Astronomical Society, AAS Meeting #227, **Pub**, January 2016, <https://ui.adsabs.harvard.edu/abs/2016AAS...22713006D/abstract>

1. the nature of reasoning, including the roles of observation, theory, simulation, and analogy, as well as the limits of reasoning, starkly evident in the anthropic principle, fine-tuning, and multiverse controversies;
2. the often problematic nature of evidence and inference, especially since the objects of astronomical interest are for the most part beyond experiment and experience;
3. the influence of metaphysical preconceptions and non-scientific worldviews on astronomy, evidenced, for example in the work of Arthur S. Eddington and many other astronomers;
4. the epistemological status of astronomy and its central concepts, including the process of discovery, the problems of classification, and the pitfalls of definition (as in planets);
5. the role of technology in shaping the discipline of astronomy and our view of the universe; and
6. the mutual interactions of astronomy and cosmology with society over time.

All are cultural but perhaps the last is closest to a general definition of cultural astronomy.

Thought for the Week

Is the study of 'astronomy –in-culture' distinct from the study of 'astrology-in-culture'. If so, how?