Editorial

Fabio Silva, Mai Rashed, Erica Ellingson and Liz Henty

For a field of enquiry to endure, the most important requirements are arguably the ability to recruit and retain early career scholars. Whereas general archaeology, which has a vocational trajectory while also being pluridisciplinary and multivocal, appeals to the hearts and minds of many students, archaeoastronomy – and by extension skyscape archaeology – doesn't have it as easy. Regardless of how we feel about the subject, archaeoastronomy today is at best a niche subject. In the UK there is but a handful of academics who devote themselves full-time to it. Globally, we estimate that there are only a couple of hundred scholars working in this area – including those who classify themselves as cultural astronomers rather than archaeoastronomers – and most of them are part-time. When it comes to the demographics of this exclusive group, it is quite clear that the field is failing to attract fresh minds (Henty 2020, 23–24).

The reasons for this would certainly be a worthy research question, but one that is outside the scope of this editorial. However, we'd like to suggest that it may be that the arcane terminology, nebulous theoretical principles and the dearth of introductory textbooks make this a field that is difficult to penetrate and off-putting to all but the most determined of newcomers. Much work is needed on this front to find, publish and promote concise and simple, yet also rigorous, ways into the field.

Turning to the problem of retention, new scholars need a clear research trajectory. This, perhaps, is a more difficult problem to solve given the distinct lack of academic positions and funded research projects in archaeoastronomy. Archaeoastronomical research is relatively inexpensive, and scholars often do their research on the side. This has resulted in an academic culture that acquires data but that does not foster grant applications – the lifeblood of any academic discipline at present. The latter, however, can be a source of income to fund a PhD student, or a postdoctoral researcher who, in this way, can be trained and nurtured into the field. We would argue that it is urgent that archaeoastronomy, and cultural astronomy more broadly, adopt the culture of grant writing that is now common throughout academia in order to create training and progression opportunities for early career scholars.

This approach will take a few years to bear fruit, but it will eventually create an academic ladder that can take new scholars from being postgraduate students to postgraduate researchers, from doing a PhD to becoming a postdoctoral researcher and eventually to getting a permanent position in an archaeology or anthropology department. In today's environment such a ladder is necessary as without a next rung even the most promising scholar will be forced to give the field up for something else, within or outside academia, that can provide for them and their families.

Existing postgraduate programmes, such as those of the University of Wales Trinity Saint David and the University of Oklahoma, provide exciting and robust entry points into the field, and may even go so far as to leverage and assist graduates into PhD programmes. But what happens afterwards? A PhD may very well be seen as a goal in itself, but in the researcher's career it is but the first step of the journey. Skyscape archaeology, archaeoastronomy and cultural astronomy as a whole need to come up with solutions not just for recruiting newcomers, but also for retaining them by providing a pathway for the future.

For this reason, we are very excited to have recently announced two joint Sophia Centre/*JSA* initiatives that aim to support and nurture students along their research trajectory. Both are open to university students (undergraduate or postgraduate) of an archaeology, anthropology or cultural astronomy degree who are enrolled in a programme by the respective deadline.

The first of these initiatives is the **Lionel Sims Award** for student contributions that bridge the gap between anthropological theory and skyscape archaeology. Named after the University of East London anthropologist-turned-archaeoastronomer who was one of the inspirations behind skyscape archaeology, this £1000 award will be given for an outstanding piece of written research that demonstrates originality and high quality, and that makes a significant contribution to the field. The award-winning essay will also be published in *JSA*, subject to our usual peer review procedure. Interested parties should know that the deadline for applications is 21st December, 2021 and that more information can be found on the *JSA* website (<https://journal.equinoxpub.com/JSA/announcement/view/206>).

The second initiative constitutes **Student Research Grants** to support, promote and nurture future research projects by students in the field of skyscape archaeology. Projects may be part of their studies (if this is allowed by their programme or unit), completely independent pieces of research or pilot projects for further studies. There will be two student research grants of £500 each – one that is open to all students who fulfil the eligibility criteria, and one that is exclusively for Sophia Centre students. The deadline for applications is 21st July, 2021. More details, together with the application form, can be found on the *JSA* website (<https://journal.equinoxpub.com/JSA/announcement/view/206>).

We look forward to reviewing applications and publishing the exciting work that will no doubt ensue from these opportunities. Until then, however, we have another exciting issue of *JSA* to share with our readers.

In their paper “Cultural Astronomy in Hispanic-Indigenous Contests of Central Chile”, **Ricardo Moyano** and **Patricio Bustamante** seek to prove, primarily through archaeological and astronomical evidence, the indigenous origins of the city of Santiago in Chile, challenging in the process the “official” colonial history which claims that the city was established by the Spanish colonialists in the early decades of the sixteenth century on an uninhabited “wasteland”. Drawing comparisons between the excavated materials, geographical locations, environmental surroundings and city structures of the South American cities of Santiago and Cuzco – the latter being the capital of the Incan empire located in southeastern Peru – the study suggests that Santiago was in reality a fully developed and functioning Incan administrative centre in the Southern Cullasuyu region of the Twantinsuyu empire before the advent of the Spaniards. Moyano and Bustamante support this hypothesis via an analysis of how particular natural and artificial features of the topography of Santiago reveal through their astronomical alignments unmistakable elements of the astro-religion of the Andes. These include the establishment of the city near mountains and hills, which, in addition to being perceived in the Incan animist worldview as possessing potent spiritual qualities as *huacas*, served the practical function of observatories and horizon calendars that aided the local indigenous population in timing anticipated festivals and predicting various solilunar phenomena.

The Neolithic temple complex at Mnajdra, Malta has been recognised by UNESCO as an exceptional example of the culture and achievements of a prehistoric society. The temple architecture appears to reflect observations of the sky, with a potential alignment with the rising Pleiades. In “Revisiting the 5000-Year-Old Tally at Mnajdra, Malta”, **George Agius**, **Lorraine Brown Read** and **Frank Ventura** add a new dimension to our understanding of Mnajdra by analysing “tally marks” inscribed on an inner temple wall. Their rigorous statistical analysis shows that these marks can be interpreted as a count of the days between the helical rising of bright stars, with the rise of the Pleiades marking the start of the tally. This new result further emphasises the importance of stellar observations, especially of the Pleiades, in Neolithic Malta.

We also present the second part of “Celestial Aspects of Hittite Religion”, the first instalment of which was published in *JSA* 5.1. In part one of the study, Eberhard Zangger and Rita Gautschy suggested that the rock-cut reliefs of the Hittite rock sanctuary in Yazılıkaya, located in the Turkish Province of Çorum in Central Anatolia, could be interpreted as a time-keeping device that aided the intercalation of the lunar calendar of the Hittites. In the second part, **Eberhard Zangger** and **Rita Gautschy** collaborate with **E. C. Krupp** and **Serkan Demirel** to further develop their initial findings by adopting an interpretive approach that seeks to provide the recorded alignments and orientations of Yazılıkaya with cultural and religious meaning. To achieve this, the authors engage in a comparative study that considers other archaeological evidence of Bronze Age societies of Egypt, Mesopotamia and Europe. The authors then propose that the engravings on the reliefs of Yazılıkaya could be representative of observable celestial objects, while the chambers of the sanctuary could be symbolic of a tripartite cosmology that divides the world into the realms of the celestial, terrestrial and the “netherworld”.

In “Decoding the Urban Plan of the City of Pilsen (Plzeň)”, **Nickolaos Ragkos** studies the medieval urban plan of the historic centre of Pilsen in the Czech Republic, a city constructed in an era that witnessed revived interest in the natural sciences and philosophies of ancient Greece. Considering the significance of astronomy in the classical Greek worldview, Ragkos anticipates seeing relevant astronomical ideas reflected in the city’s structure. After a thorough analysis of the various facets and elements of Pilsen’s historic urban plan and its Gothic architectural features, Ragkos suggests that the tangible cultural amalgam which forms the proportions, positions, orientations, geometrical lines and forms of the city are physical representations of the Greek-inspired Bohemian cosmology.

The spectacular Bronze Age conical golden hats found in southern Germany and western France are inscribed with symbols which suggest ritual astronomical or calendrical knowledge. The Nebra disk, another Bronze Age object with potential astronomical significance, was also found in a location where the summer solstice Sun rose over nearby mountains. In “The Golden Hat of Schifferstadt: An Astronomically Significant Deposit Location?”, **Luca Amendola** investigates whether the Schifferstadt golden hat was deposited in an astronomically privileged location. His article describes a detailed examination of the horizon as seen from a random sample of locations in the Schifferstadt valley. A statistical analysis indicates that only sites close to the hat’s deposit location have more celestial alignments than would be expected by chance. This analysis highlights the importance of considering the landscapes in which archaeological objects were used and suggests additional examination of Bronze Age sites.

These articles are followed by our very first *Research Note*, a new section of *JSA* devoted to shorter research pieces showcasing new finds in well-researched and contextualised regions and periods. In “A Possible New Solstitial Sightline in the Stonehenge Landscape”, **Clive Ruggles, Amanda Chadburn, Matt Leivers** and **Andrew Smith** report on a recently discovered line of timber posts erected on Lark Hill enclosure, just north of Stonehenge.

This issue includes also three book reviews, the first of which is **Carole Taylor’s** review of *The Astronomical Clock of Strasbourg Cathedral* by Günther Oestmann, who engages in a multifaceted analysis of the historical, mathematical, astronomical, mechanical and architectural features of the second astronomical clock of Strasbourg Cathedral, constructed in the last decades of the sixteenth century. This is then followed by a review by **Fabio Silva** of *Megalithic Tombs in Western Iberia: Excavations at the Anta da Lajinha*, edited by Chris Scarre and Luiz Oosterbeek, which describes recent excavations of the Anta da Lajinha megalithic tomb north of the Tagus River in Portugal. The third review, by **Brian Bauer**, is of Steven R. Gullberg’s *Astronomy of the Inca Empire: Use and Significance of the Sun and the Night Sky*, a work that explores, as its title indicates, the astronomical and cultural significance of a number of *huacas* in Machu Picchu, the Sacred Valley and Cusco, among other sites in the Inca Empire. Most in-person conferences in 2020 were cancelled because of the pandemic, and so the virtual Skyscape Archaeology Keynote Lecture Series was a welcome chance for our research community to come together. **William Romain** provides a review of the twelve talks, which were presented between October 2020 and March 2021 to appreciative international audiences.

References

Henty, L., 2020. "Skyscape Archaeology: The Place of the Sky in Academia". In *Visualising Skyscapes: Material Forms of Cultural Engagement with the Heavens*, edited by L. Henty and D. Brown, 13–34. London: Routledge. <https://doi.org/10.4324/9780203730935-2>