

Archaeoastronomy in South America: Is There a Future?

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Our contribution to the current Forum is based on our personal experience of undertaking archaeoastronomical work, our relationship with other researchers in the field of anthropology and our experience of teaching courses on “Astronomy in Culture” in South America. In the following, we focus first on cultural understanding of the sky within the academy, after which we give some thoughts on the future of the subject.

In our opinion, it appears that archaeologists in South America, and particularly in Argentina, do not consider the sky in their work. This is despite the fact that it has long been acknowledged that landscapes in archaeology have meanings that go beyond the immediate physical environment: different geographical expressions, such as a river or a hill, also form a *cultural* landscape, regarded as a particular and specific social construction for each social structure and its history (Criado-Boado 1993). This landscape, though, in most research reaches only to the horizon: only a few publications mention the heavens or suggest an astronomical relationship (see, for example, Madrid *et al.* 2000; Moralejo 2017).

The Universidad Nacional de La Plata (UNLP) is the only university in Argentina that gives students an opportunity to learn about the cultural importance of the sky, by introducing them to Astronomy in Culture as a subject which shows them, following Iwaniszewski (2011), how what is conceptualised as sky (for example, the Sun, the Moon, the stars) is also part of the landscape: relationships that any human group articulates with geotopographic elements are also replicated in the sky (Iwaniszewski 2011). The sky as a cultural construction actively participates in social life which reproduces values, norms, ideals and therefore sociocultural categories that are reflected in praxis. Informed by Bourdieu (1977), Iwaniszewski (2007) argued that the structure of the social sphere

is determined by the principles of differentiation generated by *habitus*. The sky and landscape depend on the same culturally specific classifications and the same rules or standards with which all interpretations of “social reality” (Bourdieu 1977, 37) are made. In this context, the celestial bodies and some meteorological phenomena, along of course with topographic features, become agents or social actors who by action mark and negotiate their status, rank, class, age and gender as part of a social field (or space) (Iwaniszewski 2007; 2009; 2011; 2012).

When we study an archaeological site, our goal is actually to understand a human group. As such, sky and landscape must be interrelated in analysis with other cultural aspects of their perspective that are widely recognised as relevant, such as economy and religion. This is why we consider that the mother discipline for these studies could be anthropology, especially for studies of skyscape archaeology. Belmonte (2006, 25–26) argues that astronomers and anthropologists need to learn new skills and question their epistemological references in order to become archaeoastronomers, but without losing sight of their interdisciplinary nature. Astronomy in Culture, of which archaeoastronomy is a part, is significant enough that it should be part of the undergraduate training for anthropologists, and in regions such as South America, students in a range of disciplines should be made aware of its existence. It should also be available as a specialist course for postgraduates. However, with regard to how these subjects or courses can coexist with anthropology, it will always be necessary to “negotiate” various topics and the amount of time given to them.

Is There a Future?

With regard to the future in South America, currently there are two educational programmes for archaeoastronomy and for astronomy in culture. The first is the series of “Schools of Astronomy in Culture” that has been carried out since 2012. The second is the course “Introduction to Astronomy in Culture”, which has been taught in the first semester of each year at the Facultad de Ciencias Astronómicas y Geofísicas (FCAG) at the Universidad Nacional de La Plata, Argentina (FCAG – UNLP) since 2016.

Inter-American Schools of Cultural Astronomy

Since the completion of the first training school in Astronomy in Culture in the city of La Plata in Argentina in 2012 (when 170 enrolled, though there was space only for 100 participants), the Sociedad Interamericana en Astronomía en la Cultura (SIAC) (SIAC 2020) has considered the training of young people in this area to be essential, and for that reason no scientific meeting of SIAC has taken place since without an associated school. This has brought Astronomy in Culture to Bolivia (Samaipata 2018), Brazil (Rio de Janeiro 2015), Chile (La Serena 2019), Ecuador (Quito 2013), Mexico (Mexico City 2014), Paraguay (San Cosme and San Damián 2016) and Peru (Nazca 2017). The next SIAC conference, La Plata 2020, has been postponed until 2021 due to COVID-19, and there will be capacity for 100 students.

Introduction to Astronomy in Culture at the La Plata Observatory

Since 2016, the FCAG of La Plata has incorporated a postgraduate course with credits that introduce students to the astronomy of culture as an optional seminar for the astronomy degree. Additionally it is an optional subject for the anthropology degree of the Facultad de Ciencias Naturales y Museo de la UNLP. This presence in both faculties means that every year we have undergraduate and graduate students from both majors (astronomy and anthropology), with an average of 20 students per year, though generally 70% of these students are studying for an anthropology degree.

However, although we have argued that archaeoastronomy must be a subdiscipline of anthropology, our subject was born and developed mainly at the La Plata Observatory, and there are academic, economic and historical problems that arise when adding new areas of research in an existing discipline. As such we have seen with pleasure over the past five years that some archaeology instructors now advise their students to take our subject.

Conclusion

In conclusion, we consider that the next generations of archaeologists should be trained to appreciate the sky being as part of the cultural landscape, and that this can only be achieved by archaeoastronomy or cultural astronomy, taught as a compulsory element of the anthropology degree but also brought to the attention of archaeologists. This change will not happen quickly, but we believe we are on the right track.

References

- Belmonte, J. A., 2006. "De la arqueoastronomía a la astronomía cultural". *Boletín de la SEA* 15: 23–40.
- Bourdieu, P., 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511812507>
- Criado-Boado, F., 1993. "Límites y posibilidades de la arqueología del paisaje". *SPAL: Revista de prehistoria y arqueología de la Universidad de Sevilla* 2: 9–55. <https://doi.org/10.12795/spal.1993.i2.01>
- Iwaniszewski, S., 2007. "La arqueología de alta montaña frente al paisaje montañoso en México central – problemas, interpretaciones, perspectivas epistemológicas". In *Páginas en la Nieve: Estudios sobre la Montaña en México, México*, edited by M. L. Chávez y Peniche, S. Iwaniszewski and R. Cabrera, 9–28. México: Instituto Nacional de Antropología e Historia, Escuela Nacional de Antropología e Historia.
- Iwaniszewski, S., 2009. "Por una astronomía cultural renovada". *Complutum* 20: 23–37.
- Iwaniszewski, S., 2011. "The Sky as a Social Field". In *"Oxford IX" International Symposium on Archaeoastronomy*, edited by C. L. N. Ruggles, 30–37. Cambridge: Cambridge University Press. <https://doi.org/10.1017/S1743921311012440>
- Iwaniszewski, S., 2012. "La vida social de las formas del paisaje". *Revista de Investigación en Ciencias Sociales y Humanidades, Nueva Época*, 1 (2): 139–158.
- Madrid, P., G. Politis and D. Poiré, 2000. "Pinturas rupestres y estructuras de piedra en las Sierras de Curicó (extremo noroccidental de Tandilia, Región Pampeana)". *Intersecciones en antropología* 1 (1): 35–54.
- Moralejo, R., 2017. "Arqueología y paisaje en el interfluvio de Zapata, Catamarca, Noroeste Argentino". *Boletín del Museo Chileno de Arte Precolombino* 22 (1): 119–136. <https://doi.org/10.4067/S0718-68942017005000203>
- SIAC [Sociedad Interamericana en Astronomía en la Cultura]. Website. Accessed May 2020. <http://siac.fcaglp.unlp.edu.ar/>