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THE 'PATH OF THE SPIRITS': A PRELIMINARY APPROACH TO NORTH-WEST/SOUTH-EAST ORIENTED ROWS OF CAIRNS IN THE ALTAI MOUNTAINS, MONGOLIA

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ABSTRACT

This paper explores the potential significance, in archaeological, archaeoastronomical, and symbolic terms, of a NW/SE oriented row of 54 stone cairns, locally known as 'the path of the spirits'. The row of 54 cairns, which is apparently oriented towards the setting of the sun at the summer solstice, also displays a suggestive spatial proximity to an outstanding Late Bronze Age funerary complex. The row of cairns, which has been originally documented in the arid high mountain landscape of the Ikh Bogd Uul Mountain, Eastern Mongolian Altai, does not seem to feature in the archaeological literature of Mongolia. Nevertheless, both these characteristics, namely a NW/SE orientation and a spatial proximity to a Late prehistoric funerary mound, can be also observed in a row of 9 stone cairns documented in the satellite imagery a few kilometres away, on the southern slope of the Ikh Bogd Uul Mountain. In this paper, besides the description of such archaeological features, the hypothesis that the articulation of rows of cairns with a powerful orientation and numerical symbolism could be rooted in ancient and traditional Eurasian cosmologies and could play an important role in the local sacred and funerary geographies is discussed.

KEYWORDS: Bronze Age Mounds, Funerary Geographies, Buddhist Landscape, Mongolian Cosmologies, Summer Solstice, Calendrical Numbers, Spirits Road.

1. INTRODUCTION

This paper explores distinctive material and intangible aspects of the archaeoastronomy, archaeology, and cultural astronomy of the Eastern Altai Mountains, which have been previously approached through a preliminary research on the orientation patterns of Bronze and Iron Age funerary mounds on Ikh Bogd Uul Mountain (3957 m), Bayankhongor, Southern Mongolia (Dal Zovo et al., 2014). In this contribution, we examine material features documented on the same mountain thanks to archaeological and astronomical fieldwork, analysis of the satellite images, and astronomical analysis. This information will be integrated and compared with contextual archaeological and historical data, as well as the information derived from ethnographic documentation and local folklore, in order to provide an enriching and comprehensive, although preliminary, interpretative hypothesis (Ruggles, 2005). The archaeological features at the centre of our study are two NW-SE oriented rows of small stone cairns that possibly have an archaeoastronomical value. Most importantly, to our knowledge, these oriented rows of cairns displaying also an intriguing spatial proximity to Late Prehistoric funerary mounds have not been previously considered in the Mongolian and Central Asian archaeology and lack a proper typological and chronological definition. Other rows of cairns, whose numbers of cairns equal 5, 13 or 108, have been elsewhere documented in correspondence of Buddhist monasteries and *stupa* shrines or traditional Mongolian monumental *ovoo* cairns. They have been usually investigated in the frame of the archaeology of Buddhist and traditional Mongolian rituality (De Priest, 2008; Evans and Humphrey, 2003). In this sense, our analysis aims to shed light on the persistent adaptation of local symbolism and materiality in sacred and funerary contexts of the high mountain landscape of the Ikh Bogd Uul Mountain over time.

2. MATERIALITY AND SETTING

In Mongolia, mountains, deserts, and steppes are relevant natural features that have been integrated into complex sacred pastoral geographies and monumental archaeological landscapes over time (Günchinsüren, 2017; Honeychurch, 2015; Humphrey, 1995). On the Ikh Bog Uul Mountain, which constitutes a research area of more than 6000 km^2, we can observe modern herders' campsites, traditional *ovoo* cairns, ancient rock art sites, and funerary mounds sharing the same ground and physical environment (Dal Zovo, 2016; Dal Zovo, *in press*). This distinctive material accumulation has been especially documented in the area of the high mountain plateau dominated by Puntsag Oboo Hill (2550 m). On the flat hilltop, an outstanding Bronze Age funerary complex has been previously investigated in the frame of an orientation analysis of the local ancient funerary mounds (Dal Zovo et al., 2014). The Puntsag Oboo funerary site consists of a large Late Bronze Age *khirigsuur* mound with a 60 m wide circular stone fence and additional satellite mounds (Dal Zovo, 2016; see also Honeychurch, 2015; Wright, 2007). On the eastern side of the main mound, lies an N-S oriented row of 13 small *oboo* cairns, and a Late Bronze Age standing stone, probably a rare Southern Mongolian example of West-Eurasian stelae (Fitzhugh, 2009; Volkov, 1995). The row of 13 *oboo* cairns, however, could possibly indicate a later addition, as the satellite cairns associated with Bronze Age standing stones are usually scattered around the main mound, or on its eastern side, but they are not aligned in a single row (Allard and Erdenbaatar, 2005; Fitzhugh, 2009; Wright, 2007).

The Puntsag Oboo complex dominates a wide high mountain plateau of grassy pastures and an important mountain pass for the north-south mobility across the mountain. In the slopes nearby, local herders usually set their uplands summer camps, as confirmed by the presence of the circular white felt tents in the satellite images (Figure 1). Perhaps because of the favourable location for the local mobility and pastoral activity, in 2009 the wide upland at the foot of Puntsag Oboo Hill was chosen for the celebration of a traditional *naadam*, a Mongolian festival that includes specific rituals, horse racing competitions, and boxing (Lacaze, 2010). But this is not only a crucial area for present pastoral mobility and ritual ceremonies. Next to the present pastoral summer campsites, locally known as Khon Tsögonii Artalt/Ovöön Shatnii Ikh, we documented a rich concentration of engraved boulders with Bronze and Iron Age rock art motives (see Rozwadowski, 2004; Tseveendorj, 2006), which contribute to indicate a long-term human presence in the area.

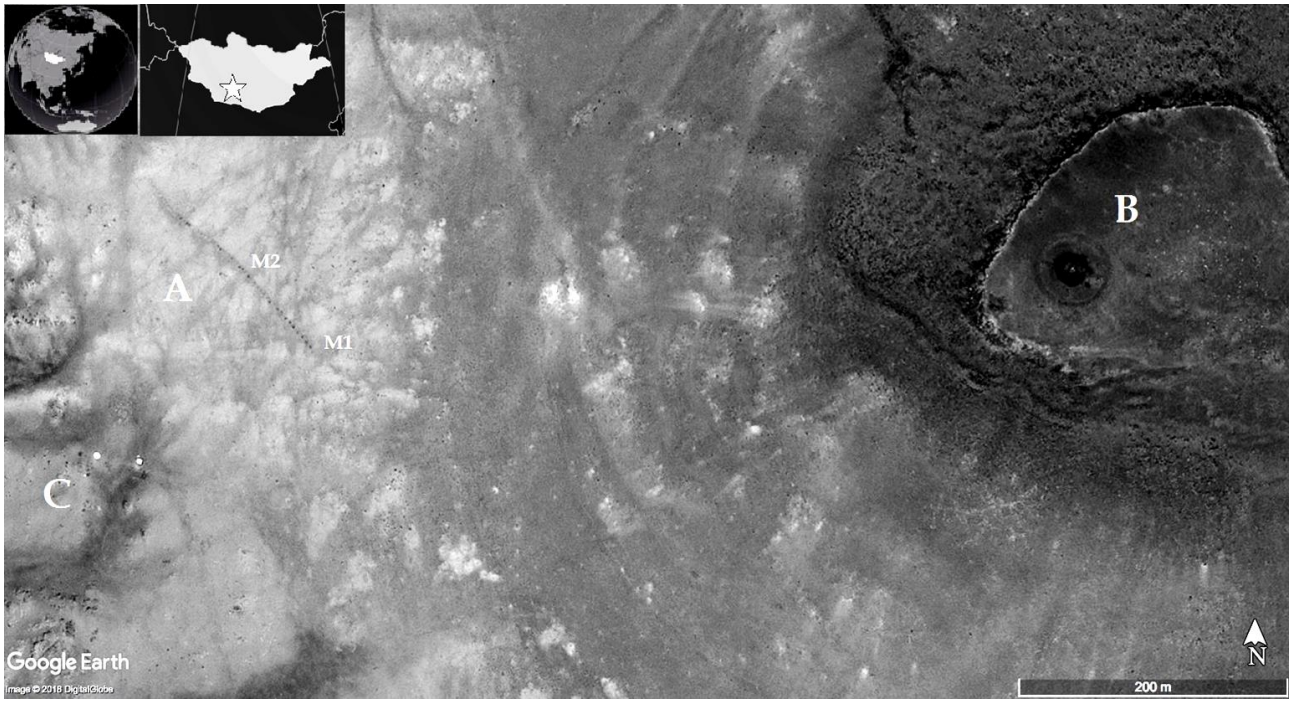

Figure 1. Research area and Puntsag Oboo site. A: Row of 54 Stone Cairns. B: Bronze Age mound and satellite features. C: Pastoral summer campsites (white ger tents) and rock art sites. M1: Measure point 1. M2: Measure point 2 (see Table 1).

3. A NW/ SE ORIENTED ROW OF 54 CAIRNS

In this composite archaeological landscape, encompassing ancient funerary monumental activities and modern pastoral and mobility practices, lies an impressive row formed by 54 stone cairns. The row of 54 cairns is c. 180 m long and it is oriented in a NW/SE direction that has been verified in the field. This feature, clearly visible in the satellite imagery, is located at the foot of Puntsag Oboo Hill, in close proximity to the rock art sites and present summer campsites (see Figure 1).

While the rock art engravings have been mostly documented on black volcanic boulders of different dimensions, the 54 cairns were primarily built using quartz and granitic stones that are equally abundant on the ground and in the granite outcrops nearby. An engraved black boulder with a zoomorphic motif comparable to those documented nearby has been localised in one of 54 the cairns. This is relevant in terms of relative chronology, as the time of construction and usage of the row of cairns is highly uncertain. It is likely that the engraved boulder has been moved and added to the cairn in the process of piling stones for the row of cairns, which would be then posterior to the Bronze and Iron Age engravings.

The row consists of 54 small cairns that are on average 50 cm high and 50–100 cm wide. They are placed one after another to form a long line on the surface of the elevated plain, west of the monumental Bronze Age complex on the top of Puntsag Oboo Hill, which visually dominates the area (See Figure 2). Conversely, the row of 54 cairns is equally visible looking from the north-western ridge of the hilltop. This inter-visibility seems to indicate an interesting visual and perhaps semantic connection between the Late Prehistoric funerary site and the row of 54 cairns. In 2011, while observing the row of 54 cairns from the privileged position on Puntsag Oboo hilltop, the notables and elders of the local mountain community of Bogd explained that the row of 54 cairns was locally known as the 'path of the spirits', thus suggesting a primary funerary and ritual value in the local folklore. The significance of this information for a locally-rooted archaeological and archaeoastronomical interpretation will be further discussed.

4. FIELD DOCUMENTATION AND ANALYSIS

Field measurements were carried out in August 2011 with the professional support of a former colleague of our institute, Yolanda Seoane Veiga. Orientation data (see Table 1) were collected using a Suunto Tandem 360 PC. This instrument includes a professional compass plus a clinometer. The face value of the azimuth measurement has an intrinsic error of ¼° and ½° in horizon altitude. Due to the different uncertainties in the measurement process,

the estimated true error in azimuth may be ~1°, which translates, when taken together with the uncertainty in altitude, into an error of ~1° in declination. The readings have been corrected in two ways for magnetic declination and magnetic anomalies. During the fieldwork, we obtained several measurements to conspicuous mountaintops that were later compared to the readings of highly accurate military maps of the area. Such measurements were further compared to satellite images and magnetic models from NOAA (http://www.ngdc.noaa.gov), thus correcting for the magnetic declination. Finally, the values for declination presented in Table 1 include a refraction correction, following Schaeffer (1993).

The row of 54 cairns displays an apparent bend at the given point in its middle section. This divides the line into two sections with well defined straight directions. In order to verify possible adaptations to the microtopography of the terrain, field measurements were taken from two different points: first, from the first cairn at the southernmost extreme of the line and then from a cairn located at the intermediate point of the row, where it bents (see points M1 and M2 in Figure 1). From the measurements points, we checked the possible presence of significant mountaintops in the skyline and the visibility to the eastern horizon, which both appeared to be significant aspects of the local orientation practices (Dal Zovo et al., 2014; Charleux, 2006; Vaté, 2006), but we concluded that this was not the case. Towards the NW, the horizon is open to a far mountain ridge with no outstanding summit. In the opposite direction, the view towards the E and SE is substantially restricted by the steep and close by slopes of Puntsag Oboo Hill (Figure 2). The field measurements, therefore, were taken following the direction of the row of cairns towards the NW horizon. As one can observe in Table 1, the results of the two sections differ, but they both seem to indicate a possible attention to astronomical events related to the moon or the sun cycles, or both. This naturally needs to be further analysed in relation to other sites and the local orientation traditions.

***Table 1. Archaeoastronomical survey** data at the row of 54 cairns on the Ikh Bogd Uul Mountain.*

Object	Azimuth	Angular Altitude	Declination	Possible Object
Cairn Meas. 1	307°.5	−2°	23°.3	**SOLSTICE**
Cairn Meas. 2	314°.5	−2°	27°.4	**LUNAR STANDSTILL**

In the case of the first observation, the calculated declination is 23°.3. This value suggests that the row of cairns could be related to the northern extreme of the sun. In particular, for an observer facing towards the NW horizon, the intended astronomical object could possibly be the setting of the sun at the summer solstice. The possible orientation to the solstice is especially intriguing in relation to the ethnographic information we will illustrate in the following paragraphs. On the other side, the result of the second measurement possibly indicates a concern for the cycles of the moon, even though the declination differs from a perfect match to the lunar standstill –by less than one degree-. This latter value may be noteworthy in relation to a certain trend of orientation patterns towards the major lunar standstill observed for several Bronze Age mounds on the Ikh Bogd Uul Mountain (Dal Zovo et al., 2014).

Figure 2. Row of 54 cairns with Puntsag Oboo Hill in the background (View to SE).

5. A ROW OF 9 STONE CAIRNS

Although our search for references in the archaeological literature and the historical sources was fruitless, thanks to a combined analysis of satellite images and the photographs taken in the field we could detect a congruous local comparison for the oriented line of 54 cairns, precisely in the research area of the Ikh Bogd Uul Mountain. This encourages us to think that similar 'row of cairns' features could be found in the area and in other regions of Mongolia in the future.

The NW/SE oriented row of cairns documented in the Uchetiin Am Valley, on the southern side of the Ikh Bogd Uul Mountain, few kilometres south of Puntsag Oboo Hill as the crows fly, is less monumental, but it presents several interesting characteristics from both the material and spatial point of view. The row is composed by 9 cairns placed one after one other, along a NW/SE linear direction that is clearly detectable in the satellite image (Figure 3). Unfortunately, precise in situ measurements are lacking due to the post-fieldwork detection. The row of cairns is c. 30 m long (measured in Google Earth). Interestingly, this is one-sixth of the length of the 180 m row of 54 cairns located at Puntsag Oboo. Moreover, the number of cairns at the Uchetiin Am site, 9, is exactly one-sixth of 54, the number of cairns in row at Puntsag Oboo. Therefore, the length of the rows and the numbers of cairns appear to exhibit a possible proportional relationship that needs to be further investigated.

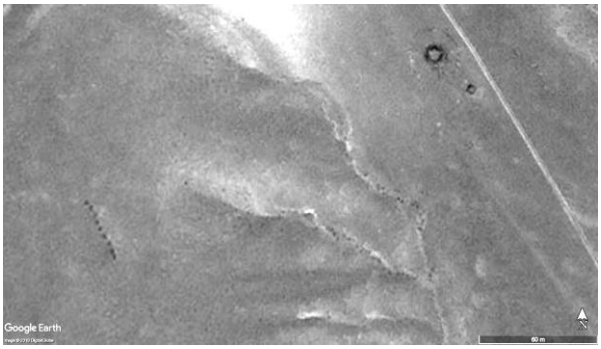

Figure 3. Uchetiin Am Valley site. Row of cairns (left); Late Prehistoric mound and modern track (right). Scale value: 60 m.

As it has been observed for the row of 54 cairns, the row of 9 cairns at Uchetiin Am Valley is located at a short distance west of a Late Prehistoric funerary complex, but in a sort of inverted topographical context. Here, the row is located on the top of a little hill and it follows its ridge, while the funerary area is located below. This is probably why in the fieldwork we failed to notice the row of 9 cairns on the hill, while we were surveying the Late Prehistoric site thoroughly. Uchetiin Am is a complex funerary area too, counting features of different epochs. The main Late Prehistoric mound has a circular stone fence and satellite stone features. Late Bronze Age/Early Iron Age slab tombs are located on a steep slope nearby, as it has been documented elsewhere in Mongolia (Honeychurch, 2015; Johannesson, 2011).

Being located on the top of a small elevation, the visibility from the line of 9 cairns is probably consistent with that verified at the row of 54 cairns: the NW horizon is constituted by a close mountain ridge with no outstanding summit. On the contrary, the location seems to provide a clear open view towards the SE. Judging from Google Earth measurements, the orientation of the row of 9 cairns is of 150º in azimuth. This value is far from any solar or lunar orientation on the horizon. However, we may speculatively suggest that the perpendicular to the line of the row would be facing towards the local summer solstice sunrise, particularly towards the NE. Although this preliminary observation should be taken very cautiously, it is interesting to observe that such perpendicular line would be directed towards the Late Prehistoric funerary mound located on the western foothill nearby.

As it has been observed for the row of 54 cairns at Puntsag Oboo, the emplacement of the row of 9 cairns and the ancient funerary area nearby is topographically conspicuous and equally relevant in present pastoral mobility. A modern track crosses the site leading towards the town of Bayan Gobi, through a ford located a few hundred metres away. In the survey, we could document that the ford is presently overlooked by a herders' campsite. Therefore, like at Puntsag Oboo, at the site of Uchetiin Am we can recognise a long-term contiguity of significant topographical features, present pastoral routes and campsites, and Late Prehistoric burials in concomitance with the localisation of the row of cairns.

6. LOCALISATION, ORIENTATION, AND SYMBOLISM

As we mentioned above, one of the main difficulties in analysing the two rows of cairns as archaeological and possibly archaeoastronomical constructs is the current impossibility of placing them into a suitable chronological frame. Although the spatial proximity of both rows of cairns to a Late Prehistoric funerary area located on their eastern side seems noteworthy, establishing a chronological and functional relationship between the two objects is highly problematical. While this aspect may be overcome with an archaeological excavation, which unfortunately has not been executed, our present essay tries to contextualise these rows of cairns taking into account their emplacement, materiality, and relevant historical and ethnographic sources. In this way, we propose to illustrate the possible cultural context and

long-term adaption of these features in the local sacred geography, beside a precise chronological definition (Ingold, 2010).

As regards to the localisation of the row of 54 and 9 cairns in close proximity to, respectively, a mountain pass and a ford, we have already emphasized that these topographical features have a persistent relevant role in the local mobility. Nonetheless, in traditional Mongolian cosmologies, fords and mountain passes also carry essential symbolic connotations: they are considered the meeting place for the master spirits of the place (Davaa Ochir, 2008; Humphrey, 1995; Tatár, 1976). Fords and passes are critical points of the pastoral routes and may represent not only a geographical but also a symbolical passage from a place or condition to another (Davaa Ochir, 2008). The symbolical and liminal connotations of certain topographical features and pastoral routes are especially relevant also in the local funerary and ritual tradition. In fact, the analogy between periodical pastoral movements and the travel of the master spirits of the place or the spirits of the deceased to the world of the dead is well documented starting from the first available written sources in Mongolia, dated to the 1st millennium AD (Marazzi, 1984; Ragagnin, 2013; Roux, 1963).

Furthermore, the seasonal settlement and mobility of the local herders traditionally take place in relation to a calendar that also incorporates the periodical rituals celebrated at certain sacred places (Lacaze, 2010; Tatár, 1976). In this sense, both herders' rituality and pastoral cyclicity can be considered structural aspects of the local landscape and traditional cosmology (Baumann, 2008). In this ritual and calendric perspective, it is worth noting that the numbers of cairns in the rows, respectively 9 and 54 –as the half of 108- are particularly relevant in the Mongolian traditional folk cosmology, as well as in the Buddhist-Lamaist symbolism (Moses, 1986). Also, they possibly have a calendric value that may be rooted in ancient Indian and Middle Eastern astronomy (Baumann, 2008). Although there is no room for a more detailed discussion of this aspect here, in other ancient sources the number 54 appears connected to long-term solar and lunar cycles (Thureau-Dangin, 1922; Waerden, 1974). The significance of numerology in the articulation of stone structures in the landscape can be also observed in the rows of traditional Mongolian *oboo* cairns that have been documented on the Puntsag Oboo Hill -a line of 13 little *oboos*- and elsewhere in both Mongolian sacred landscape and at Buddhist monasteries (Charleux, 2006; De Priest, 2008; Evans and Humphrey, 2003).

Finally, in harmony with our working hypothesis of an highly integrated and long-term pastoral and ritual geography on the Ikh Bogd Uul Mountain, it is worth noting that the possible orientation of the row of 54 cairns towards the setting of the sun at the summer solstice, and speculatively towards summer solstice sunrise at the row of 9 cairns, may be consistent with the traditional seasonal presence of local herders and their herds in the high pastures of the mountain during the summer, as it has been presently verified in the field and the satellite images (Figure 1). Indeed, ritual and or funerary activities associated to specific seasonal settlements and pastoral activities, have been equally documented for the celebration of the traditional Mongolian *naadam* festival in summertime or the New Year's Eve at winter campsites in modern times (Lacaze, 2010). Significantly, these traditional ceremonies are devoted to the celebration of the spirits of the ancestors and the master spirits of the place, thus combining multiple pastoral, ritual, and funerary aspects (Davaa Ochir, 2008; Lacaze, 2010; Tatár, 1976).

This consideration may enhance the significance of the proximity of the rows of 9 and 54 cairns to ancient Late Prehistoric funerary areas. But it seems equally noteworthy that the row of 54 cairns at Puntsag Oboo is locally known as the 'path of the spirits'. In fact, as we mentioned before, in Mongolian and Altaic tradition death is seen as a travel to the world of the dead, which usually takes an established route through fixed passages and following a certain direction, as it happens in the traditional pastoral mobility (Marazzi, 1984; Roux, 1963; Vaté, 2006). Interestingly, in the Tungus cosmology of Southern Siberian nomadic communities, the spirits of the dead travel to an afterworld located in the NW section of the world (Shirokogoroff, 1935), which happens to be one, and the most probable directional intentionality displayed by the NW/SE oriented rows of cairns. More significantly even, the Tungus afterworld can be accessed through a specific passage indicated by the most northern point reached by the sun during the summer, which likely refers to the solstice. Although one cannot be too careful in considering the possible links between the ethnographic information and material features of uncertain chronology, the possible orientation of the row of 54 cairns to the setting of the sun in the summer solstice that resulted from the archaeoastronomical analysis may appear at least compatible in relation to the local cultural context. These correspondences certainly require further investigation and comparison, but in our view, they may contribute to providing a consistent local cultural reference for a tentative, preliminary understanding of the rituality and symbolism associated with the row of cairns.

7. SPIRITS ROADS IN CHINA

The conception of the division of the world according to cardinal directions, and the association of the west and or the north with -the entrance to- the world of the dead or the world of the spirits of the ancestors has been widely documented in Eurasian and Inner Asian cosmologies (Holmberg-Harva, 1927; Marazzi, 1984; Pedersen, 2007; Roux, 1963; Vaté, 2006). Nevertheless, a special focus on the north-western section of the world in funerary materiality and symbolism can be also traced in the early China of the Warring States period (481/403-221 BC), if not before (Guolong, 2005; Pankenier, 2013). According to the sources of the epoch, a mountain located in the north-western section of the world would lead to the gate to the world of the spirits. Here, we can trace in the written sources an early confirmation of the symbolical conception of death as a travel through a certain road, route, or passage (Guolong, 2005). This cosmology likely shaped the rituals and beliefs underlying later Chinese funerary features known as the 'spirits roads': monumental promenades that led to the tombs of emperors and other outstanding figures of the Song (AD 960–1279) and Ming (AD 1368–1644) dynasties (Paludan, 1991).

In analysing the orientation of the spirits roads of the Northern Song imperial tombs, Magli (2016) observes a consistent orientation focus on the north/south cardinal axis, as well as a particular attention to the northern section of the sky. In the Chinese world, in fact, a persistent intentionality towards the cardinal orientation and the circumpolar sky can be documented as early as the end of the second millennium BC (Pankenier, 2009). In terms of directional intentionality, at the Chinese spirits roads the observer would either have been looking north approaching the funerary monument or from there, having the north behind, towards the opposite direction, the south, which is the chief direction in Chinese rituality, architecture, and orientation practises (Charleux, 2006; Chen, 2009).

What we consider important here, in comparison with the rows of cairns documented On the Ikh Bogd Uul Mountain, in the Mongolian Altai, is the cosmological association of a certain cardinal direction with the world of the dead, which may have been shifting between west and north also in Mongolian funerary tradition, while maintaining its symbolical value (Turbat, 2011). In this sense, we suggest that the orientation of the roads of the spirits towards the world of the dead at complex funerary sites in medieval China can stimulate a more refined understanding of the oriented rows of cairns documented on the Ikh Bogd Uul Mountain in Mongolia.

8. DISCUSSION AND CONCLUSION

In this paper, we have explored the possible archaeological and archaeoastronomical significance of two NW/SE oriented rows of, respectively, 54 and 9 cairns, documented in spatial association with Late Prehistoric funerary mounds, as well as present pastoral campsites, and conspicuous topographic features on the Ikh Bogd Uul Mountain. The chronology of the rows of cairns remains a highly sensitive problem, as they have not been excavated and do not appear recorded in the archaeological literature. Nevertheless, the measurements of the row of 54 cairns seem to indicate a possible selective attention to the cycles of the sun and or the moon, and particularly to the summer solstice, although this aspect can be confirmed only through further careful investigation. Here, orientation and localisation patterns have been preliminarily analysed in relation to the information available in the historical and ethnographic sources and tentatively compared with the funerary spirits roads in China. On the basis of this analysis, our preliminary interpretative hypothesis is that the rows of cairns could be seen as part of a long-term articulation of monumental and funerary settings that could possibly integrate the cycles of the local pastoral life with ancient and traditional cosmologies. Based on the historical and ethnographical comparison, we suggest that the rows of 54 and 9 cairns documented on the Ikh Bogd Uul Mountain could interweave elements of complex symbolism, funerary rituals, astronomical knowledge, and pastoral calendars of the local communities over time. In this perspective, the row of 54 cairns at Puntsag Oboo could be interpreted as an axial line pointing towards a specific area of the horizon, in order to indicate a symbolical passage towards the afterworld in the ancient cosmologies of the local communities, and thus survived in the local toponymy as 'path of the spirits'. In this frame, it is possible that the row of 9 cairns documented at Uchetiin Am could have a similar or compatible significance, although the indicative proportion in dimensional and numerical terms between the two rows of cairns cannot be fully confirmed at the moment. Further investigation and an increment of the available data, especially in terms of documented material features and orientation measurements, are necessary and desirable for the next future.

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