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SACRED SPATIAL PLANNING IN EARLY MEDIEVAL SOUTHERN KAZAKHSTAN: THE CASE OF THE TENGRIAN SANCTUARY COMPLEX OF MERKE

САКРАЛЬНОЕ ПРОСТРАНСТВЕННОЕ ПЛАНИРОВАНИЕ В РАННЕСРЕДНЕВЕКОВОМ ЮЖНОМ КАЗАХСТАНЕ: НА ПРИМЕРЕ ТЕНГРИАНСКОГО КОМПЛЕКСА СВЯТИЛИЩ МЕРКЕ

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Abstract

The article is devoted to the analysis of sacred spatial planning in early medieval Southern Kazakhstan using the example of the Merke sanctuary complex. The influence of the Tengrian worldview on the architectural organization of ritual spaces reflecting the cosmological principles and social structures of nomadic societies is considered. The research methodology is based on the interpretation of archaeological, topographic, and symbolic data, as well as on the systematization of monuments by architectural features (shape, size, orientation, material). Particular attention is paid to the concept of sacred landscape, the axial and hierarchical organization of objects, as well as their symbolic content. The importance of further study of the Merke complex as a unique element of cultural heritage on the Great Silk Road and a potential UNESCO World Heritage Site is emphasized. In the context of the reviving national identity and priorities voiced in the messages of the President of the Republic of Kazakhstan, this study actualizes the need to rethink cultural space as a key factor in historical identity.

Keywords: sacred space, Merke, Tengrism, South Kazakhstan, architecture, planning, cultural heritage.

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INTRODUCTION

Sacred space in traditional Central Asian cultures acts not only as a place of ritual practice but also as an embodiment of cosmological order, cultural memory, and territorial identity. For nomadic societies, sacred topography is a means of symbolic exploration of the world, establishing a connection between the natural environment and metaphysical reality. In the conditions of early medieval Southern Kazakhstan, an important section of the Great Silk Road, such objects as the complex of sanctuaries of Merke played the role of not only ritual centres, but also city-forming elements in the sacred geography of the steppes.

In the modern conditions of rethinking national identity and interest in historical and cultural heritage, reflected in strategic documents such as "Seven Facets of the Great Steppe" and annual messages of the President of the Republic of Kazakhstan, the significance of such monuments is increasing. However, archaeological complexes like Merke remain poorly studied, precisely in the aspect of architectural and spatial planning, and their symbolic content is rarely understood through the prism of the worldview system of Tengrianism.

The word "Tanri" (found in ancient Turkic texts and in Mahmud Kashgari) is of proto-Turkic origin and means "heavenly deity". It consists of the roots "tan" - "sky" and "ir" - "man" (man, hero). Similar forms are found among the Altai ("Tanri"), Yakuts ("Tanra"), Mongols ("Taner"), Buryats ("Taneri"), and in Kazakh - "Tanir". It is interesting that "Tan" also meant "dawn", "sunrise", and later - "equal", "half", which reflects the idea of pairing as the basis of the universe. There is also a version of borrowing from the Chinese "tian di" (天帝) - "heavenly ruler". (Aupov N.G., 2012)

The purpose of this study is to identify the architectural and spatial principles of the organization of the Merke complex and show how they relate to the religious and cosmological ideas of the Tengrian tradition. The main attention will be paid to the issues of planning, symbolic orientation, typology of monuments, and their interaction with the landscape. The study is also aimed at systematizing objects according to key features (shape, size, material, functions) and developing methodological approaches to the study of sacred spaces of nomadic cultures. Thus, this work actualizes the Merke complex of sanctuaries as the most important archaeological and architectural monument, deserving inclusion in international research and conservation programs, including under the auspices of UNESCO.

Studies of sacred landscapes around the world, from Neolithic ritual terrains in Europe (Antonello et al., 2013) to the Andean ceque system centred around Cusco (Bauer, 1998), and the sacred groves of East and West Africa (Christin Adongo, 2016) (Adeyanju, 2020) demonstrate how ancient societies inscribed cosmological principles into spatial organization. Within this global discourse, the sanctuary complex at Merke in Southern Kazakhstan presents a

distinctive Central Asian manifestation of sacred spatial planning. Despite its architectural and cosmological significance, the Merke complex remains underexamined in comparative studies of indigenous sacred geographies. This research addresses this gap by situating Merke within broader global patterns of sacred landscape formation.

LITERATURE REVIEW

Research into the sacred space and architectural organization of nomadic cultures in Central Asia covers a wide range of topics, from archaeological descriptions to philosophical and cosmological interpretations. However, a comprehensive approach that combines planning principles, religious and ideological foundations, and architectural typology remains underdeveloped.

The work of (Ayazbekova S, 2017) emphasizes the importance of circular and square planning in the Tengrian tradition, linking architectural form with the idea of cosmic order. She also points to the symbolism of the unification of circle and square in the structure of settlements and sacred sites, including such monuments as Arkaim, Koy-Krylgan-kala, and Chatal-Guyuk. Of particular interest is her concept of “fortified settlements with residential walls” as a sign of a collective sacred way of life.

Research on the cultural and spatial organization of early medieval Turkic sites in Kazakhstan has been significantly shaped by the works of Baipakov K.M., who emphasized the symbolic role of mountains, valleys, and watershed lines in the formation of sacred landscapes. In his studies of medieval urban and ritual complexes along the Silk Road, he demonstrated that Turkic sacred spaces were closely integrated with natural topography and ritual pathways, often marked by kurgans, stone steles, and memorial enclosures. (Baipakov K.M., 1986) (Baipakov K.M., 1998)

In the article Medieval mausoleums of Kazakhstan: Genesis, architectural features, major centres, the authors analyze the development of mausoleums of Medieval Kazakhstan, identify their original features, and main distribution centres. The key compositional types of mausoleums and features of regional architectural schools are determined. (Baitenov et al., 2019)

Research from other cultural contexts also emphasizes the relationship between spatial orientation, landscape, and traditional belief. For example, the work done by (Farhana et al., 2020) analyzed the orientation of buildings in the Malay settlement of Kg Seri Tanjung and found that social and environmental factors played a crucial role in shaping traditional layouts. This cross-cultural perspective helps to better understand how cultural principles and traditional beliefs may have influenced spatial planning.

Recent studies have demonstrated how digital technologies can enhance the documentation and analysis of traditional urban forms. For instance, (Noor et

al., 2019) constructed a 3D model of traditional Malay spatial identity. The technological approaches like this could also be applied to the study of sacred sites in Southern Kazakhstan to visualize their spatial logic and orientation patterns.

Comparative scholarship on sacred landscapes highlights a remarkable convergence in spatial principles across diverse cultural traditions. In Europe (Antonello et al., 2013) show how prehistoric sanctuaries in Daunia were aligned with celestial and topographical features. In South America (Bauer, 1998) demonstrates that the ceque system of Cusco organized shrines and ritual pathways according to cosmological and social hierarchies integrated into the landscape. African studies, such as those by (Christin Adongo, 2016) and (Adeyanju, 2020), underscore the role of sacred groves as mediators between human communities, ancestral spirits and the natural environment.

In conclusion, the existing literature fragmentarily covers various aspects of sacred space, but there is no systematization of the architectural and spatial characteristics of such objects as Merke in the context of the worldview tradition of Tengrianism. This study seeks to fill this gap.

COSMOLOGICAL FOUNDATIONS OF TENGRIANISM AND SACRED THINKING

The worldview of Tengrism forms a holistic model of interaction between man, nature, and space. It is based on the idea of the trinity of the world: the Upper World (Tengri - Sky), the Middle World (Umai - Earth), and the Lower World (Erlik - Underworld). These levels are not isolated, but interact through a sacred vertical, often embodied in the images of a sacred mountain, tree, or center of space.

The cosmological structure of the world was reflected in architecture and landscape organization. Thus, the vertical division of space (height, mountains, open horizon) symbolized the aspiration to Heaven and connection with higher powers. Horizontal axes, especially the east, set the direction of life and the cycle of time. The east was associated with sunrise, renewal, and beginning. The spatial planning of sanctuaries was often subordinated to these axes.

The veneration of natural objects - mountains, rivers, springs, rocks - as receptacles of spirit and energy enhanced the sacred perception of the landscape. Unlike the temple architecture of sedentary civilizations, in the Tengrian tradition, sacredness was fixed not so much in buildings as in the landscape itself. Religious objects - stone steles, burial mounds, altars, tamgas - did not disturb the natural environment, but emphasized its significance. Thus, sacred thinking within the framework of Tengrianism sets a specific spatial logic, where each element - form, orientation, location - has a metaphysical meaning. These

principles form the basis for the analysis of the architectural and spatial structure of the Merke complex.

The cosmology of Tengrianism, which integrates celestial, terrestrial and ancestral realms, resonates with broader patterns observed in indigenous sacred geographies. In the Andes, the spatial organization of shrines documented by (Bauer, 1998) illustrates how cosmology was materially embedded within the landscape. African sacred groves such as Kaya Mudvi Muvya (Christin Adongo, 2016) and Osun-Osogbo (Adeyanju, 2020) likewise reflects a worldview in which natural landscapes function as ritual and cosmological interfaces. European prehistoric sanctuaries described by (Antonello et al., 2013) similarly, demonstrate symbolic alignments connecting human ritual activity with celestial phenomena. Within this framework, the Merke sanctuary expresses a uniquely Central Asian articulation of sacred geography, where Tengrian cosmology shapes the spatial logic of mountain-steppe landscapes and cult architecture.

ARCHITECTURAL AND PLANNING STRUCTURE OF THE MERKE COMPLEX

The Merke complex of sanctuaries, located in the Zhambyl region of southern Kazakhstan, is one of the most striking examples of sacred planning formed under the influence of the Tengrian worldview. Stretching along the mountain slopes at altitudes from 1800 to 3000 meters, it includes more than 170 objects: sanctuaries, balbals (stone steles), burial mounds, carved tamgas (family signs), and runic inscriptions.

The spatial distribution of objects demonstrates the principles of sacred geography, where orientation, altitude, and openness of the horizon play a key role.

Architectural analysis allows us to highlight the following characteristics:

Table 2: The characteristics of objects

Criterion	Description
Form	Predominantly circular and oval platforms (symbolizing the sun and cyclicity); rectangular and square structures also occur (earthly order).
Size	Diameter of stone circles: 4–16 m; height of steles and balbals: 0.5–2 m.
Material	Local stone: granite, sandstone, pebble. Evidence of processing includes polishing, notches, and carving.
Orientation	A significant number of objects are aligned along the east axis, emphasizing cosmological direction (sunrise, renewal, beginnings).

Source: Author's Calculation

The typology of objects indicates their ritual and social function. Thus, the presence of paired balbals and altars indicates a gender and hierarchical structure. The concept of an “invisible center” - a central force not expressed architecturally, but defined symbolically and by the natural environment is the key to understanding Merke. Here, the landscape itself becomes a structuring element, determining how sacredness is perceived and distributed in space.

The relationship between objects and natural forms (streams, rocks, hills) indicates a fine-tuning of sacred space: architecture does not replace nature, but enhances its symbolism. Such integration is characteristic of the Tengrian model of sacred landscape. Thus, the architectural and spatial structure of the Merke complex reflects the idea of the sacred organization of the world: it is centred, oriented, hierarchical, and filled with symbols. This structure can be considered as a kind of model of the universe, fixed in stone and landscape.

RESEARCH METHODOLOGY

This study employs a mixed-method approach combining quantitative and qualitative analyses. The quantitative component consisted of collecting, systematizing, and classifying archaeological data related to the mounds and stone sculptures of the Merke complex. Parameters such as location, dimensions, construction materials, and morphological features were recorded and analyzed (Table 2). The qualitative component focused on examining the burial mounds accompanied by stone sculptures, which revealed recurring structural and stylistic characteristics (Table 3). The integration of both methods allowed for the identification of typological patterns and regional specificities within the Merke complex.

The information in Table 1 shows the main characteristics of the monuments, which are the key analytical parameters throughout the study. At the same time, Table 2 presents the classification of monuments according to the characteristics indicated in Table 1. The categories are directly related to differences in shape, size, material, and orientation, which allows for a comparative analysis of different types of sacred structures.

This study focuses on the physical and spatial characteristics of the objects under study. The selected criteria: shape, size, material, and orientation are used to systematize the monuments and identify patterns in their design and placement. Analysis of shape and size helps to identify typological variations and symbolic meanings, while the study of materials provides insight into local resources and construction techniques. Orientation is considered an important indicator of cosmological beliefs and ritual practices. Since the relative positions of various elements can tell about a complex system of beliefs associated with the cult of the sun, stars, or other natural phenomena, integrating these

characteristics into the analysis allows us to form a comprehensive understanding of the architectural logic and cultural context of the monuments.

ANALYSIS AND DISCUSSION

The Merke complex, like other sacred sites of early medieval Kazakhstan, is a unique example of the spatial implementation of the worldview model of nomadic societies. Unlike the temple complexes of sedentary civilizations, the structure of Merke is based on the principles of open landscape, integration with the natural environment, and visual-semantic orientation.

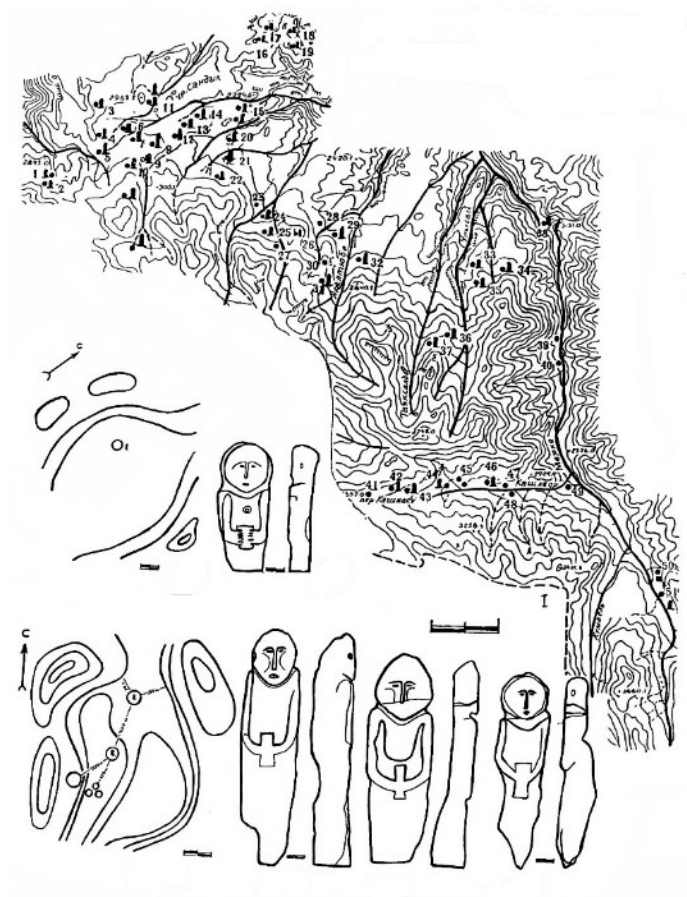


Figure 1: map of Merke

Source: from the book Merke – sacred space of the Zhetisu

The architectural logic of the complex is not subject to utilitarian, but symbolic laws: each element has not only physical, but also sacred significance.

The center of the circle, the high-rise dominant, the eastern orientation, the presence of a natural marker - all this sets the metaphysical axis that connects the earthly and heavenly levels.

Archaeological research conducted at remote memorial complexes became the basis for a preliminary chronological and cultural interpretation of ritual fences and burial mounds with stone sculptures, which were installed by nomads on the eastern side of the fence, in an extension adjacent to the embankment or center of the burial mounds from the east. (Dosymbaeva A., 2002) Among the burial mound structures of the Merke sanctuary, several ritual fences with steles and a sculpture were discovered, which were completely hidden in an extension to the fence.

Topographic features of the arrangement of ritual structures with sculptures, which are located on the ridges of the ravines, on the plateau, in the ravine itself, along the rivers, on the coastal terraces of springs, sometimes in an area separated from each other by only a few hundred meters, indicate a probable cultural kinship and chronological proximity of the monuments. For example, topographically, from the southeast to the northwest, following one after another ravine, with the names of Karalas-sazy, Togansay, Zhalanashtyn zhartysy, Sulysay, Karasay, Sholsay, Sandyk and occupying a total area of about 3 square kilometers, there are 33 stone sculptures on the mounds. In general, the territory of the localization of monuments with sculptures was a sacred space.

Based on the results of the archaeological study of the upper reaches of the Merke River, a map of the distribution of cult monuments with stone sculptures and places of accumulation of petroglyphs was compiled. In total, several dozen burial mound structures with statues were plotted on the archaeological and topographic map (Fig. 1). 64 stone sculptures were identified, including 31 female statues. Statistical analysis and data on the typology of ritual monuments made it possible to establish that the sanctuary contains only 38 complexes with statues.

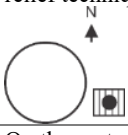
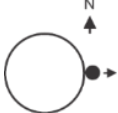
The main part of the ritual structures are stone mounds, ranging in diameter from 4-5 m to 16 m, and in height from 0.5 to 1.3 m. Some mounds are adjoined on the eastern side by rectangular extensions, also made of stone. (Dosymbaeva A., 2002) Each cult monument with a sculpture or with sculptures occupies such a position in the topography of the site that it is visible from afar. Numerous statues of women, along with men, in the materials of the Merke sanctuary help to understand some aspects of the ideological ideas of the nomads of the Middle Ages. The traditional belief of the Turks in the coexistence of the male, heavenly, and female principles has deep roots. The close interweaving of burial and commemoration rites, reflecting the desire to connect the worlds of people living with those who are no longer there, in the traditional cultures of nomads, finds its embodiment in numerous monuments of material culture, which

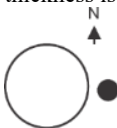
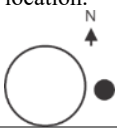
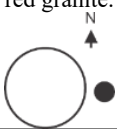
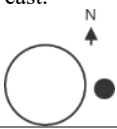
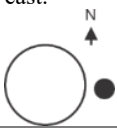
include stone statues of the sanctuaries of the Turks. (Dosymbaeva A., 2002) The cult complexes of the Merke sanctuary, together with other sources, eloquently convince us of the long-term existence of an ideology associated with the belief in the power of stone statues depicting ancestors.

The monuments of the Merke sanctuary with stone sculptures of women, temples such as Sholsai 3, Belsaz 2 with paired sculptures, are examples of the syncretic concept of the universe described in the work, the desire of the Turks to create their own sacred territory, through the development of the spiritual experience of many previous cultures and peoples, whose historical destinies, in different periods, intersected with the nomads in the space of Central Asia.

Table 2: Description of the mounds of Merke

№	Name	measurements	material	Stone sculpture location	Characteristics of the stone sculpture
1	Mound Aral-tobe 2 (surveyed and studied in 1996)	D=18 m, crater in the center of mound D= 8 m, 6 m deep. h=2 m.	large stones	was located on the northwestern edge of the embankment. 	Stele sculpture, woman, granite. The facial features are clearly visible: the eyebrow lines are curved and smoothly flow into the contour of the straight, elongated nose
2	Aktas 1 burial mound (surveyed and studied in 1996)	D= 10 m h= 0,5m	stone embankment	On the eastern side of the mound, near the embankment, there stood a stone statue. 	female, stele-like shape, bas-relief technique. The headdress and facial features are shown. The oval contours of the eyebrows and the straight line of the nose are visible. The dimensions of the sculpture: 1.1 m x 40 cm.
3	Mounds Zhalanashtyn Zhartasy 1 (surveyed and studied in 1996)	D= 11m h=1m	stone embankment	Mound 1: the sculpture is installed in the center, facing east, granite, bas-relief technique.  Mound 2: in the center, there are two sculptures - male and female, granite. 	Mound 1: Dimensions: 1.1 m x 35-45 cm x 18 cm. The head, torso, arms with a vessel at waist level are clearly detailed. Oval eyebrow contour, straight nose, cheeks, eyes and mouth are highlighted. Mound 2: The sculptures are facing each other: the male, to the southeast, the female to the northwest. Stele-like shape, bas-relief technique.

No	Name	measurements	material	Stone sculpture location	Characteristics of the stone sculpture
4	Zhalanashtyn zhartasy 2, mound (surveyed and studied in 1996)	D=11m h=1m	stone embankment	Next to the mound, there is a stone statue, placed in this place later. 	Partially destroyed. Made of granite, in bas-relief technique. The arms are clearly visible, half-bent at waist level and holding a flat-bottomed vessel.
5	Karasai 1 burial mound (surveyed and studied in 1996)	D= 9m h=1m	stone embankment	made of granite, moved from its original location, and later installed next to the mound. 	sculpture: 1.2m x 0.4m x 0.25 m. in the bas-relief technique. Has a head, separated from the body by an oval, deep groove, with hands supporting a round-bottomed pot at waist level. man: oval eyebrows, straight nose, a mustache that lowered down.
6	Karasai 2 burial mound (surveyed and studied in 1996)	D= 8m h= 1m	stone embankment	Next to the mound, there is a stone female statue, moved from its original location. 	The sculpture is stele-like, in the bas-relief technique. The face: oval contours of the eyebrows turn into straight lines of the nose, the eyes and lips are shown as almond-shaped and oval depressions.
7	Kashkasu 1 burial mound (surveyed and studied in 1994)	D=10m h=1,2m	stone saturated with an extension built on the eastern side.	The dimensions of the extension are 2.3 m x 2.7 m. In the center of the extension, there is a female sculpture, made using the bas-relief technique. 	sculpture protruding on the surface: 80 cm x 45 cm x 25 cm. The sculpture is worked out using the deep relief technique. The relief lines of the eyes and mouth of the sculpture are lowered at the edges, conveying a mournful expression on the face.
8	Sandyk 2 burial mound (surveyed and studied in 1996)	D= 9m h= 0,7m	stone embankment	On the eastern side of the mound, close to the embankment, a female stele-like sculpture is installed, facing east. 	in the bas-relief technique, the headdress, facial features are shown, and the contours of the eyebrows, turning into a straight line of the nose, are worked out. The contours of the oval cheeks are emphasized.
9	Sandyk 3 burial mound (surveyed and	D= 12m h= 0,8m	stone embankment	On the eastern side of the mound. The female, 1.1 m high. 	The stele clearly depicts facial features and a kimeshek-type headdress. A round temple

№	Name	measurements	material	Stone sculpture location	Characteristics of the stone sculpture
	studied in 1996)			The width of the stone stele is 35 cm, and the thickness is 28 cm. 	pendant is visible on the side of the headdress. The statue's ears are shown in the form of an oval relief. The sculpture is made of granite.
10	Sandyk 4 burial mound (surveyed and studied in 1996)	D=12m h=0,5m	stone embankment the outer part is partially damaged.	The sculpture of a woman was located next to the burial mound. It was moved from its original location. 	made of granite, stele-like sculpture: 1 m x 38 cm x 29 cm. On the front part of the sculpture, a headdress and oval eyebrows are worked out, smoothly turning into the contour of a straight nose.
11	Togansay 2 burial mound (surveyed and studied in 1996)	D= 10m h=1,2m	stone embankment	The stone sculpture, broken into two parts, was located in the eastern part of the burial mound. Sculpture: 1.1 m x 40 cm x 25 cm. Made of red granite. 	Sculpture of a man, in whose half-bent arms, at waist level, a cup-shaped, flat-bottomed vessel is depicted. Technique of execution - relief knockout. Facial features are carefully worked out.
12	Tayaksaldy mound 2, (surveyed and studied in 1997)	D= 12m h= 1,3m	stone embankment	On the eastern side of the mound there is a female statue facing east. 	made of granite in the bas-relief style, stele-like. The head of the sculpture was broken off and lay in the mound. The contours of the eyebrows, straight nose, oval depressions of the mouth are clearly conveyed.
13	Mound Sulusay 5 (surveyed and studied in 1996)	D= 8 and 10 m h= 0,4m and 0,3m.	stone embankments located close to each other.	On the mound D=8 m in the center there is a female stone sculpture made of granite. The sculpture faces northwest. 	protruding part of the sculpture surface: 1 m x 43 cm x 22 cm. The sculpture is made in the bas-relief technique, stele-like. The head of the sculpture and the facial features on it are clearly detailed.

No	Name	measurements	material	Stone sculpture location	Characteristics of the stone sculpture
					
14	Mound Sulusai 6 (surveyed and studied in 1998)	D= 10m h= 1,5m	stone embankment	The statue was removed from its original location and lay next to the burial mound.	Sculpture of a man with a vessel in his hand. In the bas-relief technique. The facial features are clearly conveyed.
15	Mound Sholsai 1 (surveyed and studied in 1998)	D= 9m h= 1m	stone embankment	Not far from the mound stood a female statue, moved from its original location.	Sculpture: 0.9 m x 27 cm x 42 cm x 29 cm, made of granite, in bas-relief technique. The headdress and facial features are detailed. waist-level hands, the woman holds a flat-bottomed.
16	Mound Sholsai 2 (surveyed and studied in 1998)	D= 12m h= 1,3m	stone embankment	female sculpture. Traces of a shallow crater can be seen on the top of the mound. stood on the eastern side of the mound. It may have been moved from its original location.	Sculpture, 0.9m x 35-40cm x 37cm, made of red granite, in bas-relief technique. The body, head, hands with fingers holding the vessel at waist level are worked out. Facial features are Turkic.
					
17	Mound Sholsai 3 (surveyed and studied in 1996)	D=10m h= 0,8m	stone embankment	A mound with two sculptures installed in the center, made of granite, bas-relief technique. Only the heads of the sculptures are visible on the surface. Facing each other, the male to the southeast, the female to the northwest	The statues are made in the traditional style, corresponding to the canonical pictorial of the Merke sanctuary.
					

Source: Author's Calculation

Table 3: Summary of the main characteristics of burial mounds and stone sculptures

Parameter	Characteristic and Range
Size of the mounds	D = from 8-18m (average 10-12m) h= 0.3-2m (average ~ 1m)
Material of the burial mounds	Stone embankment
Availability of extensions	Rare (only in Kashkasu 1: 2.3x2.7 m)
Material of the burial mounds	Granite (gray or red)
Technique of execution	Bas-relief (sometimes deep)
Gender of the sculptures	More often female, less often male
Type of figures	Stellar-like, vertical
Number of sculptures	Usually 1, sometimes 2 (paired)
Location of the mound	More often to the east of the mound
Face orientation	East, NW, face-to-face (in pairs)
Height of the sculptures	0.9-1.2 (average ~ 1.1 m)
Width of the sculptures	35-45 cm
Thickness of the sculptures	22-29 cm
Characteristic details	Vessel in hands, headdress, decorations
Symbolism and iconography	Vessel, kimeshek, pendants, pectoral ornaments

Source: Author's Calculation

Analysis of the burial mounds with stone sculptures located within the Merke complex reveals a set of consistent characteristics.

The diameter of the mounds ranges from 8 m. to 18 m., with an average height of approximately 1 meter. All mounds are constructed from stone; in some cases, looting pits are observed in the central part.

The stone sculptures are predominantly stele-like in form and executed in bas-relief technique from granite, including its reddish varieties. The average height of the sculptures is about 1 m. -1.1 m., with a width of 35-45 cm and thickness of 20-30 cm. The sculptures depict both male and female figures, often holding vessels. Facial features are frequently well-defined oval eyebrows, straight noses, lips and eyes, as well as elements of clothing such as headdresses, necklaces and pendants.

In terms of placement, the sculptures are most often located on the eastern side of the mound or in its center. In some cases, they have been displaced from their original locations. The orientation of the sculptures is predominantly eastward or northwestward, indicating, the presence of a stable ritual practice governing the spatial organization of sacred objects.

A comparative analysis highlights several underlying principles:

1. An emphasis on the center as a sacred point of energy concentration
2. The recurring motif of the circle and square as symbols of the cosmos and the earth
3. A social structure expressed through spatial zoning, from the periphery toward the center.

It is important to note that the architecture of the complex of Merke does not imply “buildings” in the classical sense. Sacredness is established through ritual, presence, and offering, not through monumentality. In this way, the space functions as a temporary vessel for sacred action, actualizing a cosmological order.

The contemporary significance of sites such as Merke goes beyond academic interest. In the context of cultural identity formation and the development of cultural tourism, it becomes an element of national consciousness and the historical positioning of Kazakhstan. In this regard, the inclusion of the complex in UNESCO programs and other international initiatives is of particular importance. Thus, interpreting the Merke complex through the lens of sacred planning and architectural symbolism allows not only for the reconstruction of the past worldview but also provides a foundation for a new approach to the preservation and representation of cultural heritage.

CONCLUSION

The conducted research has identified key features of the architectural and spatial organization of the Merke sacred complex within the context of Tengrianism cosmology. The elements comprising the complex are governed by a symbolic logic that reflects the worldview of nomadic societies regarding the structure of the universe, the relationship between the natural and the supernatural, life and death, and the duality of masculine and feminine principles.

The scientific novelty of the article lies in the systematization of the monuments according to architectural attributes (form, size, material, orientation) and in their interpretation as integral components of a sacred space. Merke emerges not merely as an archaeological ensemble, but as a coherent ritual and spatial system reflecting a sacred cosmological order.

The practical significance of the results lies in the potential application of the proposed approach to the analysis of other cultic complexes across the Eurasian steppe, as well as in the development of strategies for the preservation, promotion, and museological representation of Kazakhstan's sacred heritage. It is recommended that further comprehensive and interdisciplinary research be carried out, including the designation of the Merke complex as a priority cultural heritage site at both the national and international levels (including consideration for UNESCO listing).

Thus, sacred planning within the Tengrianism tradition proves to be an important resource for understanding architectural practices, spiritual values, and the historical identity of the peoples of the Great Steppe. While the conclusion summarizes findings, it could be strengthened by discussing future research directions (digital reconstruction, GIS mapping, interdisciplinary approaches) and policy implications for heritage preservation.

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