

THE ARCHITECTURAL AND SOCIAL SIGNIFICANCE OF HEARTHES IN THE MONUMENTS OF THE JEITUN CULTURE: ON THE EARLIEST FORMS OF ATTITUDES TOWARD FIRE

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ABSTRACT	KEYWORDS
This article examines the architectural, functional and social significance of hearths identified at Neolithic sites of the Jeitun culture in southern Turkmenistan. The main objective of the study is to investigate the spatial distribution and functions of hearths within Jeitun culture settlements and to explore early attitudes toward fire among Neolithic farming communities based on archaeological evidence. The study is based on comparative analysis of materials from Jeitun, Chopan Depe, Togolok Depe, Chagylli Depe, Pessejik Depe and Monjukli Depe. The results demonstrate that hearths constituted an integral element of domestic architecture throughout the Jeitun cultural area. Analysis of the second architectural horizon at Jeitun revealed that hearths were predominantly located along the eastern and northern walls of dwellings, reflecting stable architectural traditions in the organization of domestic space. Comparative analysis further indicates common patterns in the placement and functions of hearths across different Jeitun culture settlements. The available archaeological evidence does not support the existence of a developed fire cult among Jeitun communities. Nevertheless, the regular occurrence of hearths in all dwellings, their standardized placement and their central position within domestic architecture suggest the emergence of a particular social and symbolic attitude toward fire during the Neolithic period.	Jeitun culture, Neolithic, southern Turkmenistan, hearth, fire, domestic architecture, symbolic space, Central Asia.

Introduction

Annotatsiya

Mazkur maqolada Janubiy Turkmaniston hududidagi Joytun madaniyatiga mansub neolit davri yodgorliklarida aniqlangan o‘choqlarning me‘moriy, funksional va ijtimoiy ahamiyati tahlil qilinadi. Tadqiqotning asosiy maqsadi Joytun madaniyati yodgorliklarida o‘choqlarning joylashuvi va vazifalarini o‘rganish hamda ular asosida neolit davri jamoalarining olovga bo‘lgan munosabatini aniqlashdan iborat. Tadqiqot davomida Joytun, Cho‘pon-depe, To‘g‘oloq-depe, Chag‘illi-depe, Pessejik-depe va Monjukli-depe yodgorliklari materiallari qiyosiy tahlil qilindi. Olingan natijalar

Joytun madaniyati yodgorliklarida o'choqlar turar joy me'morchiligining ajralmas qismi bo'lganligini ko'rsatdi. Xususan, Joytun manzilgohining ikkinchi qurilish gorizontida o'choqlarning asosan sharqiy va shimoliy devorlar bo'ylab joylashtirilganligi aniqlanib, bu holat ichki makonni tashkil etishning barqaror me'moriy an'alarini aks ettirishi qayd etildi. Tadqiqot natijalari mavjud arxeologik ma'lumotlar Joytun madaniyatida rivojlangan olov kultining mavjudligini tasdiqlamasligini, biroq o'choqlarning markaziy o'zni olovga nisbatan alohida ijtimoiy va ramziy munosabat shakllangan bo'lishi mumkinligini ko'rsatishini aniqladi.

Kalit so'zlar: Joytun madaniyati, neolit davri, Janubiy Turkmaniston, o'choq, olov, turar joy me'morchiligi, ramziy makon, Markaziy Osiyo.

АННОТАЦИЯ

В данной статье анализируется архитектурное, функциональное и социальное значение очагов, выявленных на памятниках джейтунской культуры эпохи неолита в Южном Туркменистане. Основной целью исследования является изучение расположения и функций очагов на поселениях джейтунской культуры, а также выявление отношения неолитического населения к огню на основе археологических материалов. В ходе исследования были сравнительно проанализированы материалы поселений Джейтун, Чопан-депе, Тоголок-депе, Чагыллы-депе, Песседжик-депе и Монджуклы-депе.

Результаты исследования показали, что очаги являлись неотъемлемой частью архитектуры жилищ джейтунской культуры. Установлено, что в пределах второго строительного горизонта поселения Джейтун очаги преимущественно располагались вдоль восточных и северных стен, что свидетельствует о существовании устойчивых архитектурных традиций в организации внутреннего пространства жилищ. Сравнительный анализ показал наличие общих черт в размещении и функциях очагов на различных памятниках джейтунской культуры.

Археологические данные не подтверждают существование развитого культа огня у населения джейтунской культуры. Однако постоянное присутствие очагов во всех жилищах, их стандартизированное расположение и центральное место в структуре дома позволяют предположить существование особого социального и символического отношения к огню уже в эпоху неолита.

Ключевые слова: джейтунская культура, неолит, Южный Туркменистан, очаг, огонь, архитектура жилищ, символическое пространство, Центральная Азия.

INTRODUCTION

Fire has played an important cultural and ideological role in the history of the peoples of Central Asia. In particular, religious representations of fire, ceremonial structures, and traditions of sacred fire worship have been widely studied in monuments dating back to the Bronze Age and the Early Iron Age. Special fire structures discovered at Gonur-Depe, Togolog, and other Bronze Age centers have been interpreted by many researchers as being related to religious rituals. Therefore, the formation of ideological views on fire in Central Asia is often associated with the Bronze Age.

However, the process of the formation of a special attitude towards fire can be traced back to much earlier times. In studying this issue, the monuments of the Joytun culture, located in the Kopetdag

foothills of Southern Turkmenistan, are of particular importance. This culture, dating back to the 7th–6th millennia BC, is recognized as one of the oldest settled agricultural communities in Central Asia. (Masson, 1969; Masson, 1971; Kurbanov, 2021) The population of the Joytun culture developed grain cultivation, animal husbandry, and early forms of a sedentary lifestyle, and these processes were also reflected in residential architecture.

As a result of excavations at monuments such as Joytun, Cho‘pon-depe, To‘golok-depe, Chag‘illi-depe, Pessejik-depe and Monjukli-depe, houses made of pakhsa, farm buildings, grain remains, stone tools and numerous hearths were discovered. The fact that hearths are found in almost all settlements, their placement according to certain rules and the preservation of this tradition throughout the construction horizons indicate the need to study hearths not only as household objects, but also as an important social element in the life of Neolithic communities.

To date, the hearths of the Joytun culture have been studied mainly from the point of view of economic activity. Researchers have focused on their importance in cooking, heating homes, and meeting daily needs. However, the place of the hearths in the interior of the house, their architectural standard arrangement, and their relationship with other interior elements have not been sufficiently analyzed.

The aim of this study is to conduct a comprehensive architectural, functional, and social analysis of the hearths identified in the monuments of the Joytun culture and to determine the initial views of the Neolithic population regarding fire on their basis. The study seeks to answer the following question: Did hearths in the Joytun culture perform only a domestic function or did they also play an important role in the social and symbolic life of Neolithic communities?

The scientific novelty of the study is that for the first time, the hearths of the Joytun culture have been comprehensively studied on the basis of spatial and comparative analysis, and their architectural and social significance has been assessed. The results of the study will serve to provide a deeper understanding of the processes of formation of views related to fire in Central Asia and to identify the historical roots of religious and mythological systems that emerged in later periods.

HISTORY OF RESEARCH ON HEARTHES IN THE JEITUN CULTURE

The Jeitun Culture has attracted the attention of archaeologists since the mid-twentieth century as one of the earliest farming cultures in Central Asia. The study of this culture is primarily associated with large-scale archaeological investigations conducted in southern Turkmenistan, which have produced extensive scholarly data on Jeitun Culture sites, their chronology, economy, and architecture.

One of the first researchers of the Jeitun Culture was V. M. Masson. His excavations at the Jeitun settlement yielded important information on the residential structures, economic activities, and material culture of the earliest farming communities. In his studies, Masson focused primarily on the emergence of a productive economy, the development of agriculture and animal husbandry, and residential architecture. Although he noted that hearths were an important element of Jeitun houses, he did not specifically address their possible symbolic or social significance (Masson, 1971).

O. Berdiyev also made a significant contribution to the study of other Jeitun Culture sites. By synthesizing the results of excavations conducted at Chopan-depe, Togolok-depe, Chagyly-depe, and Pessejik-depe, he identified the internal stages of development of the Jeitun Culture. Although Berdiyev's works provide valuable information on residential architecture and the internal layout of houses, hearths were interpreted primarily as domestic features (Berdiyev, 1969; 1976).

In the 1990s, new excavations at the Jeitun settlement conducted by D. R. Harris, C. Gosden, and their colleagues provided new data on the site's stratigraphy, chronology, and economy. The researchers considered hearths mainly in the context of everyday domestic activities and examined their position within the interior space of houses. At the same time, they emphasized the importance of hearths for reconstructing the way of life of the Jeitun population (Harris, Gosden & Charles, 1996).

In recent years, the historiographical studies carried out by A. Kurbanov have contributed to a reassessment of the Neolithic sites of southern Turkmenistan. By analyzing the history of research on the Jeitun Culture, he demonstrated its place within the Neolithic processes of Central Asia. However, Kurbanov also focused primarily on chronology, cultural interactions, and historiographical issues, while the symbolic interpretation of hearths was not considered as a separate subject of investigation (Kurbanov, 2021).

Among foreign researchers, the works of P. Kohl, F. Hiebert, R. Bernbeck, and S. Pollock are of particular importance. Their studies are devoted to the emergence of the earliest farming communities, their cultural development, and architectural traditions in the foothills of the Kopetdag Mountains. Although these works contain information on the internal organization of residential buildings, hearths have rarely been examined as an independent subject of research.

Thus, an analysis of the existing scholarly literature on the Jeitun Culture shows that researchers have focused mainly on the economic system, chronology, agriculture, and architecture. The architectural placement of hearths, their role in the organization of interior space, and their possible social and symbolic significance have not been sufficiently investigated as a distinct subject of research.

The principal distinction of the present study lies in its comprehensive analysis of Jeitun Culture hearths from architectural, spatial, and social perspectives. On this basis, the study attempts to reassess the attitudes of Neolithic communities toward fire.

2. MATERIALS AND METHODS

The source base of this study consists of archaeological data obtained from Neolithic sites of the Jeitun Culture located in southern Turkmenistan. The study analyzes the results of excavations conducted at the sites of Jeitun, Chopan-depe, Togolok-depe, Chagylly-depe, Pessejik-depe, and Monjukli-depe, as well as the scholarly literature published on these sites.

The study is based primarily on the fundamental works of V. M. Masson on the Jeitun settlement, the studies of O. Berdiyev on the Neolithic sites of southern Turkmenistan, the materials of the British–Turkmen Joint Expedition conducted by D. Harris and his colleagues, and the comprehensive studies of A. Kurbanov on the historiography of the Jeitun Culture.

During the study, the architectural structure of hearths, their location within residential buildings, their distribution across construction horizons, and their functional characteristics were examined. In addition, the role of hearths in the organization of interior space and their relationship with other architectural elements were analyzed.

The study employed historical-comparative, spatial, archaeological context, and interpretative methods. Spatial analysis was used to examine the location of hearths in relation to the walls and their role in the organization of interior space. The historical-comparative method was applied to compare hearths identified at different sites of the Jeitun Culture.

3. RESULTS

3.1. Architectural Characteristics of Hearths at the Jeitun Settlement

The Jeitun settlement is one of the earliest sedentary farming communities in southern Turkmenistan, and its architecture represents an important source for the study of the lifestyle of Neolithic populations. Excavations conducted by V. M. Masson revealed the remains of residential buildings belonging to several construction horizons. According to Masson, the settlement contained approximately thirty single-room houses (Masson, 1971).

Most Jeitun houses were rectangular in plan and were constructed with mudbrick walls and plastered floors. Within the internal layout of the houses, the hearth constituted one of the principal architectural elements. Hearths were usually constructed adjacent to one of the walls, and layers of heavily fired clay were recorded around them.

Another important characteristic of the hearths is their presence in nearly all residential buildings. This indicates the important role of hearths in the daily life of the Jeitun community. In addition to hearths, niches, platforms, and household activity areas were identified, indicating that the interior space had been planned in advance.

3.2. Spatial Distribution of Hearths in the Second Construction Horizon of the Jeitun Settlement

The second construction horizon of the Jeitun settlement is one of the best-preserved complexes for the study of Neolithic architecture. The materials from this horizon make it possible to examine the patterns of hearth distribution.

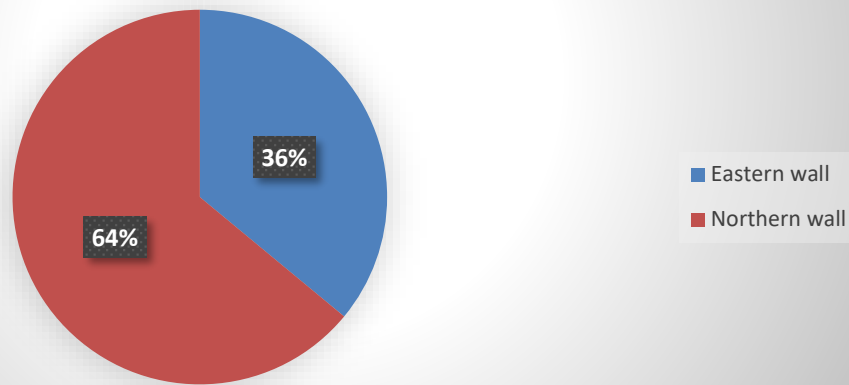
The analysis showed that hearths were mainly located along the eastern and northern walls. Hearths situated along the eastern wall were recorded in Rooms 20, 1, 7, 10, 43, 44, 31, and 32. Hearths located along the northern wall were identified in Rooms 26, 30, 41, 46, 50, 51, 56, 58, and 66 (Masson, 1971, Table 5).

Table 1 Distribution of Hearths in the Second Construction Horizon of the Jeitun Settlement

Wall Adjacent to the Hearth	Number	Percentage (%)
Eastern wall	9	36
Northern wall	16	64
Total	25	100

The regular placement of hearths along the eastern and northern walls indicates the existence of a certain architectural standard in the organization of interior space. In most cases, the entrance was located on the southern side, while the hearth was constructed along the opposite wall or along an adjacent wall.

Distribution of Hearths in the Second Construction Horizon of the Jeitun Settlement (Distribution of Hearths along the Eastern and Northern Walls)



3.3. Comparative Analysis of Hearths at Jeitun Culture Sites

Materials from other Jeitun Culture sites also confirm that hearths constituted an important architectural element.

Jeitun-type houses have been identified at the Chopan-depe site, and their internal layout closely resembles that of the houses at the Jeitun settlement. Materials from Togolok-depe and Chagylly-depe likewise indicate that hearths occupied a central position within the interior space of residential buildings.

The polychrome wall paintings discovered at the Pessejik-depe site indicate the existence of developed symbolic thought among these communities. Materials from Monjukli-depe confirm that the architectural traditions characteristic of the Jeitun Culture were preserved over a long period.

Table 2 Comparative Characteristics of Hearths at Jeitun Culture Sites

Site	Presence of Hearths	Location	Characteristics
Jeitun	Yes	Eastern/Northern wall	Standard layout
Chopan-depe	Yes	Inside the house	Jeitun type
Togolok-depe	Yes	Inside the house	Similar tradition
Chagylly-depe	Yes	Along the wall	Large hearths
Pessejik-depe	Yes	Inside the house	Complex interior layout
Monjukli-depe	Yes	Inside the house	Continuous architectural tradition

The results of the comparative analysis show that hearths constituted an integral part of residential architecture at all major Jeitun Culture sites.

4. DISCUSSION

4.1. The Organization of Hearths and Residential Space

The location of hearths identified at Jeitun Culture sites indicates that they were not constructed randomly. Materials from the second construction horizon of the Jeitun settlement show that hearths were predominantly located along the eastern and northern walls. This suggests that certain architectural principles were followed in the organization of interior space.

Among Neolithic communities, the dwelling served not only as a place of residence but also as the center of economic activities, social relations, and everyday life. From this perspective, the consistent placement of hearths in the same area within Jeitun houses indicates that they were regarded as a central element of the interior space.

From an archaeological perspective, the relationship of hearths to the entrance, niches, and household activity areas indicates that activities within the house were organized to a certain extent. This confirms that the inhabitants of Jeitun possessed established experience and architectural traditions in house construction.

4.2. The Economic and Social Functions of Hearths

The economy of the Jeitun Culture was based on agriculture and animal husbandry. Grain processing, meat preparation, house heating, and the preparation of daily meals were directly associated with hearths. Therefore, hearths occupied a central place in the economic life of the Jeitun community.

However, the presence of hearths in all residential buildings and their continuity throughout successive construction horizons indicate that they served more than purely practical functions. In many ethnographic studies, the hearth is described as the center of family unity, the household, and community life. Although ethnographic analogies cannot be applied directly to the Neolithic period, the Jeitun materials make it possible to suggest that hearths possessed considerable social significance.

4.3. Hearths and Symbolic Space

The regular placement of hearths in the Jeitun Culture provides grounds for considering them as part of a symbolic spatial organization. In particular, the consistent location of hearths along the eastern or northern walls indicates that the interior space was planned in advance.

The polychrome wall paintings discovered at Pessejik-depe indicate the existence of developed symbolic thought among Jeitun Culture communities. This makes it possible to interpret hearths, to a certain extent, as features possessing symbolic significance. However, the available archaeological evidence does not confirm that hearths were directly associated with religious rituals.

Therefore, it is scientifically appropriate to evaluate hearths in the Jeitun Culture not as religious features but as important elements of social and symbolic space.

4.4. Attitudes toward Fire in the Jeitun Culture

Religious beliefs associated with fire in Central Asia are generally linked to the Bronze Age and the traditions of Zoroastrianism. Special fire-related structures identified at Gonur-depe and other Bronze Age centers indicate the ritual significance of fire. However, no such specialized ritual structures have been identified in the Jeitun Culture.

Nevertheless, the presence of hearths in all residential buildings, their central position within the interior space, and their continuity in architectural traditions indicate that a distinct attitude toward fire

existed. This attitude may be interpreted not as evidence of a developed fire cult, but rather as an early form of understanding associated with the important role of fire in social and domestic life (**Masson, 1971; Harris et al., 1996**).

Thus, the materials of the Jeitun Culture suggest that the formation of fire-related beliefs in Central Asia may have begun long before the Bronze Age.

5. CONCLUSION

The architectural, functional, and comparative analysis of hearths identified at Jeitun Culture sites has led to the following conclusions.

First, hearths constitute an integral part of residential architecture at all major Jeitun Culture sites. This indicates that hearths occupied an important place in the daily life of Neolithic communities.

Second, it was established that, in the second construction horizon of the Jeitun settlement, hearths were predominantly located along the eastern and northern walls. This indicates the existence of certain architectural standards in the organization of interior space.

Third, the results of the comparative analysis demonstrate common features in the location and functions of hearths across different Jeitun Culture sites. This suggests that hearths played an important role not only in economic activities but also in social life.

Fourth, the available archaeological evidence does not confirm the existence of a developed fire cult in the Jeitun Culture. However, the presence of hearths in all residential buildings, their standardized placement, and their central position within the interior space suggest that a distinct social and symbolic attitude toward fire may have existed.

Fifth, the results of the study indicate that the formation of ideological concepts related to fire in Central Asia may be traced back to the Neolithic period. In this respect, the materials of the Jeitun Culture are of considerable importance for investigating the historical roots of the complex religious systems that developed in later periods.

This study provides a basis for reassessing the role of fire in the life of the earliest farming communities of Central Asia through a comprehensive analysis of the architectural and social significance of hearths in the Jeitun Culture.

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