REFLECTIONS OF UZBEK PEOPLE'S CALENDAR RITUALS IN ARCHAEOLOGICAL SOURCES

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Abstract. This article analyzes the ancient calendar rituals of the Uzbek people based on archaeological sources. This study employs methods of historicity, comparative logical analysis, chronology, and objectivity. Rock art provides extensive insight into the astronomical beliefs of our people, the solar and lunar cults, mythological concepts tied to fertility, and seasonal rituals. Petroglyphs found at Soymalitash, Sarmyshsay, Bukantovo, and other archaeological sites attest to socio-cultural traditions associated with ancient agriculture, the worship of celestial bodies, and the calculation of the year. The results of the study demonstrate that the calendar beliefs and rituals of our ancient ancestors, based on astronomical observations, played a central role in their social life and culture.

Keywords: Calendar rituals, petroglyphs, Soymalitash, archaeological sources, solar cult, lunar cult, mythological beliefs, customs of the Uzbek people.

Аннотация. В статье анализируются древние календарные обряды узбекского народа на основе археологических источников. В исследовании использовались методы историчности, сравнительно-логического анализа, последовательности и объективности. Наскальные рисунки широко освещают астрономические воззрения нашего народа, культ солнца и луны, мифологические представления, связанные с плодородием, и сезонные ритуалы. Петроглифы, обнаруженные в Соймалиташе, Сармышсае, Букантове и других археологических памятниках, свидетельствуют о социально-культурных традициях, связанных с древним земледелием, поклонением небесным светилам и исчислением года. Результаты исследования показывают, что календарные воззрения и обряды наших древних предков, основанные на астрономических наблюдениях, играли центральную роль в их общественной жизни и культуре.

Ключевые слова: Календарные обряды, петроглифы, Соймалиташ, археологические источники, солярный культ, лунный культ, мифологические представления, обычаи узбекского народа.

Introduction. Calendar rituals, which are an integral part of human development, have held significant importance in the life of various cultures and civilizations since ancient times. Archaeological findings, material cultural heritage, and written sources play a crucial role in studying the origin, formation, and evolution of these rituals. Archeological sources hold particular significance in tracing the historical roots of calendar and rituals.

Literature Review. Scholars such as Academician A. Askarov, A. I. Bernshtam, N. Y. Bichurin, Y. N. Golendukhin, M. Jo'rayev, B. M. Zimma, J. Kabirov, A. V. Oskin, N. G. Khludov, and G. A. Mukhtarov, have explored petroglyphs reflecting the calendrical systems, time reckoning, and astronomical perceptions of the Central Asian people's ancestors to varying degrees.

Methodology. The article employs established historical methods, including historicity, scientific rigor, comparative-logical analysis, chronology, and objectivity - to analyze archaeological sources reflecting the calendar and astrological concepts of the Uzbek people in rock art.

Main Part. The earliest calendrical concepts appear in petroglyphs —images carved into rocks from the Stone Age. Rock art dating from the Paleolithic period to the Middle Ages can be found in many parts of the world.

Petroglyphs discovered in the mountains of Central Asia, such as Karatag, Bukantag, Tomditag, Tien Shan, Pamir, Nurata, Chatkal, and others, are of particular interest. Rock carvings are important not only as works of art for the study of art history, but also as archaeological and historical sources for understanding the social life and spiritual world of primitive and ancient tribes. Early humans attempted to depict everything in nature as they saw it. Over time, however, this accuracy gradually became more simplified [7: 4, 32 b.; 10: 710-714 p.].

Rock carvings created by the peoples who inhabited the Turan region reflect ancient mythological concepts, magical beliefs associated with fertility and abundance, as well as archaic rituals and traditions. The rock art of Soymalitosh in the Fergana mountain range depicts calendrical myths, legendary notions related to the cults of the Sun, the Moon, and fertility, as well as the Navruz festival and the ritual of the first plowing of the land [9: 40-43; 6; 2: 50-67; 4: 181-202].

The Soymalitosh petroglyphs and their historical layers can be classified as follows:

1. **Proto-Saka period** (petroglyphs from the 2nd–1st millennia BCE, belonging to the Proto-Saka period, i.e., the ancestors of the Sakas or pre-Saka period);
2. **Saka period** (petroglyphs from the 8th–3rd centuries BCE);
3. **Hunnic-Usun period** (petroglyphs from the 3rd century BCE to the 2nd century CE);
4. **Hunnic-Turkic period** (petroglyphs from the 3rd to 8th centuries CE).

According to A. N. Bernshtam, the ancient petroglyphs carved on the rocks of Soymalitosh are divided into four stages based on their period of creation [5: pp. 50–67]. Based on the above data, it can be concluded that the knowledge of time reckoning among the ancestors of the Uzbek people dates back approximately three to four thousand years

One of the Soymalitosh petroglyphs depicts a mythical deity with a circular-shaped head. Around its head, 28 lines or rays are drawn, while inside the head there is a "solar anthropomorphic figure" whose head contains 12 lines. Above the image of the deity, a symbol in the form of a crescent or a mound is depicted.

This figure represents the lunar deity, and the 28 lines on its head symbolize the phases of the Moon, corresponding to a one-month cycle of the changing positions of the night luminary. Ancient people were well aware that the lunar phases repeat within 28 days, and the appearance of the Moon deity—namely the sighting of the new Moon (crescent)—was welcomed with special ritual practices. Even today, when the new Moon appears, ritual chants such as: "Haqqoy, haqqoy, we have seen the Moon – safety; may we never see misfortune; to the coming months and years, may we reach them with sound heads and whole hearts!" are performed. This indicates that in the past, among our ancestors who effectively used the lunar calendar, magical beliefs and rituals associated with honoring the Moon deity were widely practiced within the system of calendrical traditions [5: 11 b.].

The 12 lines on the head of the lunar deity represent the lunar calendar used by the ancient inhabitants of the Fergana Valley, in which each month consisted of 28 days. According to this calendar, a year consisted of 12 months or 336 days, and the 30-day discrepancy with the solar year was compensated by adding a thirteenth month. Yu. N. Golendukhin interpreted the anthropomorphic figure with thirteen rays on its head, recorded at Soymalitosh, as a symbolic representation of this "additional month." Furthermore, the crescent or mound-shaped symbol above the image of the lunar deity likely serves as an indicator confirming the lunar nature of the depiction [4: p. 190].

The Soymalitosh rock images also depict mythical figures with sun-shaped heads, people plowing the land, shamans performing symbolic dances, and archers shooting arrows at animals intended for sacrifice. This suggests that the area functioned as a sacred site where ancient farmers conducted seasonal rituals and sacrificial ceremonies dedicated to celestial bodies.

The solar and lunar cults were important factors that occupied a central place in the lifestyle, mythology, customs, and rituals of the ancient peoples of Central Asia. In ancient times, there was a strong belief and reverence for celestial bodies—the Sun and the Moon—and their influence. In the Soymalitosh petroglyphs, the frequent depiction of human figures with radiant, sun-shaped heads particularly reflects the spiritual connection of ancient people with the sky and their dependence on celestial bodies. In

ancient cosmogonic mythology, celestial bodies, including the Sun and the Moon, were often personified and imagined as mythical beings possessing human-like qualities, such as human appearance and life functions. Based on such figures, myths were formed that guided people in their daily lives and fulfilled spiritual and cultural functions.

The depiction of human figures with sun-shaped heads carved into rocks indicates that the ancient inhabitants of the Fergana Valley revered celestial bodies and perceived them in anthropomorphic forms. This, in turn, can be interpreted as a manifestation of the interaction between humans and nature, as well as a form of physical and spiritual worldview. During the period when the Soymalitosh petroglyphs were created, solar myths explaining the sunrise, its movement across the sky, its reddening and setting at dusk, and phenomena such as solar eclipses were widespread. These solar myths also addressed issues related to human life. Through myths, people sought to understand the movement of the Sun, changes on the horizon, and the motion of the cosmos throughout the day. Likewise, natural phenomena such as the Sun rising and setting at different points on the horizon in different seasons were perceived as meaningful signs associated with various parts of the sky. These recurring cyclical processes played an important role in their daily lives.

The fact that the number of rays radiating from the circular heads of the "solar anthropomorphic figures" is twelve clearly demonstrates the astronomical and calendrical knowledge of the people who created these petroglyphs. This confirms that they had precise and well-developed concepts regarding the twelve zodiac constellations in the sky, the points of sunrise and sunset throughout the year, as well as the division of the year into twelve months.

On one of the stones located in front of the southern peak, three such "solar figures" are depicted, and beneath them there are also symbols representing different phases of the Moon. These images indicate a deep understanding of astronomical and calendrical knowledge, as well as the careful observation of natural celestial phenomena by people of that time.

According to Yu. N. Golendukhin, the side of this stone bearing the petroglyph remains without direct sunlight for almost the entire year, and only during the summer solstice—corresponding to the seasonal movement of the Sun—is the image of the "solar figure" illuminated by sunlight. This also indicates that ancient societies possessed complex practical knowledge necessary to align and interpret significant spatial aspects of astronomical processes [4: pp. 188–189].

Agricultural culture was relatively well developed among the ancient inhabitants of the Fergana Valley, and seasonal rituals were conducted in connection with astronomical events such as the spring and autumn equinoxes, the summer solstice (the longest day), and the winter solstice (the shortest day). The petroglyphs at Soymalitosh

depict images and symbols associated with these rituals, reflecting the reverence of ancient societies for the solar cult and their understanding of astronomical phenomena. In our view, the tripartite composition of the "solar figure" depicted on the rock beneath the southern peak was designed to precisely determine the time of the summer solstice. This image represents the traditional application of a "triadic" principle in the Uzbek folk calendar for identifying time markers based on the movement of the Sun.

In the Nazari and Aylangari villages of Boysun district, Surkhandarya region, the day of the New Year—Navruz, that is, when the Sun enters the zodiac sign of Aries—was determined by observing three ancient juniper trees growing on a southern peak: "On the peak in front of the mountain where three juniper trees grow, there is a large maple tree. After the Sun sets behind that maple tree, the next day is considered the first day of the month of Hut. In the local dialect of Nazari, this day is called 'xutka.' As the month of Hut comes to an end, elders observe the sunset. In these villages, the Sun sets behind the rocks below. On the day when the Sun sets behind the first of the three juniper trees, it is announced that 'tomorrow the cauldron will be full.' The next day, the Sun sets behind the middle tree, and the following day is declared the New Year. The day after the Sun sets behind the middle tree, local timekeepers say that the first day of Aries has begun" [5: p. 13].

Similarly, the three "solar figures" depicted on the rocks in front of the southern peak of Soymalitosh served as calendrical markers. These images indicated the Sun's interaction with specific points and helped farmers determine important seasonal periods in winter and spring, as well as identify the time of the summer solstice. Ancient farmers planned key agricultural activities based on the way sunlight fell on these markers. According to the depiction, on the day when sunlight illuminated the central human figure, farmers performed ritual dances, praying for abundant water and the overflowing of rivers and streams.

The upward or downward orientation of the crescent shape played an important role for participants in rituals, as it reflected their observation of the Moon's positions in the night sky, their understanding of astronomical cycles based on these observations, and their preparation for new seasons as well as the planning of agricultural activities. These symbols and forms were not only related to agriculture and natural resources, but also helped determine the specific days and times when celestial light would influence the earth.

Yu. N. Golendukhin, who identified a cross-shaped symbol at the center of the heads of the "solar figures" carved on the rock beneath the southern peak, concluded that ancient farmers were familiar with the concept of the four cardinal directions (north, west, south, and east). The cross and vegetal forms depicted on the rocks became symbols of the Sun within a cosmogonic context. For ancient farmers, these shapes represented sunlight, its interaction with space and nature, as well as the natural

cycles between the sky and the earth, including the seasonal movement of the Sun and its astronomical positions.

A. N. Bernshtam, who studied the Soymalitosh petroglyphs, identified carvings on one of the rocks depicting three "solar symbols" [2: p. 63]. All three petroglyphs are circular in shape; two of them are divided by a cross symbol at the center, while the third contains an eight-pointed figure (i.e., two overlapping cross symbols). The depiction of "solar anthropomorphic figures" at Soymalitosh indicates that this site once functioned as one of the sacred places where rituals related to agricultural culture and mythological beliefs were performed. These rock carvings were used to honor the Sun deity and to commemorate its influence on life. The "sun-faced" human figures in the petroglyphs express the religious concepts of ancient Fergana farmers by portraying their solar deities in rock art, reflecting their understanding of natural cycles and spiritual beliefs.

The calendrical concepts of our ancestors, including mythological beliefs and traditions related to the New Year celebration, are also reflected in the rock carvings of Bukantov Mountain in the Central Kyzylkum. On a rock near the Boxali spring in Oyboxansoy, an image of two double-humped male camels facing each other is depicted. These images primarily represent ancient calendrical and astronomical concepts related to setting out on a journey and marking the beginning of the year [8: p. 113]. The astral symbol located between the legs of the camel on the right and between the humps of the camel on the left indicates that these animals are associated with the solar cult.

This rock carving represents one of the ancient rituals associated with the Navruz festival among our people—the tradition of camel fighting. Camel fighting is an integral and ancient element of Navruz celebrations and is considered a traditional ritual connected with the cult of fertility. It also held an important place in cultural life, symbolizing the beginning of the summer season and the expectation of a good harvest in the early days of the New Year. According to N. Ya. Bichurin, in the Aktog area located north of the Kucha district in the Aksu region of present-day Xinjiang, people held spectacles of ram, horse, and camel fighting for seven days during the New Year. Based on the outcomes of these contests, they predicted whether the coming year would be prosperous or unproductive [3: pp. 296–297].

Soymalitosh served as a sacred site for ancient farmers and pastoralists, where traditional seasonal rituals were conducted during specific times of the year. This place functioned as a center for important events and religious ceremonies related to seasonal changes and economic activities. For this reason, Yu. N. Golendukhin, who studied these carvings in connection with calendrical myths, wrote that "the images at Soymalitosh functioned as a kind of observatory, reflecting a system of time reckoning based on the sunrise and sunset" [4: p. 189].

Similar depictions have also been found at the Sopollitepa archaeological site. Academician A. Askarov classified 29 pictographic symbols into eight groups. Among these, the first type was conditionally named “moon” and consisted of four symbols depicted in the shape of a crescent. In ancient times, skilled farmers and religious scholars (priests, magi, and ulama) determined weather conditions and seasonal changes based on the shape of the Moon. If the Moon appeared in a semi-circular form, it was interpreted as a sign of abundant rainfall; if it appeared in a reclining position, it indicated less precipitation and a period of peace and stability. These beliefs helped our ancestors take necessary precautions and plan seasonal agricultural activities. Therefore, crescent-shaped pictographic symbols were directly related to astronomical observations and had important practical significance in determining the nature of seasonal changes [1: p. 87].

Conclusion and Recommendations. Calendar rituals have existed since ancient times among the peoples of Central Asia, including the Uzbek people, and were primarily based on natural astronomical phenomena. These rituals were closely connected with ancient agriculture, celestial bodies (the Sun and the Moon), and seasonal activities. Archaeological findings, particularly petroglyphs, confirm the existence of such rituals and provide valuable information about the astronomical knowledge, mythology, and culture of our ancestors.

Petroglyphs discovered in Soymalitosh and other sites reflect calendrical rituals and magical beliefs. For example, the cults of the Sun and the Moon, traditions of welcoming the new Moon, seasonal agricultural activities, and determining important periods of the year are all clearly represented in these carvings. These sources make it possible to trace and analyze changes up to the medieval period.

The ancestors of the Uzbek people paid particular attention to significant natural indicators, especially the changes in the phases of the Sun and the Moon, when developing calendrical customs and rituals. The petroglyphs of Soymalitosh reflect ideas related to observing the sunrise and sunset, as well as determining the New Year and seasonal rituals. The cults of the Sun and the Moon were often part of cosmogonic mythology, and the customs, rituals, and symbols based on them illustrate the spiritual world of ancient societies and their relationship with nature.

Based on the above, it is necessary to further study the calendrical customs and rituals of the Uzbek people by analyzing existing sources and tracing their development and transformation during the medieval and later periods. In particular, archaeological findings, especially petroglyphs, should be thoroughly examined. It is also important to preserve knowledge related to traditional perceptions of the yearly calendar among the Uzbek people. Promoting archaeological sources and rock art can contribute to the development of international tourism. Furthermore, integrating calendrical customs

and rituals into modern life can help provide younger generations with a deeper understanding of ancient scientific experience and astronomy.

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