

Use of natural caves for ritual purposes as a forerunner of the formation of architecture

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Abstract

At the dawn of the civilization, in the processes of transition from totems to the formation and establishment of regulated naturalistic religions, special natural geomorphological and landscape locations were selected for worshipping rituals. For example, the Platanus Forest in Shikahogh Reserve, Portakar in Sisian, megalithic monuments – Vishaps in high and visible places of the landscape (Bobokhyan et al., 2019), sacred Eridu (Lloyd, 1984) reed pond or basin in Sumer, Mesopotamia (Schmidt, 2001; Mellaart, 1982; Lloyd, 1984) etc., including caves. Later on, in conditions of continuous development of civilization, drastic changes in public requirements occurred. Buildings, and later on temples were built in the sites of rituals, with explicit canonic structures and appearances. Such as the Eridu sacred basin (Meller and Avetisyan, 2011; Mellaart, 1982; Lloyd, 1984) where reeds were growing and there were fish swimming. Ziggurats were constantly built and rebuilt on this basin for almost a millennium. Another typical example are the Urartian sun temples in the form of a cube (Shahinyan, 2004, 2011b; Shahinyan *et al.*, 1985), and three columns in each of the two rows in front of it, with thick anchors and an equal-winged cross-shaped plan in the basis. Ayanis (Turkey), Aghdzk, Erebuni, Karmir Blur (Armenia). (Haykazun, 2005; Meller and Avetisyan, 2011). Parallel to architectural structures, cave-sanctuaries built by the pantheistic principle were continuously preserved almost until the present day. They have been in use from time to time; however, the natural appearance was not distorted and no construction interventions were made. The caves formed as a result of denudation processes of water in the lithomarges of the hypogenic-clastokarst layers in Areni-1 and those of the basalt layers in “Red Cave” of Geghamavan and Byurakan (Khechoyan et al., 2014); (Gasparyan et al., 2003); (Shahinyan et al., 2022); (Gasparyan et al., 2014) have been considered sacred for many centuries. Areni-1[5, 16] was a place of worship of grape and wine, while the caves of Yeghvard and Byurakan were water worship places [11]. Rituals were held in the caves. However, speleological and archeological research has revealed that no changes in the natural appearance or other changes caused by human intervention were noticed for centuries, other than rock falls. This phenomenon is clearly expressed in the caves of Areni-1 and Yeghvard, Gegamavan-1 which have been sacred places even in the High Middle Ages (tab. 1: figs. 1, 2; tab. 3).

Keywords: *natural cave sanctuaries, underground temple buildings, temple architecture.*

The problem and the goal of our research

Caves such as the one with a water source located on the river bank, next to the Sun Temple/Tomb characteristic of the Urartian times of Byurakan, or Jrovank in Vayk, located at the end of the ravine of one of the tributaries of Arpa river, have not been altered by man and have been preserved in their natural form. And the rock wall of the spring source in the deepest part of Geghard monastery has not changed, although the remaining three walls of the hall were cut and treated in High Middle Ages.

This is not the case with Areni-1 cave (Shahinyan, 2004; Gasparyan and Sargsyan, 2003), where there is no spring though taking into account the geological environment of cave formation. i.e., the limestone conglomerates, we can argue that there were water flows from the cave from time to time; however, for

many millennia, in the conditions of changing times of different social formations and confessions, rituals did take place, using ritual items, since there are lots of artefacts and a winepress found during the excavations, with no change whatsoever in the appearance of the cave. This approach has been persisting for over 6000 years. Even with the many examples of rock-cut churches and sacred structures survived in the territory of the Republic of Armenia and neighboring countries, all of them cannot compete with Areni-1, even in terms of longevity; for example, Geghard in Armenia, Hochants in Artsakh, Karaftu in Iran, The Bayazet rock cut temple in Turkey. Etc. Our research was aimed at identification of ritual objects, such as winepress and wine amphoras, in naturally occurred and not made by human hands caves that turned into sanctuaries as well as versions of functional separation of space for rituals.

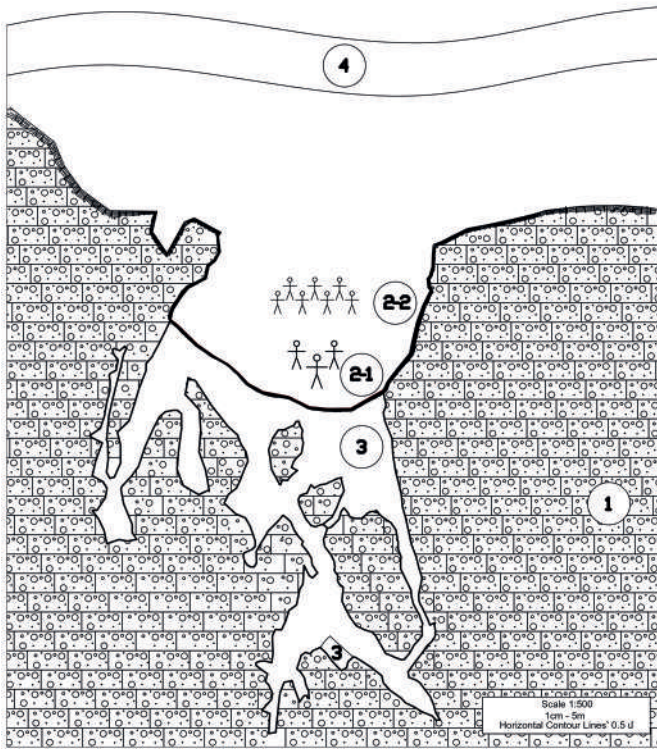
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Tab. 1: Fig. 1 – The Areni-1 cave. (The floor plan S. Davtyan; Graphical drawings A. Badasyan).



Tab. 1: Fig. 2 – The Frontal view of Areni-1 Cave.

Archaeological excavations, research and the latest discoveries (over the recent 30 years) uncover new realities of the period from the Middle Stone Age to Copper and Bronze ages, which are related to the origin of religions on the pantheistic basis, and ritual ceremonies. Rituals and ritual functions in the cave required functional spaces for the class of priests and the religious society (TTa). Taking into account the geological environment of cave formation, i.e., the limestone conglomerates, we can argue that there were water flows from the cave from time to time. In this regard, it is difficult to explain why the Areni-1 cave, which has been a sacred place for centuries and millennia, has never undergone any architectural intervention. No structures of the period of the Kingdom of Ararat (Urartu), nor that of the Christian period was discovered, while we are well aware, and the bibliographic sources have documented that the first Christian churches were built in the place of old temples or in their foundations. Moreover, the ritual functions in the naturally formed caves have aroused the need of not only separation of the functional spaces, but also of particular items and structures for conducting the rituals (Gasparyan and Arimura, 2014). For example Areni Cave, winepress, wine amphoras with idea-bearing images and magical (tab. 2). For centuries and even more, those rituals and ritual items have been processed, standardized, and received a special style and shape. The form and the design of ritual and worship items have crystalized also in the form

of symbol-bearing signs (symbols) or idea-bearing images composition of symbols. For example, Tree of Life, Khachkars. see: (Shahinyan, 2012a; Arqepiskopos, 2016) and ended up in the form of compositions with idea-bearing signs: B. Gasparyan, Pottery with dragons and with the symbol of the sacred Sun (tab. 2: fig. 1, 2, 3).

We are concerned with one question with many whys: a number of ritual artefacts of different and confirmed periods found in the archaeological layers of the above-mentioned caves indicate their use for religious purposes for millennia. Why there are no facilities and architecture characteristic of the sacred structures of religions alternating each other, such as in Geghard, where, in the spring hall, we see both construction and architectural intervention?

Written and archaeological information on the permanence and the longevity of sacred sites

Developments and variations of emergence and architecture of sacred temples have stemmed from various ancient pantheistic faiths, in accordance with the dogmas and rituals of those religions (Sarg-syan, 2022; Toramanyan, 1984) (tab. 5). However, the change in belief did change the geomorphological landscape or the place of rituals, in our case - the

Fig. 1

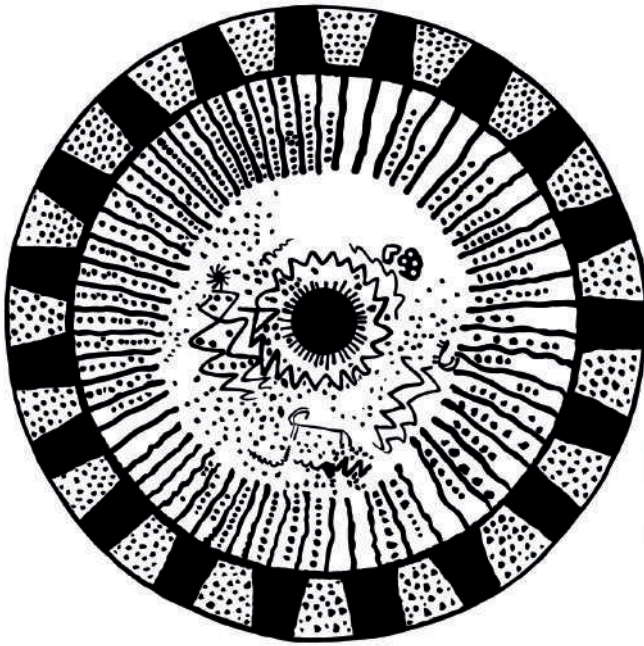


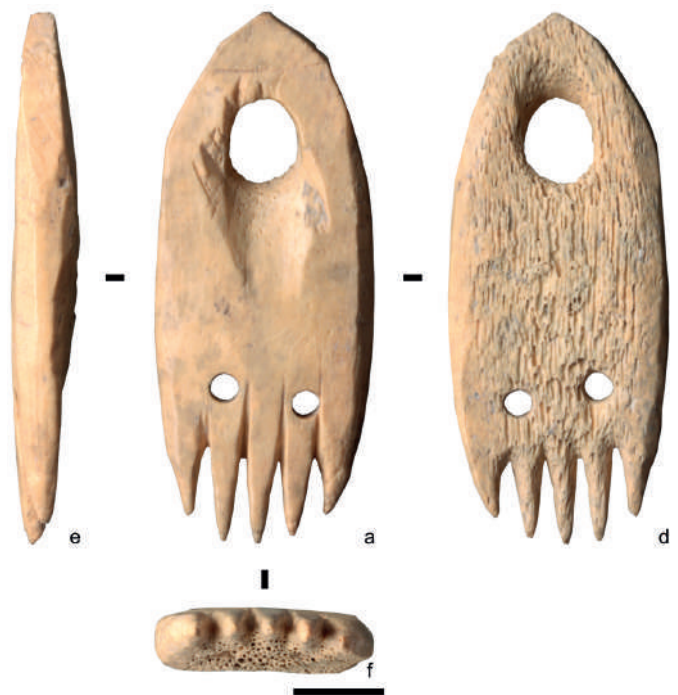
Fig. 2



Fig. 3



Fig. 4

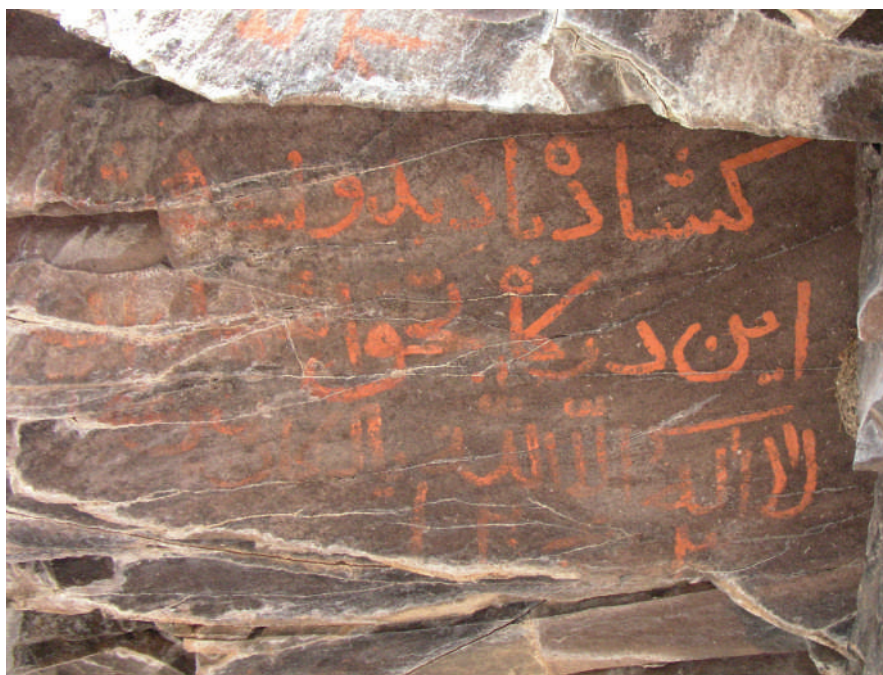


Tab. 2: Figs. 1, 2, 3 – The worship of the Tree of Life and the Sun has always been an integral part of Armenian culture. Among the characters in mythology are the two dragons who guard the Tree of Life, the Sun, the Seed, and the cube-shaped crust, the Earth, the Sky, from Chaos (Shahinyan, 2010).

Tab. 2: Fig. 4 – Sacred amulet with the image of the foot of a typical representative rodent of Areni-1 cave biotope.

cave. In other words, the temple of the new faith was built on the foundations of the old one or on the old one: for example such as Mother See of Holy Echmiadzin, under which a pagan temple with ritual items was discovered. This very fact was recorded since the 5th century in the chronicle works of the Armenian historians, such as Khorenatsi and Agathangelos (Khorenatsi, 1913, 1990; Agathangelos, 1985).

The cave sanctuaries are especially durable in this regard. Even with no reliable information about the pagan period of Geghard (Ayrivank-is located north of the village of Garni in Kotayk marz of Armenia, on the slope of Goght tributary of Azat river) due to the lack of relevant archaeological research, we can nonetheless state with confidence that it has been a pre-Christian sacred complex for a very long



Tab. 3 – Geghamavan - 1. In the top row, the entrance to the cave, on the right is the Persian inscription, which testifies to the fact that the spring is sacred. In the bottom row: The part of the canyon where you can go down into the cave. On the right side. At the beginning of the trail leading to the cave, a petroglyph carved into the basalt.

time. We learn from written sources that Armenian Catholicoses have lived and worked here since 301: *Grigor Lusavorich* (Gregory the Illuminator), who founded the first church (probably in a cave) in the place of a sacred pagan spring, then Nerses I Partev, Sahak A Partev, Hovhannes D Ovayetsi, Hovhannes E Draskhanakerttsi and Catholicos Stepanos of Aghvank (Albania). In other words, St. Geghard Monastery has been continuously operating during the

entire period of Christianity, more than 1700 years. However, we have chronicled information about the buildings and architectural interventions only starting from AD 7th – 9th centuries. This means, after the Christianization of the pagan sanctuary, for hundreds of years, the rituals were performed in a natural cave environment.

There are many examples of similar longevity throughout more than 15 thousand years of the his-

Հունկերէն բառի նշանակությունը՝ ըստ PSD-ի Meaning of the Sumerian word (PSD)	Հունկերէն բառը Sumerian word	Հայերէն համարժեք բառը The Armenian word (equivalent)	Meaning of the Armenian word
1 (cosmic) underground water	<i>zu-ab / šu₂-ab</i>	<i>šov - ծով¹</i>	Mythological Purple Sea
2 (cosmic) underground water	<i>zu-ab / šu₂-ab</i>	<i>šov - ծով</i>	Sea 2. Large water basin
3 a ritual water container in a temple	<i>zu-ab / šu₂-ab</i>	<i>šov - ծով</i>	Large copper pool
4 (cosmic) underground water	<i>abzu / ab(a)zu</i>	<i>awaz-an - աւազան</i>	Basin, pool, puddle, baptistry in church
5 "(cosmic) underground water" <i>engurru</i> " - subterranean waters".	<i>engur</i>	<i>nkol-(ak) - նքոն-աղ</i>	Sea, lake (and especially the water inside)
6 "(cosmic) underground water" <i>engurru</i> " - subterranean waters".	<i>Engur-(ra)</i>	<i>əngla - Ընդդայ</i>	A mythical monster embodying the sea in the Armenian mythology
7 "(cosmic) underground water" <i>engurru</i> " - subterranean waters".	<i>engur</i>	<i>ngur / ngoyr - նգոյր</i>	Sink, where people wash their hands before sitting at the table
8 "(cosmic) underground water" <i>engurru</i> " - subterranean waters".	<i>engur</i>	<i>nkur / nkoyr - նքոյր</i>	Sieve ² - ³
9 "(cosmic) underground water" <i>engurru</i> " - subterranean waters".	<i>engur</i>	<i>gur - գուն</i>	The basin in front of the spring; 2. Water basin
10 Sky, heaven	<i>(Engur=) zikum</i>	<i>jik - ջիք</i>	Upper Ether – the places near the sun
11 sea, lake	<i>šu-e</i>	<i>šov - ծով</i>	Sea

In Sum. word **engur**, **en** is a particle; it is the same as the English *in* and Arm. *ən* (*ըն*) and *i* (*ի*).

The **Eridu** temple is considered to be the oldest temple in the territory of Sumer, which was dedicated to the God ⁴EN-KI, ⁴HA-IA₃. ⁴EN-KI embodied the constellations of Aquarius (^{mul}**gu-la**) and Capricorn (^{mul}**suhur-maš-ku₆**) in the starry sky (MUL.APIN): He was considered the ruler of ABZU.

The **Eridu** temple was called ^{E2} **zu-ab**, literally meaning **house-temple Sea** (or of Sea) and ^{E2} **engur** – literally **house-temple Sea** (or of sea)⁴.

The word **Eridu** in Sum. Means "**guidance - leadership, administration**".

Sum. **eridu** = **ericu** = **երիցու** ("yeritsu"): nom, **երեց** ("yerets"), gen. **երիցու** ("yeritsu") – "**First, Esquire, senior**", **երեց գահ** ("yerets gah") – "**honorable throne, chair**", **երեցանց երեց** ("yeretsants yerets") – "**chief priest**"⁵.

¹ Hr. Acharyan, Armenian Root Dictionary, v. 2, page 468 and links. The identity of the Sum. word **zu-ab** and the Arm. word **šov** was first mentioned by Sargyzyan and J. Karst.

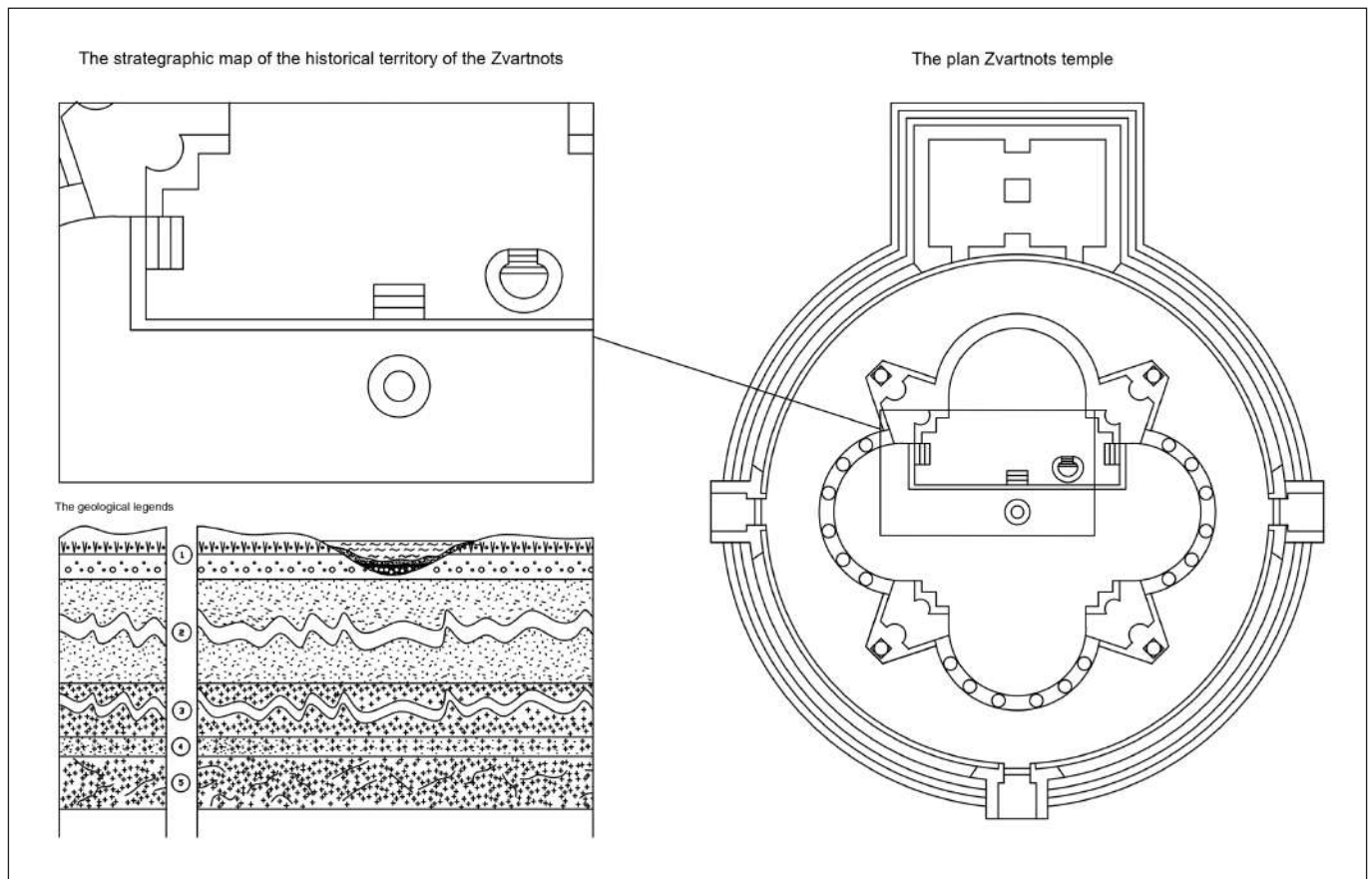
² **Ngoyr** is the same **nkoyr** – "**magh**" ("sieve"), with a sieve-like perforated cap in the sink, through which the water runs down: Hr. Acharyan, ARD, v. 3, page 438.

³ In Armenian **Sieve of the God** means "**sky**".

⁴ Green, Margaret Whitney (1975). *Eridu in Sumerian Literature* Chicago; University of Chicago.

⁵ St. Malkhasyants, AED, v. 1, page 584.

Tab. 4 – Comparison between Sumerian and Armenian words and their meanings.



Tab. 5 — The plan of the Zvartnots and baptismal font (Avazan). The floor plan (by Toramanyan, 1984; graphical drawings by A. Badasyan).

- 1 — River and lake sedimentary rocks, boulders, cobbles, sands, clays (4 meters).
- 2 — Lake sediments. Sandstones and clays (6 meters).
- 3 — Clays, sandstones (36 meters).
- 4 — Basalt permeable (28 meters).
- 5 — Sandstones (7 meters).
- 6 — Basalt deep fissured aqueduct (42 meters) (S. Shahinyan).

tory of human civilization. The fact that Gobekli Tepe is a result of civilization, can be easily proven calculating the natural resources of the particular biotope, which was necessary for human existence and get convinced that the number of nomads and gatherers could not possibly provide the opportunity to create a large army of masons who could create 27 temples even for 5 centuries. One of them is Enki Temple in Eridu. Archaeological excavations have shown that the temple, which has been built and rebuilt for millennia, was originally just a reedy lake full of fish. It was sanctified and became a place of worship. This is evidenced by the many bones remains of *Getatsatsan* (Carp) fish found during excavations. As a result of his studies, Yu. Sargsyan (Sargsyan, 2022), based on the geological and geomorphological features of the terrain, on the research of F. Safar, S. Lloyd and other archaeologists, as well as the legacy that has come down to us from the Sumerian folklore culture, draws

three interesting and fundamental conclusions. The first conclusion is that the lake was fed by underground springs and not terrestrial waters. The second conclusion is that the lake has remained intact underneath the foundations of ziggurats built and rebuilt dozens of times on the lake. And thirdly, the Enki Temple was the only one, where, due to the specificity of the geological structure, the Holy Font unlike all the known ziggurats of Mesopotamia, was constantly existed under the ziggurat: In our opinion, it is an interesting and also scientific hypothesis that should be put into circulation. In other words, in the case of the Sacred Pond, we are dealing with an underground or cave pool. It is worth noting that the Sumerian word “*avazan*” is used in Armenian with the same sound and meaning to this day (“font”, “pond”, “basin”) (tab. 4); moreover, the baptismal font, *avazan*, is the same word “*avazan*” used in Sumerian (Shahinyan, 2011a) (tab. 4).

Results of research, analyses and conclusions

Research of Areni-1 cave began in 1979. The scientific exploration began with the efforts of the Speleological Expedition of the Geographical Society of Armenia. The task of the expedition was to describe the morphological and geological features, the faun and the archaeological perspectives of the cave. Based on the research results, the Scientific Council of Geographical Society of the Arm SSR AS proposed in 1982 to start archaeological research.

The ethnography and archaeology expeditions of the RA NAS started the excavations only in late 1990s. Excavations became more effective with international scientific expeditions getting involved. The excavations were participated by archaeologists from Armenia, U.S., UK, Germany, Japan, Israel, The Netherlands, etc. Institute of Ethnography and Archeology of NAS 2010-2021. The discovered and classified archaeological material made it possible to get an idea of the numerous different, sometimes, radical, changes in the social life of the indigenous ethnoses over the course of 6200 years. At the very beginning of the archaeological work, the separation of the archaeological layers at the entrance of the cave with a large opening, caused significant difficulties. The reason was that in different eras, the people who used the cave for different ritual and other purposes made holes for amphoras and for other purposes and thus disturbed the sequence of layers of archaeological significance. It should be stated to the credit of archaeologists that they accomplished the task assigned to them with honor and were able to restore both the chronology and the stratigraphy of the cave culture with the help of the chronology of each finds. The solution of this problem was greatly supported by the excavations of the large hall deep in the cave, where the stratigraphy was comparatively undistorted unlike the that at the entrance. As a result, we have now the opportunity to get an idea on *g'inedzon* ("libation") ritual as close to the reality as possible (see the plan of the cave and the explanation in tab. 1: fig. 1).

Based on the findings presented in this article and the opinions within the many publications on the basis of excavations, we have made the following radical conclusions:

- Areni-1, Geghamavan, Jrovank, Geghardavank and other sanctuaries for millennia have been sanctuaries, regardless of religious dogmas and the type of faith (see the inscription in Persian on the rock wall in Geghamavan).
- Caves from which springs flowed out were sanctified.
- Pantheistic and pre-Christian religious beliefs have not only been preserved in folklore works (eposes, myths, fairy tales); but also, rituals have long functioned in parallel to the adopted major religion.

Summary

From a purely architectural point of view, the sacred caves can be divided into three groups.

1. The cave has preserved in its natural appearance as a temple, with the allocated sites and sacred items being allocated for functions making the architectural component.
2. With the cave being partially built, the worshippers of the underground waters and underground deities earnestly and continuously professed their faith until they were adapted to the new faith, incorporating old rites (like blessing of water and blessing of grape in the calendar of the Armenian Church) into the new religion.
3. The temple was built on a cave, sacred spring or a pond, with the former sanctuary in its natural initial shape becoming the integral functional component of the temple (Enki in Eridu - the ziggurat dedicated to the God the Creator Hye).

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