

ROCK CUT VERSIONS OF ARMENIAN CHURCHES AND MYTHOLOGICAL AND SOCIAL GROUNDS OF THE ORIGIN OF THEIR ARCHITECTURAL COMPOSITION

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The Armenian central dome churches with cruciform plan, as complete architectural setups, emerged in the seventh century or perhaps earlier and did not change their initial construction for nearly 1,500 years. The reason is the national spiritual philosophy and the mythology of the Indo-European civilization, carrier of which as an important component of culture to this day is the Armenian people. From the architectural point of view, rock carved versions of this type of churches are convincing and irreproachable, with the semantic characteristics of the mythological tree of life, the bowels of the earth-earth-sky trinity, black and white world-creating and world-destroying forces in the form of dragons and the cross as a symbol of light.

Key words: *Armenian central domed cruciform churches, national and Indo-European mystical philosophy, tree of life, sacred trinity*

The scientific objective: Architecture of sacred structures and in particular architecture of temples is anchored in social classification and politics, faith and its dogmas. Depending on the faith of a particular people and changes in that faith in a historic period, as well as serious change in the demographic composition inside the state or radical change of ethnoculture, architecture of temples and sacred structures has been changed respectively. For example, architecture of Pharaohs, Ptolemy and then substituting the latter Muslim Egypt has undergone fundamental changes despite the fact that the main ethnic composition of population remained unchanged. We can see changes in the architecture of sacred structures also in case of monuments of Etrusk, Roman, Christian Italian, Persian Ariarbarzan or Ariarmen [Nersisyan2011], Cyrus [Xenophon of Athens 1970], Zoroastrian [[Nersisyan2011; Shahinyan 2012; Agatangegos 1987] and Muslim period. In Armenia, we can see vast changes in architecture of sacred structures and temples of 4th-3rd millennia, Kingdom of Van (Urartu), Hellenistic and Christian periods. And this is despite the fact that, starting from 6th century B.C. up to Late Middle Ages, the ethnic, native population and the principles of royal administration and social and class order have not undergone any fundamental changes. Only religious views and the religion itself have changed [Shahinyan 2010, Marr 1922, Dyakonov1989, Movsisyan2002,].

Thus, objective number one: what kind of natural and anthropogenic factors have influenced the architectural formation of sacred structures and in particular churches.

Objective two: what is the reason for the longevity of the style and composition of sacred structures and particularly Armenian churches over considerable time periods, more than 1,600 years.

Research: Armenian churches have been continuously written about since the 5th century, during the entire period of Christianity, and starting from the 19th century, numerous scientists have been involved in issues of church architecture and a great amount of materials were published about the results of scientific researches.

Among the vast amount of scientific viewpoints published about basilica, Toros Toramanyan's scientific hypothesis on architecture of basilica type temple structures is favorably distinguished. According to Toramanyan, architecture of basilic churches is a result of thousands years of development of temple construction and the main impact on its formation have been the social

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relationships in empires having clearly differentiated hierarchic class structure. To support this viewpoint, he gives the example of plans of Ancient and Middle Egyptian Kingdoms, Hellenistic and Greco-Roman temples [Toramanyan1945].. From his explanation the functionality of temples is clearly emphasized which is anchored in the empire's hierarchic, religious-civil class structure and functions and rights of each of its strata.

The other principle that has served a basis for formation of the architecture of center domed cruciform planned churches is based on the mythological worldview of Armenians since ancient times about the creation and structure of the Universe and the Earth. Reasonable figures available in Armenian petroglyphs, rugs, decorative art of medieval manuscripts and in mold frames of khachkars (cross stones), and the constructive structures of the composition of mausoleums with circular semispherical stone-hill and stone-box burial chambers built in 4th-3rd millennia B.C. become meaningful only within the ancient mythological notions of Armenians about the Tree of Life, Dragons, the quadrate structure of the Earth, the Fruit of the Tree of Life, and the structure of Universe.

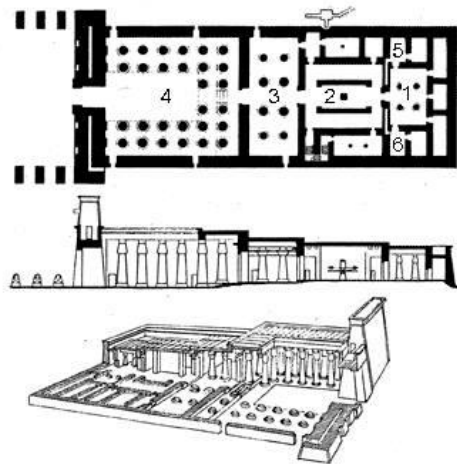


Figure 1. The plan of Egyptian Temple. 1. Area the Pharaoh-priest 2. The area for Priest and Pharaoh's family 3. Priest 4. The aristocracy and military elite 5-6. Treasury

Architecture of center domed churches, as a classical model and as structures radically different from other compositions were recorded by Toros Toramanyan. Later on, in the 20th century, scientific researches and publications were provided by Strzhigovski, Tokarski, Jaconsn, Yaralov, Mnatsakanyan, Chubanishvili, Safaryan, Taghayshvili, Khalpakhchyan and others. Vahagn Grigoryan published in 1982 a monography “Early medieval central domed small monuments of Armenia”, where he brings together all works previously done and performs a typological classification, as well as Telman Gevorgian’s “The proportions in Armenian Architecture”, which studies the numerical relations and proportions of constructive structures of churches based on units of measurement used in ancient and medieval Armenia: dzogh (“rod”), krknaqayl (“double step”) girik (“embrace”), votn (“foot”), tiz (“span”), etc. [Gevorgian2012]

However, the works of all these scientists are based on the tectonic peculiarities of the structure which eventually leads to analysis and description of achievements of engineering technologies of structures and cannot have national features, while studies of the composition do not indicate any traditional, ethnocultural bases of origin and establishment of the form and style. Therefore, it is difficult to ground with this methodology the purely Armenian origin of this type of churches.

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In case of decoding of the esoteric meanings of the all the following is comprehended: the traditional constructive trinity of churches, church windows, doors, defensive towers framed with depictions of two cosmic mythological elements (, Black Water, and Purple Sea that separate the regulated universe of evil and good and protect it from endless chaos) boundaries of the field occupied by depiction of Tree of Life appearing in the form of khachkars and cross images, etc. Numerous examples of application of the symbol of the sacred act of creation in small size architectural monuments (Odzun) and in stylization of church entrances; application of the Sun – the fruit of the symbol of the Tree of Life in the form of a new symbol of Holy Cross adapted to and meaningful in Christianity; application of the symbol with rectangular drawing of the Earth in petroglyphs, esoterics, pictograms, and planning under the domes of churches that characterize the Earth’s sphere.

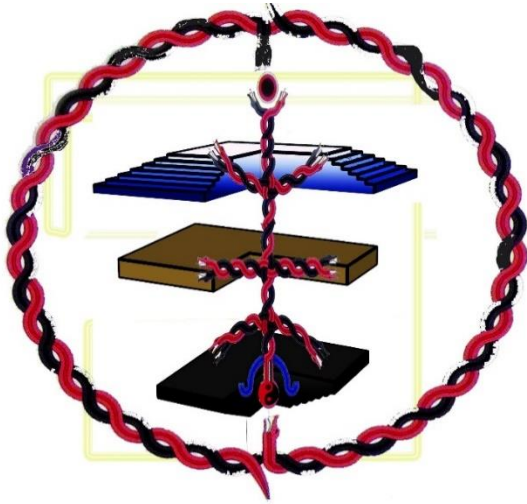


Figure 2 Tree of Life and Dragons

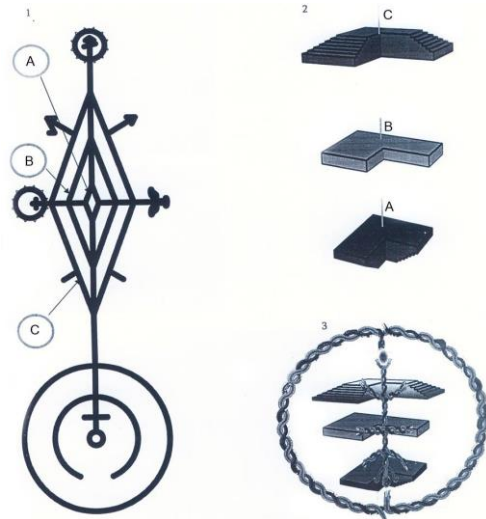


Figure3 1: Mythological construction of Universe 2:A. Underground B. Earth C. Sky 3: Universe

Furthermore, the portrayals of man, goat, bull, eagle that characterize the four sides of the Earth and, simultaneously, the four elements – soil, fire, water, and ether, as well as, characterizing the sphere of bowels of the earth, three, five or seven platforms of square drawing and developing gradually upward and placed one on the other in the base of churches or in compositions serving as a pedestal for khachkars and monuments.

Social bases for architecture of basilicas and temples: Architecture of basilicas has more often been anchored in social structure and respectively on public demand. The functionality of the structure was a public demand, which had been formed on the bases of exercising the rights of people inside the church or temple according to the class structure of the society during pre-Christian and Christian periods. This point of view is shared by part of the 20th century researchers of the Armenian architecture, while it was most convincingly presented and well-grounded by Toros Toramanyan.

Toramanyan believes that the cult of deceased has appeared among the tribes that had mastered agriculture and metalwork; in the architecture of the mausoleums dedicated to them legends associated with faith and worship were already outlined. In the church architecture, starting from the ancient times, the concept of the eternity of life and rebirth was valued since the idea of immortality and heavenly life still holds an important place in people’s mentality. From the plan structure of temples, three functional components are clearly distinguished: sanctuary, functional areas for priests and prayer hall.

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It is natural that the prayer hall is the largest both in ancient temples and in churches, while the sanctuary that contains a sculpture to God and the treasury with different items gifted to a particular god by believers were inaccessible for the public at large.

Mythological bases of the compositions of Armenian churches: In the ancient Armenian mythological notions, the Earth has a square drawing; there are references on this in medieval books. Bowels of the earth consists of a number of layers; mainly seven layers are brought up, where the lowest layer is followed by the Black Water. The sky looks spherical, where the top of the Tree of Life reaches. Every day the Sun is born from a bud of the Tree of Life and is protected by the White Dragon which also protects the Earth and the Sky from external sinister forces or from chaos. Every night the Black Water of Bowels of the earth or the Black Dragon steals and takes the Sun away. The Black Dragon also has a protective function though: it protects the world in the Bowel of the earth or the mythological Dark World and people living there. The Black Dragon is also the protector and the bearer of waters and gives birth to lots of springs from his wounds after he dies.

Thus, according Armenian and in some case common mythology preserved among the Indo-European tribes, the Universe has a form of Sphere or consists of two spheres. In the surface of the cross section of the sphere the surface of the Earth is placed with square drawing, with its landscape arising upward, and below that plane there is the Dark World or Bowels of the earth. Thus, the Universe is three-storied: Bowels of the Earth, Earth, and Sky.

Results of the research: Thus, an important situation is outlined both for temples and churches built on the ground and for the rock cut ones: the architecture of part of mausoleums, antique Egyptian and Greco-Roman temples as well as basilicas is anchored in the concept of the eternity of life or immortality or the rebirth. While from the functional standpoint, the sections of temples where the “presence of God” is ensured and the small cell where treasures offered to God are kept as well as areas prescribed for the functions of the priest and pastor class were inaccessible for believers. The prayer hall for believers did not have any direct linkage with the sanctuary section from the functional point of view, while in some cases it was not linked with the temple at all. We can see this phenomenon in Egyptian (Temple of Ra), Sumer (Zikkurats), Urartian (Ayanis in Van, “Sussi” or Arevi in Erebuni), Assyrian, Mesopotamian, and Hellenistic temples. Architecture of these temples is mostly dedicated to a particular god, and only the chosen people from the class of priests and pastors were entitled to enter the temple and the room where the gifts dedicated to that god were put. The prayer hall was located mainly outside the temple and it could be a facility with columned roofing, such as in the case of Ayanis Temple or simply an area adjacent to the temple.



Figure 4 The Areni and Amberd center domed cruciform planned churches: Stone Tree of Life

This phenomenon can be seen even more vividly seen in the case of holy temples placed on the top of pyramids in Aztec, Olmec, Ink, Maya cultures, where the faithful people were nestled in the area outside the temple and the pyramid. Thus, it is quite difficult to find the spiritual bases of the architecture of basilica and national features in the principles of functional differentiation of constructive components of composition given that the concept of immortality or rebirth is universal. Therefore, starting from the ancient temple construction up to the basilica, architecture is based on the entreaty from a particularly worshipped God or gods about eternal life or immortality. This means basilic church is basically a result of an international thinking, and only on case of availability of a few details of national culture we can perform classifications for distinguishing it as Italian, Greek, German, Georgian, Armenian, etc.

The situation appears to be different when architecture of central-domed cruciform planned Armenian churches are viewed under the light of Armenian ethnoculture and myths preserved by other Indo-European peoples, where we can see that in the architecture of sacred structures myths about the Tree of Life, World-Destroying and World-Creating Dragons, Life Seed or Cosmic Egg, square structure of the world, the three-storied universe, and the fruit of the Tree of Life, i.e. the Sun, are still alive at least in the Indian mythology and Vedas. We can observe this phenomenon in case of the architecture of earth-hill and stone-box mausoleums both in the Armenian Highland and in Iran, in the ancient civilizations of the Mediterranean Sea basin and in the Irish Newgrange. All these contain all or part of mythological components: cromlechs arranged along the external circle of mausoleums of 4th to 3rd millennia B.C. in the Armenian Highland or the enormous fined stones arranged along the circle of the mausoleum in the basin of River Boyne in Newgrange, Ireland, which probably embody the Dragons. The planning structure or the plan of the burial chamber or burial area with square or cruciform drawing as well as the deceased contracted and placed like an embryo in the maternal womb that can often be seen, which portray the mythological seed from which the Tree of Life will grow and yield fruits.

All world-creating elements the architecture of central-domed cruciform planned Armenian churches as well as all world-creating elements have preserved in the mythology of Indo-European peoples.

Conclusions

In the bases of the architecture of sacred places and temples lies the need to create necessary functional volumes and space for worship of gods or God. Basilic churches with their medieval planning and planning principles are directly linked with the architecture of sacred places of the Old World, where the sanctuary is separated (the stage and the altar or niche where the image or a sculpture of a saint or Christ is placed), with the priests' rooms and the prayer hall to the right and to the left of the stage. Developments of the architecture of basilica in different countries, because of creative approaches and social order and demand, have formed this diversity of styles such as gothic, baroque, etc. And to resolve issues of tectonics, engineering solutions and technologies have been found such as use of half-arch supporting column to strengthen the external walls to prevent the ceiling from collapsing in French and English churches in the period of Renaissance.

The architecture of the Armenian central-domed cruciform church was immediately formed in the 5th century and has never undergone any compositional change to date since the constructive structural details are directly anchored in the ancient mythological model of the structure of the Universe. Occurrence of the rock cut versions of the central-domed church in the Armenian Highland and other places was due to the intention to hide from enemies or the unorthodox. However, for rock cut central-domed churches it was a mandatory requirement to have "yerdik" (a round or square opening through which smoke goes out and the light penetrates) in the central part of the dome of the ceiling, in the place of attaching the cross, wherefrom the light was falling on the believers.

References

1. Shahinyan S. 2012 - About one peculiarity of rehabilitation of Ancient Sacred Structures of peoples of Indo-European family and medieval Armenian Churches. Proceedings of the 4th International Conference on contemporary problems in Architecture and Construction. Collection of articles., Czestochowa, Poland, pp. 707-712
2. Meller H. & Avetisyan P. 2011 - Archäologie in Armenien. Landesmuseum für Vorgeschichte. Helle. p.72-110
3. Bixio Roberto, A. Bicchi, A. Bixio & Others 1964 - The underground towns of Cappadocia. ERGA EDIZIONI Editoridal, p. 162.
4. Chilingiroglu A. 2011 - Ayanis An Iron Age Site. The Oxford Handbook Anset Anatolia 10000-323 B.C.E. (Oxford 2011)
5. Schmidt K. 2001 - Göbekli Tepe, Southeastern Turkey. A Preliminary Report on the 1995-1999 Excavations, Paléorient 26.1, 45-54,
6. Paolo Cuneo 1973 - Le chiese paleocristiane armene a pianta centrale, Estratto da "Corsi di cultura sull 'arte ravennate e bizantina", Ravenna,
7. Thierry M. 1971 - Monasteres Armeniennes du Vaspurakan, "Revue des Etudes Armeniennes", t. VII, p.216-218
8. Vazguen Ghazarian 2010 - Las Cavernas Prehistoriacas.Histori Del Pueblo Armenio.Traduccion y Actualizacin Ruben Artzruni. SIRAR Ediciones, Barselona. Spain p.47-50 p.524
9. Shahinyan S. 2011 - Global Climate Changes and Pantheistic Spiritual Perceptions in Armenia Highland Before and After the Last Wurm Glaciation. <http://www.inqua2011.ch>
10. Shahinyan S. 2009 - The impact of changes ecological and public environments for Architecture of Anthropogenic Caves and Underground Constructions, RA MES YSUAC Directory of constructors of Armenia, N 2 (138), Yerevan, pp. 17–22.
11. Shahinyan S. 2010 - Petroglyphs and Ancient Symbols of Armenian Highland. YSUAC & ACS Zangak 97, Yerevan, p.116
12. Shahinyan S. 2010 - Petroglyphs and Ancient Symbols of Armenian Highland. YSUAC & ACS Zangak 97, Yerevan, p.116 Shahinyan S. 2005 - The Discovery of VII-XII cc. Underground Churches and Settlements in Qashatagh by the 2002-2003 Expedition of ASC, UIS 14th international congress, Abstract Book, Athens-Kalamos, P-4, p. 9
13. Shahinyan S. M 2008 - “Global changes of environment and the great migration of people from Asia Minor at the end of the Quaternary period” WAC-6 World Archeological Congress. Dublin”, p.300.
14. Claire O’Kelli 2007 - Newgrange. Eden Publications. Dublin. IR. p. 32.
15. Poghosyan G. 2005 - Cave Complex Samar, UIS 14th international congress, Abstract Book, Athens-Kalamos, W23, p. 187.
16. Armin A. 2011 - “The cosmic ideology of the Mount Sun”, Los Sngeles,.
17. Armin A. 2007 - “Ancient pagan byble: Sasna Tsrer Epos”, Spyur 2007 Glendale, 260p.
18. Agatangegos 1987- .,The history of Armenia,, Yerevan, 468p
19. Davrizhetsi A. 1988 - “History”, “Soviet Grogh” Yerevan, 590 p.
20. Draskhanakerttsi H. 1996 - “History of Armenia”, YSU, 397 p.
21. Gevorgian Telman 2011 - “The proportions in Armenian Architecture”, Sargis Khachents-Printinfo.Yerevan. 184p.
22. Grigoryan Vahagn 1982 - “Early medieval central domed small monuments of Armenia”, 264p.
23. Grigoryan V. 1982 - “Small centraldom monuments early medieval in Armenia”, 190p.

24. Toramanyan T. 1942 - "Armenian Architecture", Armfan, Yerevan, 403 p.
25. Toramanyan T. 1948 - "Armenian Architecture", Yerevan, ArmSSR AS, p. 308.
26. Kaghankatvatsi M. 1969 - "History of the land of Aghvank (Albania-tr.)", Yerevan, "Armenia", p. 322.
27. Hakobyan T. 1988 - "Ani the capital city", YSU, Yerevan, 326 p.
28. Haykazun A. 2005 - "Symbolistic thinking in the Armenian architecture", Yerevan, Alas, p. 178, Table 106.
29. Harutyunyan S. 2001 - Armenian mythology, Hamazgayin, Beyrut, 527p.
30. Harutyunyan S. 2007 - "Armenian mythology", Hamasgayin, Beirut, p. 528.
31. Marr N. 1906 - "Brief list of the repository of antiquities in Ani", LVt. əSOP. p. 32.
32. Melkonyan M. 2002 - "Urartian rock carved caves", "Zangak-97", Yerevan, p. 196.
33. Mikayelyan N. 1968 - "Cyclops' fortresses in Lake Sevan basin", ArmSSR AS, Yerevan, p. 67, Table 80.
34. Movses Khorenatsi 1913 - "History of Armenia", Tbilisi, book III, 165 p.
35. Movses Khorenatsi 1990 - "History of Armenia", "Hayastan", Yerevan, p. 324.
36. Movsisyan A. 2002 - "Newly brought to light cuneiform inscription from Berdsor cave", "Handes amsorya" 1-12, Mkhitarian Publ. Vienna-Yerevan, pp. 401-411.
37. Nersisyan H. 2011 - Armenological studies, Bavikh, Yerevan, 774p.
38. Shahinyan S. 2012 - "Khachqar. Sakramental system of creation of the Univers", Yerevan, Printed by Ayas Print LLC, YSUAC, 84 p.
39. Shahinyan S. 2005 - "Caves of Armenia", v. I, "Zangak-97", Yerevan p 170.
40. Shahinyan S. 2004 - "Caves in the process of formation of mentality and culture of the Armenian people", Program 1: The Armenian Highland as a hearth of Armenian and world civilization, Institute of History, NAS, Yerevan, pp. 24-32.
41. Shahinyan S. 2003 - Caves in the process of formation of mentality of the Armenian people", "Echmiadzin", N 5, Echmiadzin, pp. 55-75.
42. Shahinyan S. 2012 - "Khachkar. The sacred system of cosmic creation", YSYAC, Yerevan, 120p.
43. Petrosyan V. 2004 - "Emblem of faith (Khachkar), "The Armenian Highland as a hearth of Armenian and world civilization", RA NAS, Yerevan, pp. 62-65.
44. Vehuni A. 2001 - "Geology and the riches of its entrails", YSY, Yerevan, p. 435.
45. Orbeli H. 1911 - "Ruins of Ani", St. Echmiadzin, p. 63.
46. Xenophon of Athens 1970 – Anabasis, SA of Arm. Yerevan SSR, 282p
47. Ancient World History 1989 - SA of USSR „Nauka,,Vol. 1, 470p, Vol.2, 572p.
48. Artemi A. 1980 - The life of Artemi Araratyan, AAS, Yerevan, p. 223.
49. Bryusov V. 1917 - Sphinxes and vishaps, Gorts.
50. Kipshidze D. 1972 - Caves of Ani, AAS, Yerevan, p. 176.
51. Marr N. 1922 - Archaeological expedition of 1916 to Van, Printing House of Acad., Yerevan, p. 42 .
52. Tokarski N. M. 1973 - Pages of the history of Armenian Architecture, Yerevan, 86 p.
53. Tokarski N. M. 1961 - Architecture of Armenia in IV-XIV centuries, Yerevan, 96 p.
54. Shahinyan S. & Minasyan O. 2011 - Direct impact of factors of the ecosystem on formation of the Armenian mythological perceptions of the universe, "Beliye nochi 2011", St. Petersburg, pp. 112-118.
55. Shahinyan S. 2011 - On peculiarities of endemic culture formed under the influence of the factors of biotope. International Academy of Sciences of Ecology and Safety of Vital Activity, Vestnik, Volume 16, N5, issue 1, pp. 25-27.
56. Shahinyan S. 2011 - Direct impact of factors of the ecosystem on formation of the Armenian mythological perceptions of the universe. Scientific readings "Beliye nochi 2011", Velikiy Novgorod, RF 2011, pp. 112-118.

57. Jakobson A. L. 1950 - Outline of the history of architecture of Armenia of V-XVII centuries, M.-L.

**ՀԱՅԿԱԿԱՆ ԿԵՆՏՐՈՆԱԳՄԲԵԹ ԵԿԵՂԵՑԻՆԵՐԻ ՃԱՐՏԱՐԱՊԵՏՈՒԹՅԱՆ ԵՎ ՆՐԱՆՑ
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Ս.Ս. Շահինյան

Ճարտարապետության և շինարարության Հայաստանի ազգային համալսարան

Հայկական կենտրոնագմբեթ խաչաձև հատակագծով եկեղեցիները որպես ամբողջական ճարտարապետական հորինվածք ի հայտ եկան յոթերորդ դարում, կամ հավանաբար ավելի վաղ և այլևս չփոխեցին նախնական կոնստրուկցիան գրեթե 1500տարի: Պատճառը ազգային հոգևոր փիլիսոփայությունն ու հնդեվրոպական քաղաքակրթության առասպելաբանությունն են, որը որպես մշակույթ մի կարևոր բաղադրիչ առ այսօր կրողն է հայ ժողովուրդը: Հայ հնագույն հոգևոր և մշակույթային այս յուրահատուկ ժառանգության հետազոտությունն ու մեկնաբանությունն ավելի քան կաևոր է, քանի որ համոզված ենք, որ այն հայ մշակույթի և ճարտարապետության ակունքները հասկանալու բանալին է: Այս եկեղեցիների հորինվածքի հիմքում ընկած է առասպելաբանական կենաց ծառը, Ընդերք-երկիր-երկինք եռամիասնությունը, սև ու սպիտակ աշխարհաստեղծ և աշխարհակործան ուժերը վիշապների տեսքով, և խաչը, որպես լույսի սիմվոլ:

Բանալի բառեր: Հայկական կենտրոնագմբեթ խաչաձև հատակագծով եկեղեցիներ, ազգային ու հնդեվրոպական միստիկ փիլիսոփայություն, կենաց ծառ, սուրբ եռամիասնություն

**МИФОЛОГИЧЕСКИЕ ОСНОВЫ ПРОЕКТИРОВАНИЕ АРМЯНСКИХ
ЦЕНТРАЛЬНОКУПОЛЬНЫХ ЦЕРКВЕЙ И ВОПРОСЫ ИХ ПОДЗЕМНЫХ АНАЛОГОВ**

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Централнокупольные Армянские церкви появились в 7-мом веке как законченный архитектурный замысел и композиция и больше не менялись в течении почти 1500 лет. Автор предполагает, что причина долговечности этой архитектурной композиции является мифологическая концепция вселенной, который формировался в 3-ем тысячелетия у народов Армянского Нагорья. Этот духовная начала также было пресуше предков народов индоевропейского языкового семейства, но в наши дни носителем этой культуры в основном является армянский народ. Доказательства этой теории являются также подземные аналоги цетральнокупольных церквей. Каждый отдельный элемент архитектурный композиции символизирует Древо Жизни, Подземелья-Земля-Небо триаду, а также двух Драконов на каторх держится равновесия в нашей вселении.

Ключевые слова: централнокупольные Армянские церкви, Национальная и индоевропейская мистическая философия, Древо Жизни, Святая троица