On study and accounting of geophysical fields in architectural space of sacral purpose

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Abstract. The semantic content of the paper is aimed at identifying the role of geophysical fields in architectural spatiality. This is a contribution to the development of geo-directionality in the formation of a certain architectural and spatial environment, in this consideration of sacral space. The influence of geo-factors determines one of the essential features of the sacred space, the impact on both psychophysiology and extrasensory perception. As part of the formation of geo-factorial intentionality, an analysis of the geophysical causes of the energy impact on the architectural space is carried out. The historical precedents of geo-effects accounting in architectural practice, as well as methods of detecting geozones of energy influence are considered. The primacy of the text is hydrogeological features of the location of sacred sites, as well as elements of their energy infrastructure. The research compares the presence of water flows, their location under the architectural structure and the nature of bioenergy radiation.

1. Introduction
Rethinking the experience of the ancient builders, on bits of collected remnants of the once-lost tremendous knowledge, allows you to define some of the principles of finding the "right" place for building and building a special space for special purpose buildings, such as religious. The structure of such a space is largely dependent on geological conditions and other specific factors that have an impact on individual elements or a complex of elements of a “good place”. It is necessary to recognize and take into account both the factors of positive and negative impact.

The Earth, like all objects of the material world, has an energy field that is different in nature and intensity of radiation over its entire surface. The bioenergy field, through which energy is exchanged with the environment, is dependent on phenomena that have a gravimagnetic nature. Taking into account the impact of geophysical fields on humans in architectural practice, such as electromagnetic and gravity-magnetic fields, anomalies of the natural magnetic field, gravitational anomalies and other weak fields, will allow to form a specific architectural space. The concept of “specific architectural space” includes the impact of various geofactors on architectural formation and is considered from the standpoint of the scientific direction of architectural geonics [1].

The author's article “Determination of the specificity of space in architectural geonics” [2] contains factors that are the cause of the specificity of space and a brief description of the practical orientation of a specific space aimed at the perceptive perception of a person.
2. The scientific significance of the issue with a brief review of the literature

Attempts to describe and study unusual phenomena in the architectural space associated with geofactors are found in the works of Yu.P. Suprunenko, M.Yu. Limonada and A.I. Tsiganova, V.F. Tsallagova, Lugovenko V.N., S.E. Ermakova, T.V. Faminskoy, A. Platova. Some of the ideas presented in these works can be attributed to the scientific with some reservation. But the unification of such works into a single concept of the influence of geofactors on architectural spatiality is a chance to find the keys to the door slamming many years ago. The door behind which lies what seemed to be forever lost.

The analysis of the nature of the geophysical effects is undertaken in the book by Yu.P. Suprunenko “Places of Power on the Map of Russia and the World” [3], made accordingly to their geographical location and relief features.

About the presence of interrelation of especially significant architectural structures with such a geofactor as groundwater we find in the works of foreign authors: H. Hessel, F. M. Butby, V. H. Lend, M. Langdon, G. Andervud, T. Grivz, A. Wotkins, U. Pidgeon, V. Todt, T. Morison, A. Tom, L. Merl, S. Dio.

3. Formulation of the problem

The objective of this study is to identify the role of geophysical fields in the architectural space, formulate the semantic perspective of the geophenomenological aspect of the architectural space, as well as perform a comparative analysis of factors influencing the formation of an integrated system of architectural geonics.

4. Theoretical part

4.1. Formation of geofactor intentionality in the pattern of specificity of the architectural space. Geomorphological fragments of the Earth have fixed boundaries in space. The energy frame of the Earth is very complex and can be represented as a “matryoshka”, with the systems of regular grids being embedded into each other. Energetically anomalous zones of the Earth are above deep tectonic faults, underground cavities, underground water flows and their floor intersections, ore bodies, and also orderly in the places identified by geobiological networks of E. Hartman, F. Para, E. Vittman, M. Kurri and the so-called “Russian grid”, the model of which was developed by Soviet scientists N. Goncharov, V. Makarov and V. Morozov. Professor G. I. Schwebs (Ukraine) in 1998 identified three types of bioactive structures: global, regional and local. Stable (weakly varying in time) geoactive structures have different shapes and sizes.

Global geo-active structure - non-uniform education. It is a system of grids of various levels: large-celled, medium-celled, small-celled. It has an energy-field nature, which is expressed by lines of force, planes and energy nodes. The intersections of nodes and lines of networks and water flows create particularly dangerous areas in the form of spots and stripes with a diameter from several centimeters to several meters or even tens of meters.

All the radiations of the Earth are polarized.

In addition to the listed grids and grids formed by their interaction, geo-mantle (telluric) zones are distinguished. Geo-mantle zones have a complex structure and are oriented to the cardinal points. Such areas of the earth's surface have long been considered benevolent, sacred places. They are associated with most of the ancient religious buildings, and later Christian churches, often built on the site of pagan shrines [4].

In the 70s. XX century., T. Graves discovered energy structures, representing a system of concentric rings, the polarity of which changes when passing from the center out and back. He found that similar systems of rings are present in other megalithic structures [5]. Yermakov calls such
structures "points with variable polarity" and believes that they are an integral part of the structure of the energy system of sacred places.

When studying megalithic structures and Christian churches in 1921, A. Watkins discovered “ley lines”: vertically, this structure is formed by spiral streams, each of which changes polarity and force depending on the phase of the moon, passing through “zero” during time 1 and 3 quarter. In May 1992, a similar vertical structure was found by S.E. Ermakov in a study of the Trinity Church in the village of Luzhki, Serpukhov District, Moscow Region on the apse of the limit [6].

An interesting fact of the intensity of the listed types of energy structures, according to V.N. Lugovenko [7-8], is instability. Measurements of electromagnetic parameters in these zones are “closed” during the day and “open” depending on the location of the Moon and planets, other cosmic-earth factors. Figuratively, this process was called the "breath of the Earth." O.A. Korzin, T. Graves indicate in their works the existence of the hourly, daily, and monthly cycle of zone activity.

Yu.P. Suprunenko published works [3, 9], written in conjunction with I.A. Shlionskaya to collect information on the location of global in scale anomalous zones that have the impact of geophysical fields on humans. P. Poddar [10] proposes the scientific substantiation of the traditional geo-matic rules of creating a healthy artificial human environment and gives interesting facts that testify to the incredible knowledge of the ancients in this area. Discovers evidence of impressive knowledge already formed independent branch of modern science - geobiology. The role and importance of geophysical anomalies in environmental medicine is considered in the works of A.D. Dubrov [11-12]. Where are described in detail the means and methods for identifying geophysical anomalies, known as geopathogenic zones; A classification of these methods and a description of the features of their application in practice are given. Particular attention is paid to bio-resonance methods of detecting geopathic effects on humans. I.P. Neumyvakin [13], V.P. The treasurers [14] describe the bioenergy essence of a person and determine the change in his state as a measure of interconnection with everything around him, in particular, with the architectural space.

4.2. Considerations for geo-impact in architecture

For the construction of especially significant architectural structures, places have long been chosen, taking into account the energy zones with special radiation. "Therefore, it is not surprising that Orthodox churches and monasteries stand on the site of pagan shrines" [3].

The location of prehistoric megalithic structures located on the surface of the Earth from the Far East to Ireland falls on the intersection points of geobiological networks, which have the highest level of negative energy. The result of this arrangement is the transformation of negative telluric energy into positive. The megaliths continue to perform this function even today. The dolmens are located in the center of the network cell and function as emitters of positive energy [15].

In ancient India, the global orthogonal and global diagonal (15x20m) energy networks were used in the concept of eight dyshas, created specifically for the correct location of temples relative to residential development, which is very clearly stated in ancient «Vastushastras». The direction of the flow of telluric energy in these networks is from north to south and from east to west [9].

The location of some religious buildings falls on the focus of underground water masses. In 1935, in the article “The Religion of the Stone Age,” C. Boothby writes: “... It can be argued that all the points where the ancient monuments are located are connected with groundwater ...”. This fact is confirmed by L. Merl (1933), S. Dio (1935) and many others, who discovered underground water accumulations or underground sources under each investigated sanctuary (i.e. sacral place). An example is the famous Cathedral in Chartres (France) [16]. The architectural space of the structure acquired the specificity of the permanent telluric effect formed by water flows. “Literally all the burial mounds, cromlechs, henji and other sanctuaries, including detached menhir stones, are located above the intersection points of two or more underground water streams, lying at great depth, or above water-filled voids. The same specific pattern is characteristic of Christian churches in Europe. First of all, this applies to those of them that were built before the Reformation ”[4]. S. Yermakov [5] reports that biolocation studies carried out on the territory of several Orthodox churches of various ages built in
Stanislavl, Luzhki, Davydova Desert, etc., confirm the presence of underground water flows under all the temples surveyed.

“Detailed studies have shown that usually two or more streams intersect by floor under the place where the altar stone is located. One stream usually flows under the apses of the temple, and two or three more - in the main room or under the belfry, if any. The direction of water flow is often determined by the terrain, and the channels are usually almost perpendicular to the walls. The depth of occurrence of underground streams is on average from 2-3 to 8-10 m. Most often, the streams passing under the altar stone are closest to the surface”[5].

4.3. Methods for detecting geozones for energy impacts and methods for quantitative measurement of the intensity of radiation
VF Tsallagov [4] indicates the fact of knowledge in the most ancient world cultures, and especially in Chinese, Indian and Japanese, of the effects of the artificial and natural environment on the human body. Some people's ability to perceive and understand these effects were considered divine. This area of knowledge of the ancients is known as geomansion.

Currently developed instrumental methods for determining geological heterogeneity. Instruments are highly sensitive radios. But in the cities, their work is limited to a high level of industrial interference, therefore biolocation retains the role of the main method, the metrological parameters of which can be brought through special ground works to a 95% confidence level. S.V. Zenin developed the Method for the Study of the Efficiency of Bioenergy Impact (RF Patent No. 2109301), which the Scientific Council of the Ministry of Health of the Russian Federation approved on November 2, 2001, the official method of registering bioenergy impact.

Methods of registration of magnetic fields with the description of modern devices and automated systems for measuring and analyzing weak magnetic fields are considered by the following authors: Kneppo R., Titomir L.I., Vvedensky V.L., Ozhogin V.I., Kholodov Yu. A., Kozlov A.N., Gorbach A.M.

To date, many different ways have been developed to quantitatively measure the intensity of radiation from bioenergy networks and zones [17-18], using conventional units or points. One of the methods was developed in France by Antoine Bovy and Andre Samonton, who use Lecher’s antenna for measurement - a horizontal frame with a biometer representing a scale with a movable slider. The scale is divided into dimensions, the name of which is taken by the name of one of the authors of “bovi” and is limited to numerical indicators from “0” to “16,000”. Theoretically, researchers cited the correspondence of the amount of energy from a normal healthy human body.

“The energy concentrations in different cultures are included in this range in the Sancta Sanctorum (holy of holies) of churches, temples, mosques, etc. . The energy level around crucifixes in Protestant or Lutheran churches is different. Church bell ringing is also estimated at 11,000 bovis. In Muslim mosques against the eastern-oriented niche, an energy level of 12,000 bovi is observed, which corresponds to the energy level of the human throat chakra. In Tibetan temples in a sacred place called “gabhabriha”, the energy level is about 14,000 bovi, which corresponds to the energy of the human chakra in the “third eye” area. The Buddhist stupa, thanks to its proportions and form, radiates energy to 12,000 bovis, which has a strong beneficial effect on people, attracting them to a spiritual center for recharging their energy”[10].

In the work of A.O. Korzin [15] we find the following: “The tendency of increasing the energy field to the sanctuary found in almost all religious buildings can be explained as the conscious organization of the energy environment to help the priest withstand the load of long-term exposure to high energy levels”.

5. Practical relevance, suggestions and results of implementations, the results of experimental studies
Studies of the location of the sacred places of the time period, covering the ancient world and until the last Renaissance period, are connected with the geophysical fields of the Earth. Such fields are a
manifestation of the main bio-energetic terrestrial processes. The analysis of the fact of geophysical fields in the architectural space allows us to understand that the most important phenomenological significance of the sacred space consists in the role it plays in the psycho-physiological impact on humans. This is the semantic perspective of the geo-phenomenological side of the architectural space. And this meaning becomes a constitutive basis, a kind of pivot in the formation of an integrated system of architectural geonics. Geophysical factors are defining the determinants of a specific environmental formation in architectural geonics and are considered from the author’s position, as one of the reasons for the disclosure of the phenomenon of the sacred. And the reasons are quite important, by means of which the territory of the “place of power” is distinguished, initially having qualitatively excellent properties.

6. The main findings of the study

One of the key positions in the design of a religious building is the choice of a location that contributes to the maximum impact on the mental and physical state of a person. The interaction and interconnection of architectural forms with such a location provokes the emergence of information and energy mechanisms and is the basis on which a special architectural space is created and functions.

The presence of energy in geophysical fields is part of a unique spatial complex of a religious structure.

The described properties of the geophysical fields of salyuberogennogo nature contribute to the manifestation in people of extrasensory perception of the architectural space: the phenomenology of space provokes the phenomena of perception. The prospect of predictable living and experiencing a geospecific architectural space is described in the article “Hypothetical features of the architectural space for the elderly” [19], in which, as an imperative of predictability, the introduction of regulatory synthesis is proposed. And also, a report on the formation of a system-structural approach to the study of the geospecific architectural space has been published [20].

The mission entrusted to the architectural geonics of systematizing the extensive and versatile data on the effects of the Earth's geofields on humans will allow the non-utilitarian function of the architectural space to be developed and put into the hands of the architect the management of subtle human sensual structures.

The work done allows, in general terms, to identify the main directions of research on the role of geophysical fields in the architectural space.

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