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# ANCIENT AND MODERN PERIOD OF INFORMATION RESOURCES ON ARCHITECTURAL AND CONSTRUCTION SCIENCE OF AZERBAIJAN

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**Abstract.** Today, at the beginning of the 21st century, it is important to understand the numerous development challenges of our cities. It is necessary to identify their architectural, planning and construction features, to clarify the role and importance of modern architectural history in the development of our society. This is a particularly effective and rich period of 20th century architecture in Azerbaijan. It is a symbol of the rapid development of urban planning in the 20th century. The rapid growth of many cities, the formation of new settlements, public centers, industrial areas, transport systems and green areas are observed during this period. The article provides detailed information on documents and information resources on architecture and construction in Azerbaijan from ancient times to the present day. The works of architects, historians and hikers investigating these periods are described in chronological order. As is the case in all areas, the study of document and information flow related to architecture and construction is directly related to libraries. Thus, the library is one of the main and historically original information institutions that provide public access to socially important document information, one of the producers of information products and services.

**Keywords:** ancient period, modern period, information resources, architecture and construction.

## ДРЕВНИЙ И СОВРЕМЕННЫЙ ПЕРИОД ИНФОРМАЦИОННЫХ РЕСУРСОВ ПО АРХИТЕКТУРНО-СТРОИТЕЛЬНОЙ НАУКЕ АЗЕРБАЙДЖАНА

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**Аннотация.** Сегодня, в начале XXI века, важно понимать многочисленные проблемы развития наших городов. Необходимо выявить их архитектурные, планировочные и конструктивные особенности, уточнить роль и значение современной архитектурной истории в развитии нашего общества. Это особенно эффективный и богатый период архитектуры 20 века в Азербайджане. Это символ бурного развития городского планирования в 20 веке. В этот период наблюдается быстрый рост многих городов, образование новых поселений, общественных центров, промышленных зон, транспортных систем и зеленых зон. В статье представлена подробная информация о документах и информационных ресурсах об архитектуре и строительстве в Азербайджане с древних времен до наших дней. Работы архитекторов, историков и путешественников, исследующих эти периоды, описаны в хронологическом порядке. Как и во всех областях, изучение документооборота и информационных потоков так и архитектура и строительство, напрямую связано с библиотеками. Таким образом, библиотека является одним из основных и исторически оригинальных информационных учреждений, предоставляющих публичный доступ к социально значимой информации о документах, одним из производителей информационных продуктов и услуг.

**Ключевые слова:** древний период, современный период, информационные ресурсы, архитектура и строительство.

### Introduction

The territory of Azerbaijan is rich with architectural monuments. The diversity of natural-geographical and climatic conditions prompted Azerbaijani artisans to solve certain construction-architectural problems from ancient times.

The achievements in the architectural area are the national wealth for Azerbaijani people who is the owner of ancient history, rich material and spiritual culture. Ancient architectural specimens are highly valued in the international arena as rare pieces of world culture. It is no coincidence that many architectural examples of Azerbaijani people were included in the UNESCO World Heritage List. These include the Icheri Sheher Historical Architectural Complex, the Gobustan Historical and Artistic Reserve, including the Shirvanshahs Palace and the Maiden Tower. Also, recently Shaki Khan Palace has been included to this list in July of 2019.

The diversity of natural-geographical and climatic conditions prompted Azerbaijani artisans to solve certain construction-architectural problems from ancient times. From the history of architecture it is known that the first steps in this area go to the natural caves of primitive people. Examples of architectural specimens found in the foothills of the Great and Small Caucasus Mountains, Talish Mountains, Nakhchivan Autonomous Republic, Zangilan, Kalbajar, Gadabay, Khanlar (present Goygol), Shamakhi and other regions, especially Azikh Cave, found in Fuzuli District. [1, 157]

Stone chronicles, which are valuable examples of our

architectural history, include cities, bridges, monuments reflecting the spiritual riches of our people and forming brilliant pages in the history of world culture. Continuing the rich traditions of their predecessors, the Azerbaijani architects have made a worthwhile contribution to the development of world culture by providing unparalleled service to our national culture through new searches, discoveries and achievements.

It becomes clear when you looking at the stages of the development of native Azerbaijani architecture, that the architecture of both the ancient and medieval times, and the new era, were developed with the states (Atropatena, Manna, Median, Caucasian Albania, Shirvanshahs, Atabaylar, Garagoyunlu, Aggoyunlular, Safavids, etc.), their social and cultural-ideological orientation, thus embodied the atmosphere of concrete historical conditions. The magnificent monuments of that period - defensive installations, fascinating castles, mosques, churches, tombs, khanates are immortal architectural examples.

### Methods

Azerbaijan is a land of culture with very deep roots. The location of the country in the ancient civilizations region, on the border of Europe and Asia, where the ancient peoples in the area of migration flows here has given rise to a multifaceted, rich, colorful culture in the most distant periods of history. One of the most important parts of this culture is architecture. Ancient residents of Azerbaijan have traced their first primitive construction activity in caves and outdoor camps. Yet in the VI millennium, there were habitats of circular and rectangular houses. As the result of their

growth and development, the first cities began to emerge. In the middle of the first millennium BC, there were about 200 large settlements and cities in Azerbaijan. Many of them had defensive walls. The attacks of major neighbor states and the need to protect the Caucasus crossings have created the basis for the development of antique defense buildings, the creation of the magnificent fortification systems and the first city-castle.

Creation of ancient states - Manna, Atropatena and Caucasian Albania on the territory of Azerbaijan led to the rapid development of construction art and architecture. Unfortunately, very poor exploration of historical and architectural monuments in the territory of South Azerbaijan does not give a chance to restore the historical development path of this area. However, some examples known in scientific literature indicate a very high level of construction and architecture.

Archaeological excavations carried out to the fundamental research of the history of Azerbaijani architecture from the middle of the last century and planned ongoing today. Thus, dozens of ancient settlements and cities were discovered. Gabala, Saritepe, Xinisli and other archaeological monuments are especially distinguished with the volume and richness of the materials obtained.

The ruins of large public and religious buildings found in Gabala, the capital of Caucasian Albania, are an indication of the high level of architecture. The first archeological excavation is a large city with a magnificent palace complex that has been discovered by Garacemir's research.

The architecture of Caucasian Albania, one of the roots of medieval Azerbaijani architecture, is represented by defense, religious and civil architecture, which has reached its present state. Religious monuments have a special place among them. [2, 267]

Gobustan which is located in a mountainous-deserted area at the Caspian Sea coast, 60km from Baku, east of Azerbaijan, has kept very interesting and rich historical information.

The first researcher of Gobustan, archaeologist and ethnographer I.M.Jafarzadeh included 3500 rock paintings in 1935-1940, as well as other traces of ancient human activity [4]. More than 20 residences and shelters, over 40 burial-type burial sites and hundreds of new rock paintings were discovered and studied later.

Doctor of architectural sciences D.Akhundov, who founded the ancient architecture of Azerbaijan, believes that the stone found in Cingirdag is composed of residential houses consisting of circular plan houses constructed along one line.

The oldest hearth of human life in Azerbaijan was discovered in the Azikh cave located in the southern slopes of the Lesser Caucasus in Karabakh. This complex of 6 caves near Azikh village of Fuzuli region was discovered by the Azerbaijani archaeologist Mammadali Huseynov in 1960 in the paleontological camp [2, 22].

From the middle of the 20th century, archaeological expeditions have discovered the remains of many ancient settlements in Azerbaijan. Remains of human construction activities - arched fragments, arched arches, low walls of houses and buildings, ancient decor objects allow imagining how an ancient dwelling are formed and shaped.

The architectural features of ancient settlements of Azerbaijan were first studied by D. Akhundov [2, 38].

Azerbaijan's cyclopic (flat stone, masonry, hammering) facilities are of great interest. These installations are valuable sources of study of the building culture of the ancient population of Azerbaijan as Bronze and Early Iron Age monuments. These are primarily residential areas enclosed in the Lesser Caucasus or surrounded by large, solid walls of several hectares, or compact towers. Academician I.I. Meshshaninov, the first researcher of the cyclopic monuments of Azerbaijan, recorded a cyclopic castle in 1927 in the Dashkasan region. The study of ancient monuments of this kind is reflected in the work of "The Cyclopic Buildings

of Azerbaijan" by I.M. Jafarzadeh, where the information about 59 monuments are given (3). Later, cyclopic buildings were the object of research by a number of Azerbaijani architects. Up to now 139 such devices have been discovered. [5, 198]

In the second half of the III millennium BC, there were already large tribal associations in the South and North Azerbaijan territories. Historical changes have led to the development of defense architecture, requiring protection of residential areas.

The defense architecture of Azerbaijan has been studied by V.K. Kerimov. He conducted dozens of monuments' inspections, classified their designs and developed draft designs for their reconstruction. He has compiled a list of ancient defense structures of Azerbaijan [6, 104-123].

Extremely limited written sources make it difficult to study ancient cities and settlements. Therefore, the results of archaeological excavations, which provide important material evidence of the lives of the cities and settlements of the Caucasus Albania, are of particular importance.

Researchers have begun to pay special attention to the study of archaeological monuments in the late 19th and early 20th centuries. However, ancient material objects found in Azerbaijan in the 19th century were taken to museums in Tbilisi, Moscow, St. Petersburg and Paris.

Since 1958, to study the history of Azerbaijan, particularly the Caucasus Albania, extensive archaeological excavations have been conducted in Azerbaijan. Xinisli, Gabala and Torpakgala expeditions, which gained valuable information about the history and culture of Caucasian Albania, were organized.

Ancient authors - Strabon, Plutarch, Ptolemy, Dion Cassy and others have extensive information about Atropatena and Albania.

Numerous examples of monumental architecture preserved until our days reveal the high level of skill of Albanian architects. Religious buildings, which incorporate the best achievements of building activity, provide more complete and comprehensive information on medieval architecture [2, 32].

The work of Musa Kalankatly's "Albanian History" take a special place in studying the architecture and construction of the ancient period.

The high art, the diversity of the architectural forms of the bold compository thought and the harmony of the diversity of decorations in Azerbaijan's XII-XIII century architecture prove the consistent development and perfection.

The details of Arab historians and geographers about the Azerbaijani cities make it possible to say only some of the assumptions about the planning structure and architecture of those cities.

Informations that was given by Mugaddasi, Istakhry and Musa Kalankatly about The Juma Mosque, located at one of the tallest hills of Gabala, and the palace and markets near Juma Mosque in Gabala, and the location of the Christian temple in Barda are of great interest. [7, 8-9]

Civilian architecture which were saved to our days can only be characterized by minor buildings and written sources. Restoration and expansion of Azerbaijan's trade relations with East and West countries required the security of caravan roads, as noted by many Western European merchants (Baldurchi, Pegolotti et al.).

Travelers who have been in Azerbaijan but have not described caravanserais can hardly be found. H. Gazvini, Rashidaddin, I.Berezin, I.Lerx and others have valuable notes on the description of caravanserais and their significance [7, 206].

Although it is not perfect, it is possible to get a general idea of the architecture and the way of development of the palace architecture, based on historical information on archeological researches, giving some details about architecture and decor [8, 16].

In the 14th century, Rashidaddin, a prominent statesman, was responsible for the construction work, the selection and

recording of the necessary construction materials, and the definite contingent of architectural and construction workers (artisans, architects, idols, masks, etc.) to the construction site. A whole range of miniatures created during this period describe the construction process at one or another stage of the monumental building.

Nasuh Matrakchy's unique painting miniature (XVI century), which is an exceptional visual material for his character, contains great information about Tabriz, Sultaniyya, Hoy, Hamadan, Miyan and other medieval urban areas. Thanks to these and other miniatures, it is possible to restore everything that is typical of the Tabriz architectural school, which affirms its unique style with a large circle of influence in the process of the solution of the magnificent multilateral tasks, the army of numerous masterminds and their successors [9, 93].

Information about Azerbaijani architectural monuments in the nineteenth century was not accidentally transmitted one person to another, but was increasingly reflected in the articles and articles of the growing number of local researchers and visiting scholars, visitors, ambassadors and military servicemen. In studying existing monuments, and measuring works should be especially emphasized the services of artists, architects, as well as civilian and military representatives from Russia.

### Results

Under such conditions, important tasks have been set before the people working in the field of architecture and construction to determine the optimal scientific-theoretical and methodological aspects of optimization and management of the field.

As is the case in all areas, the study of document and information flow in architecture and construction is directly linked to libraries. Thus, the library is one of the main and historically original information institutions that provide public access to socially important document information, one of the producers of information products and services.

As a result of the formation of a fundamental system of higher and secondary specialized education in the field of construction, the information resources related to this area are also increasing.

The work on improvement and further enrichment of the existing legal framework and a set of normative and technical documents is underway.

It should be noted that some of the normative and technical documents developed in the former Soviet Union are still used in the territory of the country in accordance with relevant decisions of the Cabinet of Ministers of the Republic of Azerbaijan, which has objective and subjective reasons. At the same time, the phased development of national regulations for construction has already begun, and many have been implemented. Taken to account the complexity and versatility of the construction sector, the increasing number of regulatory documents used and the rapid development of the construction sector, there is a need for the formation of a new national system of construction regulations, the establishment of an institutional unit with numerous scientific and practical specialists in this field, the financial resources and some time [1, 77].

For a long time, the issues of bibliographic information support of architecture have been studied in other bibliographic compositions. However, in the last quarter of the 20th century there was a need to distinguish bibliography of architecture as an independent field of bibliographic sciences and this direction was formed.

Architectural bibliography is closely linked to the areas of science and practice. The documents available in this area can be distinguished by a number of features. The content and direction of development of scientific research on architecture also influences the content of documents in this field. This development is primarily related to the dynamics of the development of architectural science itself. The dynamics of architecture development are constantly changing and evolving. Sometimes over a period of time, rapid improvement

and development in a separate area is noticeable. Of course, the flow of documents in this area is also increasing.

Another characteristic feature of architecture is that the textbooks, vocabulary and encyclopedias have a very high proportion of document flow in this area. For example, scholars make extensive use of questionnaires in the field of restoration and reconstruction of monuments, technical passports of equipment in this area, various tables and schemes.

Another aspect that has recently been seen in the flow of architectural documents is the emergence of non-traditional electronic documents and an increase in the specific weight of document flow in this area. Currently, the literature on this issue is transmitted electronically in the form of texts written on CDs and multimedia.

Large organizations that have their own line of project work have played a major role in the development of design and construction of the country. Creation of documentary information resources in the field of architecture and construction of the republic became possible only thanks to the activities of these project institutions. Each of them has the latest libraries and provides its specialists with documentary information resources.

Architects-scientists who play an invaluable role in the development of Azerbaijani architecture Sadig Dadashov, Mikayil Huseynov, Abdulvahab Salamzadeh, Niyazi Rzayev, Anvar Gasimzade, Leonid Bretanitsky, Shamil Fatullayev, and also Jafar Giyasi, doctors of architecture Gulchohra Mammadova, Aybaniz Hasanova, Ramiz Abdulrahimov, Rayiha Amanzadeh, Nargiz Abdullayeva, Nariman Aliyev, Nizami Nagiyev, Vidadi Muradov, Afif Talibov who continue their researches and young architects apply to these researches in their practical activities [1, 44].

### Discussion

There is a great deal of literature on the problems of modern architecture development. Their authors made a significant contribution to the study of the dynamics of modern architecture in Azerbaijan during the 1920-2010s and the nature of its development.

In parallel with the extension of the experience of architecture and urban planning in Azerbaijan, systematic scientific research was also carried out. As a result, the country's architecture has been extensively studied so far. Discovering the valuable architectural heritage of the Azerbaijani people in large-scale works of S.A. Dadashov, M.A. Huseynov, L.S. Bretanitsky, A.V. Salamzade, G.M. Alizadeh, E.A. Gasimzade, the evolution of creative searches and features of architectural planning forms during this period.

In recent years, the activities of universities in the field of creation and use of bibliographic databases in Azerbaijan are of particular interest. Since 1999, the work has been done on the creation of electronic catalogs at the scientific libraries of Baku State University (BSU), Khazar University, Azerbaijan State Oil and Industry University and Western University.

Created for the first time in 1999 at the BSU Scientific Library, the Library Computerization Laboratory began to carry out comprehensive computerization of the library. In the same year, the laboratory started the implementation of Automated Library Information System (AKIS) "Library 1.0" based on systems created in the Russian Federation, and in 2000 certain modules of the system were put into operation. Later, a new version of the system, "Library 2.0", was launched.

Much work has been done in the National Library of Azerbaijan named after M.F. Akhundov in the field of creation of electronic bibliographic information resources reflecting the literature on architecture. This work was started in 1999 at the National Library and in 2000 the library was provided with an Internet hall. In 2001, an educational institution was established in the library, and in 2003, an automated management system was introduced. The software of the system is based on a special automated software package for libraries "VIRTUA", purchased by VTLS, USA. The system also has a special module for compiling bibliographic databases and electronic catalogs. Automation has begun

with the creation of an electronic catalog, the most important area of the library, and is now included in the bibliographic descriptions of national literature.

#### Conclusion

The analysis and forecasting of the processes gives us an idea that in the near future there will be further development of bibliographic databases on architecture, electronic information resources in the republic, and the public information needs in this area will be fully covered.

It should be noted that the issue of the formation of information resources on architecture is becoming more and more relevant in the modern world. As a logical consequence of this, the process of the formation of an architectural bibliography as an independent field of bibliographical research continues.

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