
Innovative features of restoration and research of traditional ceramic patterns of Ganja

In this scientific works for the first time have been researched the basic typical characteristics of traditional ceramic wares of Ganja. Also, on the basis of innovative arguments and technologies were investigated the main pottery patterns from the historic-ethnographical point of view.

Keywords: archaeological ceramology, clay wares, historic-ethnographical research, innovative technologies and arguments, Ganja, Azerbaijan.

One of the areas of initially appeared human civilization was an integral part of Azerbaijan, the historical land of the city Ganja. Scientific and archaeological researches have proved that Ganja was cradle of science and culture not only of Azerbaijan, but also of the whole East. The majority of historical monuments, that are demonstrate the 4000 thousand year history of Ganja, which is the national wealth of our people, today gain unique place in the expositions of world's museums. In state and private museums of Metropolis, Munich, Berlin, Hamburg, Louvre, Paris, Moscow, St. Petersburg and other cities rare and valuable exhibits, that concern to the history of ancient Ganja are preserved.

Ganja city that located on an altitude of 400-450 meters above sea level is situated on the west of Azerbaijan, 375-kms to the west from the capital city Baku, on Ganja-Kazakh plain, that located in the Kura - Araz lowland, at the foot of the Lesser Caucasus on the north-east. Most of the natural and geographical conditions, plenty water of rivers, fertile land, rich ore deposit, fuel, wood materials used for construction and craftsmanship, colored plants for getting color and natural caves

allowed the first people to live in this area in the Late Stone Age (Кулиева, Гасанов, 2012, с. 37). Ganja, that has changed its location at least 4 times since its establishment, is located in a favorable position from the strategic point of view. That why it always has been the center of attention of foreigners. Ganja, that was the victim of a terrible earthquake many times, also was the subject of attacks of Mongols, Kharezmshahs, Georgians, Arabs, Russians and other invaders. Ganja has turned to the arena of war damage of different countries of the world. But in spite of it didn't shake and using the genetic power revived and developed and rose to the level of great cities. Protecting the status of capital city Ganja, in the various stages of the history, had an important role in the preservation of the ancient statehood traditions of Azerbaijan. At the end of the VII century Ganja was the provincial city of Arabs, in the X century the capital of Arran, in the XI century Seljuk's, in the XII–XIII centuries was the residences of Atabek's empire. During this period Ganja had renaissance time of its development, science, culture, trade, crafts reached the highest peak. As a result of scientific researches by the well-known arabist and scientist

on Nizami's work Bertels have been proved, that during the terrible earthquake in Ganja in 1139, 3 thousand people died. This fact is reflecting the city's power and greatness again. For comparison, it is also appropriate to note that, in the middle of the XIII century, in the great European city in Paris, lived nearly 100 thousand and in London nearly 40-50 thousands people (Нәсәнов, 2013а, s. 115-119).

During 2011–2013 years in the territory of the modern and also ancient Ganja city we researched the basic traditional ceramic wares of Ganja. On the basis of innovative facts and arguments we can note:

I. The formation of pottery on the territory of ancient Ganja is concern to the stages of ancient history. Basis on research works carried out by the various persons in XIX century and experts-archeologists at the beginning of XX century in old ruins of the city and surrounding areas there were found different samples of pottery.

First of all, there have been discovered, that initial ceramic production in Ganja and its surrounding regions are belong to the VIII–VII millennium BC. From the history point of view, these ancient clay vessels, belonging to the Neolithic stage, are differing from the pottery samples of the neighboring ethnic in a number characteristic. These differences are seen in preparing technology, also in the area of external surface decoration (Guliyeva, Hasanov, 2013, p. 282-285).

From the construction point of view, samples of pottery, that concern to Antique period, also to the period of Hellenism in Ganja, differed in various forms:

1. Pictorial vases
2. Ceramic figures
3. Connected dishes (Исмаилов, 1991).

II. Also, we have to note about the basic facts on investigation of history of research of pottery craftsmanship in Ganja by scientists. Ganja – an ancient center of urban culture with more than 4000 years history, that situated on the old Great Silk way, is rich with many historical and material-cultural monuments, which have their typical, unique trade and architectural characteristics. As a result of archaeological excavations and

ethnographical researches in Ganja during various historical periods have been found different material-cultural monuments. Therefore, Ganja and its surrounding areas are considered as one of the richest territories of Azerbaijan from the historical-ethnographical and archaeological point of view. First scientist, who has given information about the rich epigraphic, ethnographic, archaeological, numismatic material-cultural patterns, was French researchers Dubua de Monpere. In 1834 on the way to Tiflis (Tbilisi) he came to Yelenendorf (now – Goygol), and found different black-colored ceramic plates and bronze patterns (objects), which showed, that an ancient city culture formed here. Also, many archaeological wares and material patterns, that have found by Zare, Morgan, Virkhov in that period, are reserved in Moscow, Petersburg, Dresden and in other European museums. V. Belk, who worked in Dashkesen copper minds, found here more than 300 monuments, which proved the 3000 yearly city culture of ancient Ganja. Main parts of these items are reserved in Hamburg and Munich museums. E. Resler, who was the teacher in Ganja (Yelizavetpol) province in 1892–1903 years, on the basis of his researches around of Ganjachai (Ganja river) has found many materials, connected with the ancient history and culture of this city. Some parts of his material patterns are now reserved in Moscow and Saint-Petersburg museums. In 1896 A.Ivanovsky with the request of Moscow Archaeological Society has been sent to the province of Yelizavetpol for archaeological excavations. Here he has found the old city cemetery with 72 stone boxes graves and sent those materials to Moscow. Now these materials are kept in the Moscow History Museum (Гасанов, 2013, с. 155).

In 1903–1914 years B.Rozendorf, who was working pharmacists in Helenendorph carried out scientific-researches throughout in the territory of Ganjachai, discovered extremely valuable historical materials in Ganjachai valley Helenendorph and Chovdar villages, also graves of the ancient stone boxes, which reflected 3000 years old urban culture. Information about his researches was published in St. Petersburg in 1906, on «*Reports of the Imperial Archaeological Commission*». Mining engineer B. Shults, who worked in the region of Ganjachai

in 1898–1903, an officer in the military service in Yelizavetpol in 1905 V. A. Skinder, mining engineer F. Lass in 1908, E. P. Paritsenmayer in 1910, and many foreign researchers found in area Ganjachai the existence of extremely valuable historical materials. Some examples of them are kept in the museum of Berlin. Yakov Hummel, who had German nationality and worked in Helenendorph (Goygol) in the secondary school biology teacher with the help of the student circle of the school during the archaeological researches on the right and left banks of Ganjachai has found valuable materials, that concern to the Bronze and Iron age. The value of found materials was so great, that here has been created in Regional Museum of Helenendorph in 1927.

As a result of his archaeological research, has revealed, that a great civilization existed in Ganja in the initial stages of the primary community structure. In 1940 he published «*Archaeological Essays*». The work is carried out within the resources dedicated to the results of Ganjachai researches. In 1961, in connection with the closure of regional museum of Khanlar (Goygol), all the exhibits of the museum were given to Ganja State Historical Museum named Nizami. We can say that today, more than 4000 years old 15 thousand exhibits, found in the region of Ganjachai and that concern to the different historical periods were obtained by Y. Hummel.

The cradle of ancient science and culture Ganja is famous in the world with its unusual historical monuments because of development art and architecture traditions.

Already in the X century, the construction and Renaissance works in Ganja, turned this city into the one of the largest architecture center of Azerbaijan. From that period till now in Ganja have been developing more than 30 craft areas, such as separate samples of selected pottery items, carpet weaving, jewelry, saddle-making, copper, were built a lot of tombs, which has no analogue, numerous mosques, bridges, castles and towers, that prove, that local architectural traditions have a rich history.

III. Ceramic trade was one of the main branches of craftsmanship in Ganja/ Pottery dishes, that concern to the first stages of Middle Ages of Ganja,

are differ from the ceramic samples of Antique period in two features:

- 1) On shape.
- 2) For preparing techniques.

Potter's products of the Early Middle Ages of Ganja and its regions for their technical characteristic are divided into 2 major groups:

- a) Glazed ceramic products.
- b) Unglazed ceramic products.

The main types of samples of ancient clay toys in Ganja regions are the follows:

1. Rattle.
2. Zoomorphic figures.
3. Toy dishes (Hasanov, 2013d, p. 82).

IV. On the basis of innovative technologies during 2012–2013 years have been defined new arguments about development of pottery craft of with such craftsmanship branches as glass production and weaving, dying. The majority of archaeologists agreed with the idea, that the homeland of glass production is ancient Egypt, but the famous English archaeologist, Egyptologist Petri Flinders thought, that it could be Mesopotamia or the Caucasus. Taking into account that cobalt, used in glass coloring wasn't in Egypt, the scientists thought that, it could be in the Caucasus, also in Dashkesan (Саламзаде, Авалов, Салаев, 1979).

Samples of glass decorations we met in the patterns of Ganjachai, Mingechevir, Xachbulaq and others. In these areas, the first centuries BC were found in samples of the glass plate. The majority of containers and the analysis based on graphical elements of the Roman scholars came to the opinion that the samples of the same scale as the Roman Empire through trade. There are more than 2000 beads in complex materials. Colored beads have prepared of different types products. Mostly distinguish beads that prepared from blue green and grey paste. A group of beads made of bone and antimony. A part of the hanging beads were prepared from cockleshells «*Nassagibbosula*» and «*Suraeva Moneta*». According to expert's thoughts, such kind of cockleshell that widely spared in the Indian and Pacific Ocean, also the Eastern Mediterranean region were put to Azerbaijan with economic relations. Among the materials of Borsunlu Complex are differing with number of beats in majority and form (Həsənov, 2013a).

In III–V centuries, the local craftsmen themselves also became to produce better-designed containers. Among the local clay and glass utensils that found in and around Ganja there were big similarity in the form and also in the decoration. All the glass dishes found in and around Ganja are similar with the local clays on decoration of that period. Glass dishes were containing of iron, cobalt, magnesium and other elements, that were specific elements for Ganja and its surroundings. The development history of this sphere of craftsmanship can be determined only through archaeological research. In general, information about the development of this sphere of was found in 1959–1960 years, glass products in and around Ganja was obtained only at the end of the twentieth century. Results of archaeological excavations in the territory of Azerbaijan and research show that in the preparation of glass utensils were two technical methods: casting method and the method of blowing. The first of these methods is more ancient, but in the Early Middle Ages and Middle Ages were used both of them (Флоревский, 1836).

Produced glass alloys were transparent colored. By the addition of dusts of various metals in glass alloys people got colored glasses. We can see also to get her with different tinted green glasses also parts of blue, black and pink colored glass dish in sections of IX–X century in Shatal and Ganja. In IX–X centuries appeared dishes that had handle and spout. Glass products, obtained in Ganja and Shatal in the IX–X centuries, find their similarities in dwelling places of the Middle Ages in Barda, Beylagan, Mingachevir, also in the obtained materials of the neighboring republics of the same period. Among decorations of that period yellow, white and red beads of round and plain form are met mostly. At the beginning of X–XIII centuries development of production of glass in and around Ganja characterized by improvement from the technology point of view (Алиева, 1973, с. 24).

Archaeological researches show, that outside of the cities in the VIII–IX centuries, also big settlements were established. This is often due to density in cities. As in many places, production of wool, cotton and silk in and around Ganja made necessary emergence and development of weaving.

Becoming weaving one of the ancient spheres of crafts in and around Ganja was connected with the rich raw material base here. Presence of useful plant species for textile, including cotton, high level development of wool area of agriculture– sheep and goat breeding, camel breeding, horse breeding, presence of cotton cropping in Middle Ages and finally, regular expansion of silkworm breeding in this area created a foundation for growth of weaving here. In addition, during the research work in Mingachevir, Kazakh, Shamakhi, Sargah, Pirsaat river Basin monuments there have been found whole and parts of weaving loom and different sizes of clay and bone samples that consist to weaving (Мәммədov, 1988, s. 55).

Moisey Kalankatly notes, that, along the banks of the Kura River... there are a large amount of silk (mulberry tree)... and cotton. Arab author who lived in the X century Al-Istaxri gives big information about, that in Barda in ownerless gardens were cultivated mulberry leaves and silkworm, then mulberry silk sent to Farsistan and Khusistan for sale. His contemporary and fellow townsman Ibn Hovqal gives information about preparation of silk clothing from them. Also, Al-Istaxri provides detailed information about cutting of textile in Derbend. The art of Textile materials, that concern to weaving craft, consists of spindle heads and needles. The remnants of dying from the Shamkir, Ganja, Shatal and Khunan prove development of dying here. Plant remains have been widely used in dying.

The End of Middle Ages and New Period. In this historical period in Ganja and its regions ceramic has following kinds:

1. Building ceramic materials;
2. Unglazed ceramic products;
3. Glazed ceramic products (Исмаилов, 1991).

For Middle Ages and New period among pottery products of Ganja ceramic samples as clay construction materials have great importance. First of all, glazed bricks, that used in construction of most buildings in the XVII–XVIII centuries, and also in great monuments, and the main construction material– air-dried bricks, attracted attention. During this period, using of baked brick has been

widened and their standard sizes were as follows:
25 x 24 x 5 cm;
25 x 25 x 5 cm.

In addition to the found samples in residential areas as a result of archaeological excavations,

also were found a lot of brick spoilages. According to such kind mass finding of brick spoilages, we can make the conclusion, that the bricks used in construction of buildings in Ganja, were wares of local production (Hasanov, 2013b, p. 26).

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- Алиева, А. С. 1973. *Ворсовые ковры Азербайджана XIX – нач. XX веков*. Баку: Элм.
- Гасанов, Э. Л. 2010.* Историко-этнографическая характеристика художественной керамики древней Гянджи (IV век до нашей эры – I век нашей эры). *Интеллект*, 3, с. 72-75.
- Гасанов, Э. Л. 2013. Инновативный подход к исследованию исторического развития основных ремесленных отраслей Гянджи. *Успехи современного естествознания*, 7, с. 155-156.
- Исмаилов, М. 1991. Страницы истории Гянджи. *Гянджа-Низами*. Баку: Элм, с. 17-18.
- Кулиева, Н. М., Гасанов, Э. Л. 2012. О развитии некоторых традиционных ремесленных отраслей Гянджи на рубеже XIX–XX веков. *I Международная научно-практическая конференция «История и археология в современном мире»*. Москва: Спутник +, с. 35-38.
- Наджафова, Н. 1964.* *Художественная керамика Азербайджана XII–XV вв*. Баку: Издательство АН Азербайджанской ССР.
- Саламзаде, А, Авалов, З., Салаев, Р. 1979. *Проблемы сохранения и реконструкции исторических городов Азербайджана*. Баку: Элм.
- Флоревский, Н. 1836. *Елизаветпольский округ. Обзорение Российских владений за Кавказом*. Санкт-Петербург, II, с. 392-393.
- Guliyeva, N. M., Hasanov, E. L. 2013. Investigation of basic decorative-applied arts of Ganja on the basis of some innovative arguments and technologies / *Science and Society: Proceedings of the 3rd International scientific-practical conference*. London: SCIEURO \ Berforts Information Press Ltd, Stevenage, London (Great Britain), 1, pp. 281-291.
- Həsənov, E. L. 2010.* Gəncə duluzçuluq sənətinin son tunc və erkən dəmir dövrü nümunələri etnoqrafik mənbə kimi. *Tarix və onun problemləri (Nəzəri, elmi, metodik jurnal)*, 4, s. 196-199.
- Həsənov, E. L. 2012a. *Azərbaycan ziyarətqahları: Gəncə İmamzadə türbəsi (tarixi-etnoqrafik tədqiqat)*. Bakı: Elm və təhsil nəşriyyatı.
- Həsənov, E. L. 2012b.* Die Gändschänischen teppiche von XIX – XX Jahrhundert als geschichtliche – ethnographische quelle / *Die Europäische Wissenschaft und die Technologien (European Science and Technology): 2nd International Scientific Conference*. Bildungszentrum Rdk e. V. – Wiesbaden, III, pp. 26-27.
- Həsənov, E. L. 2013a.* Məhsəti Gəncəvi dövründə sənətkarlıq (tarixi-etnoqrafik tədqiqat) / *Craftsmanship during the period of Mahsati Ganjavi (historic-ethnographical research)*. Gəncə: Elm nəşriyyatı.
- Hasanov, E. L. 2013b. About fundamental studies on local cultural traditions of Ganja. *European journal of Natural History*, 3, pp. 65-68.
- Hasanov, E. L. 2013c.* Applied innovative researches on local craft and national traditions of Ganja / *Applied Sciences and technologies in the United States and Europe: common challenges and scientific findings: Proceedings of the 1st International scientific conference*. Cibunet Publishing. New York, 1, pp. 27-28.
- Hasanov, E. L. 2013d. Innovative approach to teaching and research of some traditional craft branches of Ganja of the end of XIX century. *International journal of experimental education*, 2, pp. 81-83.
- Məmmədov, R. 1988. XIII–XIV əsrlərdə Azərbaycan şəhərlərinin iqtisadi vəziyyəti haqqında (ticarət və ticarət yolları). *Azərbaycan tarixinə dair materiallar*, X.

* On the basis of these positions, the author summarizes some conclusions

Ельнур Лятіф оглу Гасанов

доктор філософії з історії, головний спеціаліст Гянджинського відділення
НАН Азербайджану, докторант Інституту краєзнавства Гянджинського відділення НАН Азербайджану.
ORCID ID 0000-0001-6358-593X. el-hasanov@mail.ru (Гянджа, Азербайджан)

Інноваційні особливості реставрації і дослідження традиційних глиняних виробів Гянджі

Уперше досліджено основні характерні традиційні глиняні вироби Гянджі (Азербайджан). Крім того, на основі інноваційних аргументів і технологій вивчено основні зразки кераміки з історико-етнографічного й археологічного поглядів.

Звернено особливу увагу на вивчення джерелознавчих особливостей деяких традиційних глиняних виробів в дослідженні міської культури в Гянджі впродовж століть. Місцева кераміка, що зберігається в музеях міста Гянджа, досліджена як важливе етнографічне й археологічне джерело. Окремі характерні особливості реставрації виробів Гянджі також було вивчено на основі локальних матеріалів. Крім цього, приділено увагу сучасному стану консервації окремих типів кераміки місцевого значення в таких великих музеях міста Гянджі, як Історико-краєзнавчий музей імені Нізамі Гянджеві, Етнографічно-археологічний музей «Стародавні фортечні ворота Гянджі», Музей імені Мірзи Шафі Вазеха, Музей імені першої поетеси Мехсети Гянджеві та ін.

Ключові слова: археологічна керамологія, глиняні вироби, історико-етнографічне дослідження, інноваційні технології й аргументи, Гянджа, Азербайджан.

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