

The Issue of Zoomorphic Ornaments in the History of Studies of Gunch (Stucco) Carving in 9th to 12th Century Central Asia

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Abstract—The article examines the issue of what is termed "hidden" zoomorphic images in the architectural ornament of early Islamic Central Asia. For many years, zoomorphic motifs were considered intentionally concealed in floral ornament in order to circumvent the Islamic prohibition of depicting living creatures. The author examines carved stucco (gunch) as a very informative and representative source of early Islamic architectural ornament. The study uses the comparative historic method to describe and classify the "hidden" zoomorphisms and cites analogues; also analysed are mediaeval theologians' opinions on the content of the canonic prohibition. The author makes the following conclusions: although ornamentation grew in significance in the 9th to 12th century, the tradition of quite realistic depiction of animals continued and retained a significance of its own. "Encrypted" zoomorphisms can rather be considered ultimately stylized floral motifs. The author suggests tracing their development paths from realistic to most abstract floral forms.

Keywords—*zoomorphic ornament; early Islamic architectural ornament; Central Asian architecture; early Islamic art; Tirmidh; Hulbuk; Afrasiab*

I. INTRODUCTION

The belief that the various ornamental forms of early Islamic art of Central Asia are actually based on disguised zoomorphic motifs was shared by most Soviet historians of art. Until now this idea has many followers as regards both decorative applied art and architectural ornament. They believe that the texture of 9th to 12th century floral ornament carved in wood or gunch (stucco) hides barely discernible images of various animals: pairs of wings in the form of S-shaped swirls, pairs of fishes, ram's horns, etc. The images were supposed to consist of floral ornamental motifs that needed deciphering. The prevailing opinion was that mediaeval art of the Islamic countries replaced realistic zoomorphic images with their ornamentally encoded analogues. My study will address this historic and theoretical issue.

My purpose was to identify the so-called "hidden zoomorphisms", most popular in research literature (as exemplified by six surviving monuments). I used the

comparative historic and descriptive methods to do this. My second purpose was to document and describe the express, not hidden, zoomorphic ornaments in the two surviving monuments (collection of information). The study covered the time span of the 9th to 12th century and included monuments of art in the territory of Central Asia (Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan). Its underlying material was carved gunch (stucco) that is the most informative and representative means of architectural décor in the early Islamic period and dates back to the Sassanid art traditions [1].

II. BACKGROUND

This historic and theoretical issue first arose as the Soviet archaeologists discovered the wooden columns in the upper reaches of the Zeravshan (Zarafshan)¹, which was followed by a number of publications. Yet the most profound analysis of the hidden zoomorphisms in early Islamic art (as exemplified by Zeravshan and Chorku woodcarving) is contained in works by V.L. Voronina. The ideas of the transformation of fauna forms into floral ornamental motifs and the saturation of the carved columns with stylised and veiled images of pre-Islamic ideology are prominent in that researcher's papers of the 1950s to 1970s. This phenomenon was never called into question but had numerous supporters who included, as regards carved gunch, L.R. Rempel and B.T. Tuyakbayeva whose main works on this topic were written in the 1960s and 1970s; and, as applicable to carved wood, V.M. Filimonov and M. Ruziyev in the 1970s (to list just a few researchers who dedicated the greatest number of publications to this issue — to be reviewed below). The opinion was challenged by S.G. Khmel'nitsky who made a number of publications on the topic in the 2000s (dedicated mainly to carved wood) [2], [3], [4].

Review of those works shows that the hidden zoomorphisms usually boil down to the following motifs:

¹ M.S. Andreyev discovered the Obburdon column in 1925; Ye.M. Peshchereva discovered the Urmetan column in the same year; A.Yu. Yakubovskiy's expedition discovered the columns of Rarz and Fatmev in 1946.

ram's horns, the bird and its derivatives (beak, feathers, wings); pairs of fishes, and feline predators. Let us examine each one individually and try to name each one's prototype from floral ornamentation.

The most comprehensive study of the Central Asian architectural ornament was made by the art historian L.I. Rempel. He explained the issue of hidden zoomorphism by the fact that the expression of token images through linear arrangement (geometry) and floral ornament was generally characteristic of the early Islamic art of Central Asia. These are also helpful when figurative depiction is precluded by a religions ban [5]. This approach permits the researcher to give a number of interpretations that we consider disputable. For example, in the spiral-shaped fragment of an impost capital of the domed hall, unearthed on the Afrasiab city site (gunch dating from the turn or second half of the 10th century) he sees ram's horns ("Fig. 1") [6]. However, firstly, not only the fragments of gunch found in the domed hall but all the gunch of Afrasiab includes no encrypted analogues. Secondly, the researcher's only argument in favour of the "ram's horns" is that the capital stands close to the carved wood of Zarafshan and repeats some of its zoomorphic motifs [6]. In discussing the ornament mix in the total mass of Afrasiab carved gunch, the researcher keeps repeating that the zoomorphic images related to pre-Islamic cults and stylised nearly beyond recognition are in this respect similar to the carved wood of the upper reaches of the Zeravshan. Those statements, first made by V.L. Voronina and applied by L.I. Rempel to the gunch material, were successfully refuted by S.G. Khmel'nitsky in the past two decades. Thus, he traces the appearance of the above-mentioned Zeravshan capital to a transformed Corinthian capital that has gone far away from its classical prototype, with its classical framework filled to a lesser extent with floral motifs but largely with non-figurative plastics whose intricate curved combinations are wrongly interpreted as zoomorphisms.



Fig. 1. An impost capital of the domed hall, unearthed on the Afrasiab city site, 9-10 centuries, Samarkand. "Afrosiyob" Samarqand tarixi muzeyi. After Arkharov I.A and Rempel L.I.

Let us turn to L.I. Rempel's studies again. He notes such zoomorphisms in a whole number of monuments: e.g. the motif of paired wings in the S-shaped swirls on the southern

portal of the 12th century Magoki-Attori mosque and in the 10th to 12th century Al-Hakim al-Tirmidhi mausoleum² ("Fig. 2"). He explains that in Bukhara and Tirmidh this motif had travelled a long way of development and schematisation from the emblem of the Sassanid royal house (image of bird wings and the moon in a circle of pearls) to completely lose its initial meaning in the stucco of Samarra. After tracing its paths of development in the art of Iran and Central Asia from realistic portrayal to a floral swirl, the author himself admits it to have lost its zoomorphic meaning [7]. If we continue this discourse we can say that this motif in the Magoki-Attori mosque and the Al-Hakim al-Tirmidhi mausoleum is nothing but a schematised palmette. It might originate from a pair of wings, but the gunch carvers could neither know this nor intentionally encode animal images, especially as they had a free hand to create figurative images (which will be discussed in more detail in the next section of this article).

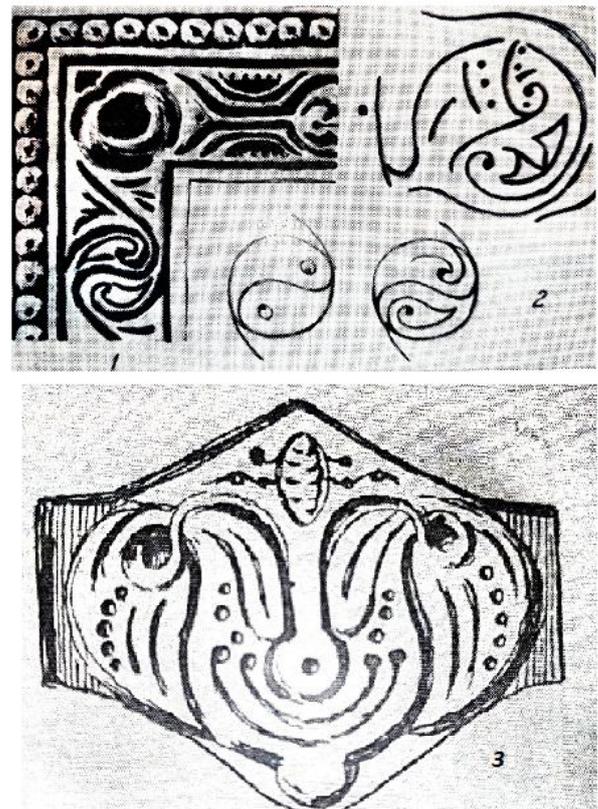


Fig. 2. S-shaped swirls. 1) - Rabati Malik caravanserai, 11 century, Uzbekistan; 2) -Al-Hakim al-Tirmidhi mausoleum, 10-12 centuries, Tirmidh; 3) - Magoki-Attori mosque, 12 century, Bukhara. All after Rempel L.I.

For a fuller picture we shall cite one more example. L.I. Rempel pays attention to the portal of the 11th Rabati Malik caravanserai (of whose décor we can judge by photos only,

² The carved gunch dates from 1081-1095, but in the 14th century new décor was applied to replace the previous one, and in the 1950s the monument was restored; these circumstances should be taken into account in interpreting the ornament.

for the monument has been damaged). It had a broad band of eight-pointed stars with gunch rosettes inside, on the background of flat gunch carving with two revolving figures, with a comma-shaped eyelet, inscribed in a circle ("Fig. 2"). Researchers interpret them as two fishes or two wings that embody some concepts of the dualistic basis of nature similarly to the Chinese ornament. There are no data to substantiate this hypothesis, so for now this motif can only be interpreted as a peculiar fruit similar to a pepper pod – found in more elaborate form in the tympana of the arches housing paired lions in the Tirmidh rulers' palace (carved gunch dating from the second half of the 12th century). The fact that the "pepper pod" (questionable) is depicted among other floral motifs next to quite explicit images of lions indicates that it is really a floral element (this monument will be discussed in more detail below).

Let us turn to papers written by the next generation of researchers. Thus, architect B.T. Tuyakbayeva discovers a whole set of images in the décor of the 10th century Shir-Kabir mihrab. In the frieze riband ornament of the middle arch niche she discerns images of winged felids, while these are actually three-tiered flower trees with symmetrical stalks

on the sides and presumably a lotus in the middle ("Fig. 3") [8]. This is a fairly common scheme of the Sassanid three-tiered tree of life that passed, in a somewhat modified form, into the Omayyad art (in the central motif of the Dome of the Rock friezes, Al-Aqsa consoles ("Fig. 3"), the triangles and rosettes of Mshatta, and in the late 8th century Egyptian carved teakwood panels (from the Metropolitan Museum ("Fig. 3") [9] and into the Abbasid art (8th century Building IV doorway decorations at Hira) [10]. Secondly, the researcher supposes that the pair of eyelets in the big spiral-shaped arch apex compositions is nothing but stylised heads of birds of prey with long beaks ("Fig. 3"). But they are actually a variety of stalks, with stylised flowers, curled into major and minor spirals, with stylised flowers. A similar circle theme is developed in the earlier mihrab of the 10th-century Friday Mosque of Nayin, Iran, to which the Shir Kabir monument is stylistically close in terms of its décor programme ("Fig. 3"). Since the Sassanid times, the principle of using a plant stalk to merge several circles into one became common in Iran, e.g. as presented in the well-known wooden panel of the second half of the 8th century from Takrit (we'd like to consider this a transformation of the Sassanid locket type).

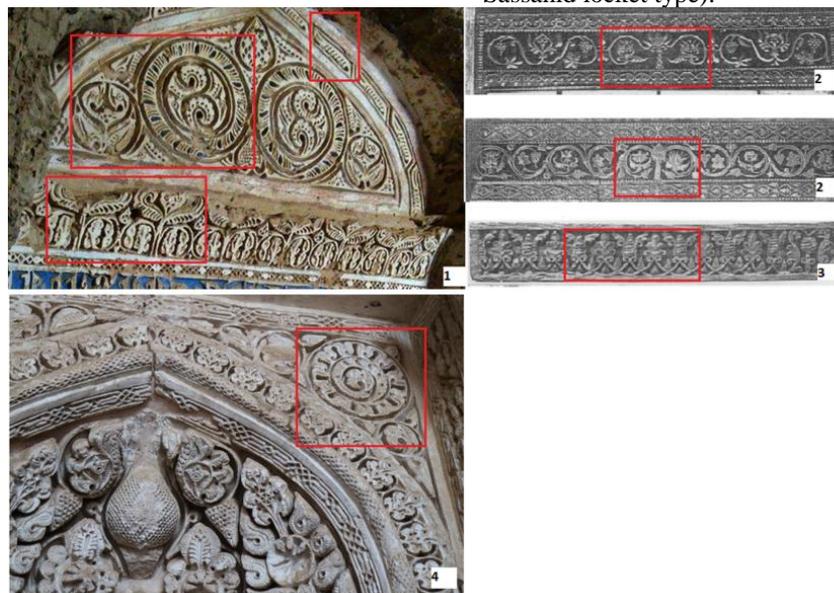


Fig. 3. 1) A tree of life of the frieze, floral ornament of the arch niche and a stem in Shir-Kabir mihrab, 9-10 centuries, Turkmenistan, an author's photo; 2) Al-Aqsa consoles, 961-962, Jerusalem; 3) Egyptian carved teakwood panels, the Metropolitan Museum, 8 century – all after Dimand M.S.; 4) Friday Mosque of Nayin, 960, Iran. An author's photo.

Thirdly, B.T. Tuyakbayeva finds bird feathers in the ornament of the band setting off the arch apex ("Fig. 3") [8]. This is actually an undulating stalk interpreted as extended acanthus, and a carved decoration on the outer facet — motifs from the above-mentioned mihrab of Nayin. Such conclusions are refuted not only by the current body of knowledge about the early Islamic ornament in general but also by general considerations: Islam ruled out all figurative images at places of sacral significance (see more below) [11].

A general consideration on this historic and theoretical issue is expressed by art historian N.A. Ruziyev. In his opinion, the zoomorphic ornament features fragmented

images, interprets a number of important details typical of living creatures, and is laconic; figurative images are dissolved [12]. To illustrate his opinion, the researcher cites the carved gunch inside the 10th-century middle mausoleum at Uzgen: a predator's image apparently placed on the frieze, with fishes standing for its brows and eyes, and bird heads, for its mouth, while they are actually lancet-like figures and so-called "Persian pickles" — widespread and long-standing elements of the Central Asian ornament ("Fig. 4"). The same ornament, with some modifications, is repeated in the frieze around the mihrab in the Hulbuk palatial complex (Hall 8), wrongly interpreted as fishes by E.G. Gulyamova [13]. We

reiterate that the masters cannot have placed an express zoomorphic image in the décor of a building used for religious worship, which is strictly prohibited by Islam (to be discussed in the next section of this paper).

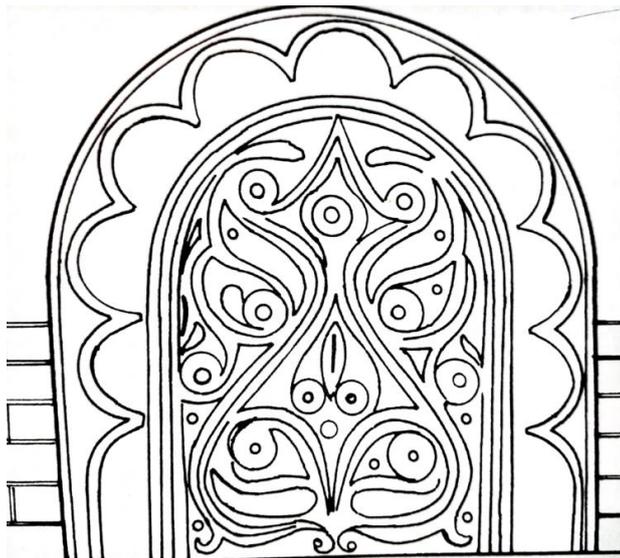


Fig. 4. The carved gunch of the frieze inside the middle mausoleum at Uzgen, 10 century, Kirgizstan. After Bachinski N.

III. A NEW LOOK

The acceptance of such reasoning is prevented by the whole body of contemporary knowledge, including both analysis of carved gunch and the general considerations, namely 5th to 8th century Central Asian art excluded predecessors or successors of such disguised animals [2]. This is indirectly confirmed by the only specimen of carved gunch that represents pre-Islamic art of Central Asia: the Bukhar-Khudats' palace at Varakhsha whose gunch décor dates from between the 720s and 770s and contains realistic images of human figures, animals, fishes, and plants in high relief, rather than floral-zoomorphic hybrids. They were destroyed as the Arabs came, for the strict monotheism of Islam dismissed such art as idolatry. Here we should specify the extent of the prohibition (although much discussed in research literature). Despite the express canonical ban, numerous images of living creatures can be found in Islamic countries' art [14], [15], [16], [17]. Yet they are secondary, not used for worship purposes, and subordinate to ornament. They can be termed as *mumtahn*, i.e. something meaningless and not paid much attention. Thus, household utensils with images of images are not outlawed canonically. As the maximum, they may be considered "undesirable" (*makrooh*), when images on household objects distract attention during prayer. One hadith relating to this prohibition, explained by Muslim theologians, is remarkable: "The worst Doomsday torment will be suffered by those who likened themselves to God in His ability to create." [14], [18]. Proceeding from this hadith and a number of others of similar meaning, some Islamic theologians concluded that figurative images were possible if used as something secondary and unobtrusive (i.e. for household rather than

religious purposes) and "casting no shadow" (probably to exclude sculpture and high relief, like in damaged Varakhsha). Imam al-Nawawi, a respected 13th century theologian, put it as follows: "The majority (*jumhur*) of the Prophet's learned associates and first generation theologians (*tabi'un*) were of this opinion. Such scholars as al-Sawri, Malik, Abu Hanifa and al-Shafi'i, agreed with this. And some specified that it was not even important whether an image cast a shadow or not. What was important was that the images were not regarded as something sacred, worshipped or exalted." [14]. So figurativeness was not discarded altogether. Already in Omayyad art, in addition to non-figurative mosaics, there appear murals with images of humans and animals in the reception halls and baths of Qusayr Amra (early 8th century) [19], stucco reliefs of male figures at the Khirbat al-Mafjar palace (2nd quarter of the 8th century) [20], and recently discovered stucco panels of a horseman, dancing girl and a man's figure with a sword at the Qasr al-Hayr al-Sharqi castle (Building E, 1st half of the of the 8th century) [21]. That is, images were quite overtly present at places of entertainment, festivities or sybaritic luxury. In books they first appear where strictly necessary (works in astronomy, botany, and collections of fables like *Kalila and Demna*). Figurativeness became acceptable as part of ornament (the latter came to include animals first, and then figures of hunters, feasters, musicians, and singers). Though ornamentally enriched, most such images are easy to recognise and need no deciphering (the carved stone frieze at the Mshatta palace castle and human figures on ceramics, especially Fatimid Egyptian and Persian, became part of the ornamental language). Utilitarian domestic use was safe in terms of the religious canons. The Islamic countries' art was generally full of human and animal images. Their society was thus undergoing a division between the spiritual and the secular (similarly to the concurrent division between the spiritual leader, the caliph, and the sultan as the man of power). So the Central Asian gunch carvers had no reason to disguise images of living creatures, nor did the stucco carvers at the Samarra palace (camels) or at Khirbat al-Mafjar or Qasr al-Hayr al-Sharqi (anthropomorphic images) have any.

Some examples of carved gunch can be cited here. One is the décor of the palatial complex in Hulbuk (capital of the Huttal mediaeval region in southern Tajikistan) studied by Soviet archaeologists E.G. Gulyamova, Ye.A. Davidovich and B.A. Litvinsky. It is located near, and existed at about the same time in the 9th–11th centuries as the wooden fragments of the upper reaches of the Zeravshan and Chorku, whence the idea of encrypted zoomorphism spread far and wide, courtesy of V.L. Voronina. Many rooms of the palace were decorated with carved gunch of high artistic quality dating from the 11th century. In one room of the Huttal mansion a wall decorated with carved gunch has a vertical protrusion with a protoma of a predator (lion?) (Fig. 5). Here the lush gunch ornamentation does not extend onto the relief image, simplified but needing no deciphering. The ornamentation does not intrude into the figurative plastics area.

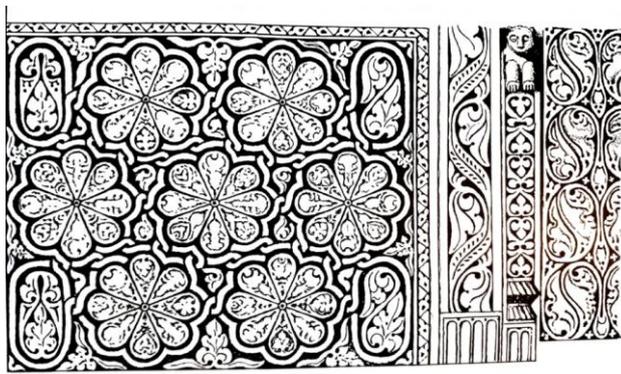


Fig. 5. The carved gunch wall of the Huttal mansion, 11 century, Tadjikistan. After Gulyamova E. G. and Bazhutin V.

In Rooms 19 and 20 the capitals of the gunch colonnettes are topped with paired masks of a feline predator, apparently a lion. In the first case it is a profile image of its grinning muzzle with elaborated fangs, mane, and ears; in the second, an en face image (with lips curved in a smile that produce the impression of a good animal). However conventional, the image displays no attempt to reduce an animal's muzzle to an ornament (the floral texture in the lower parts of the capitals reaches the animals' muzzles and does not go any further).

Similar open-mouthed lions walking one after another are found in locally made ceramics (images of horses and the Simurgh (questionable) also occur on glassware) [22].

The same conventional stylistics is characteristic of paired flat-carved animal masks in Room 3 (animal muzzles and floral ornament are juxtaposed; the latter keeps out of the area alien to it) ("Fig. 6"). They are strikingly similar to the lions from the Tirmidh rulers' palace, to be discussed below.



Fig. 6. The carved gunch wall inside the palatial complex in Hulbuk, 9-12 centuries, Tadjikistan. 1), 2) – animal masks; 3) – a pheasant; 4) - animals' hunting scene. After Sim 6n P.

The panel with a running pheasant's image is remarkable for its anatomic accuracy; the image exists separately from that of a flower ("Fig. 6"). Similar realism is characteristic of a fragment of gunch band with a beast chase scene (that was part of a geometric ornament in the wall's décor): it depicts a dog pursuing a fox and a feline predator hunting mountain

goats (in addition to other animals) ("Fig. 6"). Here the animal figures are also quite separate from their ornamental environment, distinguished even more by the high relief technique on a flat background. Room 17 houses a rectangular panel with a panther stalking along its upper edge. It is realistically interpreted: its muzzle is tilted towards the ground, and the carver truthfully conveys the animal's rounded forms and soft pads on its paws. The gunch decoration of Hulbuk dates back to the traditions of Sassanid and then Abbasid art of the 9th century and bears resemblance to the décor programmes (in stucco and wood) in Tirmidh, Nishapur, Balkh, and Lashkar-i Bazar dating from the 9th and 10th centuries [22].

Another classical example is the gunch decoration of the Tirmidh rulers' palace that includes four panels with stylised images of animals. The first one contains the motif of beasts fighting, popular in Iranian and Sassanid art (judging by its surviving fragment), the third panel contains two heraldically juxtaposed winged gryphons whose trunks and paws are covered with ornamental motifs; partially preserved hind legs of two animals with their backs turned on each other can be considered parts of the fourth panel. The second panel is the most representative one, with cartouches depicting paired fantastic predators with one head standing out against immensely diverse floral and geometric ornaments ("Fig. 7"). The animals' bodies are decorated with circles and trefoils that carry no meaning. They neither conceal nor encrypt the animals' bodies. In the literature they were interpreted in various ways: a double-trunked lion [23], [24], [25], paired lions [26], [27], a div [28], [29], fantastic animal(s) [30], two beasts with a common muzzle and their backs grown together [31] (to cite just a few most common judgements). One thing is indisputable anyway: it is a fantastic being of animal kind. It is not encrypted and requires no separation from floral ornament. It not only fills the panel but also brings out the animals' body structure: the decorated carved circles mark the places of their shoulder and hip joints, the trefoils bring out the animals' hides, and the sprawling lines stand for their back and tail muscles. The floral ornament is thus helpful wherever an animal's figure cannot be depicted with a line. The paired lions' figures were in harmony with the floral and geometric ornaments in the palace's numerous panels. All the images are made in summary and conventional manner. The animal figures in all the panels seem to merge with a background of floral motifs in the form of semipalmettes, vine-leaves and other plant elements but are clearly readable and need no deciphering.



Fig. 7. Gunch panels from Tirmidh rulers' palace, 12 century, Tirmidh. 1) – beasts fighting; 2) – paired lions; 3) – gryphones; 4) – paws. After Alpatkina T.G.

A monument of similar nature is the images of running goats and birds on 11th century carved stucco panels in Sawe, Iran, that use the same techniques of background saturation and stylised interpretation of animals' bodies. Moreover, the carver conveyed the running animals' motions quite realistically. Still another monument from this series is the stucco panel depicting a dancing-girl from the above-mentioned Qasr al-Hayr al-Sharqi castle, where the realistic image is enclosed in a cartouche and the background is filled with trefoils that combine into quatrefoils but do not overlap with the figurative image. After comparing the images in the Tirmidh palace with the preceding epoch's monuments we can state that such symmetrical portrayal of animals' bodies and the ornament on the surface of their bodies (circles with eight-petalled rosettes, and six-pointed stars) are typical of pre-Islamic Sassanid art. The décor of the Tirmidh palace is generally regarded as a link between the pre-Islamic Sassanid pictorial traditions and the new abstract art of Islam.

IV. CONCLUSION

We can see that ornamental and representational art co-existed in parallel and interacted within a common decorative style. The early Islamic art of Central Asia never abandoned the depiction of living nature. The very tradition of figurative portrayal was based on the pre-Islamic Sassanid tradition. Consequently, it is not the encryption of zoomorphic images as a means of overcoming the Islamic ban that is at issue here — but a special ornamental art, essentially abstract, with floral ornamentation stylised to the point of losing similarity to real floral forms, which enabled generations of Soviet researchers to see encrypted zoomorphism in them.

REFERENCES

[1] Grabar O. The Visual Arts // The Cambridge History of Iran, Vol. 4, 1975, pp. 329-364.
[2] Khmel'nitsky S.G. The Palaces of Huttal. Ideas and Forms of 11th to 13th Century Central Asian civil Architecture. Berlin: Savadovskii-Verlag, 2006 [In Russian].

[3] Khmel'nitsky S.G. The Chorku Mausoleum of Amir Khamza Khasti Podshoh. The Oldest Wooden Building of Central Asia with Carved and Sculptural Décor. Berlin-Riga: Gamajun, 2002 [In Russian].
[4] Khmel'nitsky S. G. Problem of Zoomorphic Ornament in the Art of Central Asia // Central Asia Cultural Values, No. 3, 2004. P.59-74.
[5] Rempel L.I. The Architectural Ornament of Uzbekistan. History of Development and Theory of Design. Tashkent: State Fiction Literature Publishing House of the UzSSR, 1961 [In Russian].
[6] Akh'rarov I. and L. Rempel. The Carved Stucco of Afrasiab. Tashkent: Gafur Gulyam Art Literature Publishing House, 1971 [In Russian].
[7] Rempel L.I. The Art of the Middle East. Selected Works in History and Theory of Arts. Moscow: Sovetsky Khudozhnik, 1978 [In Russian].
[8] Tuyakbayeva B.T. The Epigraphic Décor of the Ahmed Yasawi Architectural Complex. Alma-Ata: Oner, 1989 [In Russian].
[9] Dimand M.S. Studies in Islamic Ornament 1. Some Aspects of Omayyad and Early Abbasid Ornament // Ars Islamica, vol.4, 1937, p.293-337.
[10] Rice D.T. The Oxford Excavations at Hira // Ars Islamica, vol.1, part 1, MCMXXXIV, p. 51-73.
[11] Kharazmi M, Sarhangi R. An Analytical Study of the Methods of Design and Geometric Constructions in Architectural Ornaments of the Friday Mosque of Forumad // Nexus Network Journal. Architecture and Mathematics, Vol. 18, issue 1, 2016, pp. 275-276 // URL: <https://doi.org/10.1007/s00004-015-0278-0> (retrieved on 04.08.2019).
[12] Ruziyev M.A. The Carved Wood of Chorku. Dushanbe: Donish, 1975 [In Russian].
[13] Gulyamova E.G. The Carved Stucco of Hulbuk // Material Culture of Tajikistan, 1978, 3rd issue, pp. 186-202 [In Russian].
[14] Al-'Asqalani A. Fath al-Bari fi Sharh Şahih al-Bukhari. In 18 volumes., 1996. Vol. 11 URL: <https://umma.ru/hadisy-pro-izobrazhenie-fotografii-statuetki-iskusstvo> (retrieved on 29.07.2019).
[15] al-Banna A. al-Fath al-Rabbani li-tartib Musnad al-Imam Ahmad ibn Hanbal al-Shaybani. Vol. 9. Pt. 17 URL: <https://umma.ru/hadisy-pro-izobrazhenie-fotografii-statuetki-iskusstvo> (retrieved on 29.07.2019).
[16] al-Mundhiri Z. Mukhtasar Sahih Muslim // URL: <https://umma.ru/hadisy-pro-izobrazhenie-fotografii-statuetki-iskusstvo> (retrieved on 29.07.2019).
[17] Ibn Abu Shaibah, A. al-Musannaf fi al-Ahadis wa al-Asar. Vol. 6 // URL: <https://umma.ru/hadisy-pro-izobrazhenie-fotografii-statuetki-iskusstvo> (retrieved on 29.07.2019).
[18] Al-Bukhari M. Şahih al-Bukhari [Collection of Hadiths of Imam al-Bukhari]. In 5 volumes. Beirut: al-Maktabah al-'Asriyah. Vol. 4, 1997. // URL: <https://umma.ru/hadisy-pro-izobrazhenie-fotografii-statuetki-iskusstvo> (retrieved on 29.07.2019).
[19] Ettinghausen R., Grabar O. The Art and Architecture of Islam 650-1250. London: Penguin Books, 1987.
[20] Shalem A., Troelenberg E-M. Beyond Grammar and Taxonomy: Cognitive Experiences and Responsive Ornaments in the Arts of Islam [Au-delà de la grammaire et de la taxinomie: l'expérience cognitive et la responsabilité de l'ornement dans les arts de l'Islam] // Perspective [En ligne], 1, 2010, mis en ligne le 14 août 2013, consulté le 02 mai 2019, pp.57-76 // URL: <http://journals.openedition.org/perspective/1217> (retrieved on 03.08.2019).
[21] Genequand D. Les décors en stuc du bâtiment e à qasr al-hayr al-sharqi // Syria, T. 88, 2011, pp. 351-378 // URL: <https://www.jstor.org/stable/41682315> (retrieved on 03.08.2019).
[22] Sim'ón P. Hulbuk: Architecture and Material Culture of the Capital of the Banjurids in Central Asia (Ninth-Eleventh Centuries) // Muqamas, Vol. 29, 2012, pp. 385-421 // URL: <https://www.jstor.org/stable/23350370> (retrieved on 03.08.2019).
[23] Denicke B.P. The Architectural Ornament of Central Asia. Moscow-Leningrad: Publishing House of the All-Union Academy of Architecture, 1939 [In Russian].
[24] Denicke B.P. The Depiction of Fantastic Animals in the Tirmidh Carved Decoration // The Art of Central Asia, M., 1930 [In Russian].

- [25] Denicke B.P. The Carved Decoration of the Building Excavated in Tirmidh // Third International Congress on Iranian Art and Archaeology. Reports. Leningrad, September 1935 / Ed. by Orbeli I.A., Moscow — Leningrad, Publishing House of the USSR Academy of Sciences, 1939. Pp. 39-44 [In Russian].
- [26] Rempel L.I. The Uzbek Gunch // Decorative Art of the USSR, 1959, No. 2. Pp. 8-11 [In Russian].
- [27] Alpatkina T.G. The Images of Lions in the Carved Décor of the 11th–13th Century Palace of the Rulers of Tirmidh (a Variant of Reconstruction). // Culture, History and Archaeology of Eurasia. *Orientalia et Classica*. Proceedings of the Institute of Oriental Cultures and Classical Antiquity, 2009, issue XXII, 2009, pp. 187-196 [In Russian].
- [28] Pugachenkova G.A. Tirmidh, Shahrissabz, Khiva. Moscow: Iskusstvo, 1976 — [In Russian].
- [29] Pugachenkova G.A., Rempel L.I. Essays on Central Asian Art. Antiquity and the Middle Ages. Moscow: Iskusstvo, 1982 [In Russian].
- [30] Masson M.Ye. The Town Sites of Old Tirmidh and Studies Thereof. // Proceedings of the Uzbek Branch of the USSR Academy of Sciences, Series 1: History, Archaeology. — Issue 2 / Termez Comprehensive Archaeological Expedition, 1936. Tashkent, 1940 [In Russian].
- [31] Arshavskaya Z.A., Rtveladze E.V., and Z.A.Khakimov. The Mediaeval Monuments of Surkhandarya. Tashkent: Gafur Gulyam Art Literature Publishing House, 1982 [In Russian].