

PRINCIPLES OF BIOLOGICAL SYNERGY IN THE STRUCTURAL ORGANIZATION OF KHOREZM JEWELRY COMPLEXES

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Annotatsiya Ushbu maqolada Xorazm zargarlik san'atining ko'p asrlik taraqqiyoti, badiiy uslubi evolyutsiyasi va buyumlarning tarkibiy tuzilishi xususiyatlari tahlil qilinadi. Zargarlik majmualarida (shokila, peshkhalt) qo'llanilgan o'simliksimon va biologik shakllarning uyg'unligi, shuningdek, ularning estetik, ijtimoiy-madaniy ahamiyati ilmiy nuqtai nazardan ochib berilgan.

Tayanch so'zlar: zargarlik, Xorazm, shokila, peshkhalt, sinergiya, ornament, estetik funksiya, materiallar uyg'unligi.

Аннотация В статье анализируется многовековая история развития ювелирного искусства Хорезма, эволюция его художественного стиля и особенности структурной организации ювелирных изделий. Рассматривается гармония растительных и биологических форм, используемых в ювелирных комплексах (шокила, пешхалта), а также их эстетическое и социокультурное значение с научной точки зрения.

Ключевые слова: ювелирное искусство, Хорезм, шокила, пешхалта, синергия, ornament, эстетическая функция, гармония материалов.

Abstract This article analyzes the centuries-old history of the development of Khorezmian jewelry art, the evolution of its artistic style, and the structural features of its jewelry items. The harmony of vegetable and biological forms used in jewelry complexes (shokila, peshkhalt), as well as their aesthetic and socio-cultural significance, are revealed from a scientific perspective.

Keywords: jewelry, Khorezm, shokila, peshkhalt, synergy, ornament, aesthetic function, harmony of materials.

1. Introduction

The jewelry art of Khorezm is distinguished by its ancient forms and enduring traditions. According to historical sources, in the 1830s and 1840s, jewelry craftsmanship in Khiva reached its highest stage of development, and was widely known as the "mastery of gold and silver smithery."

Jewelry items served not only as personal adornments but also reflected the socio-economic stratification and aesthetic worldview of society. Studying the principles of biological synergy in the structural design of Khorezmian women's jewelry complexes holds significant scientific relevance for modern industrial and product design.

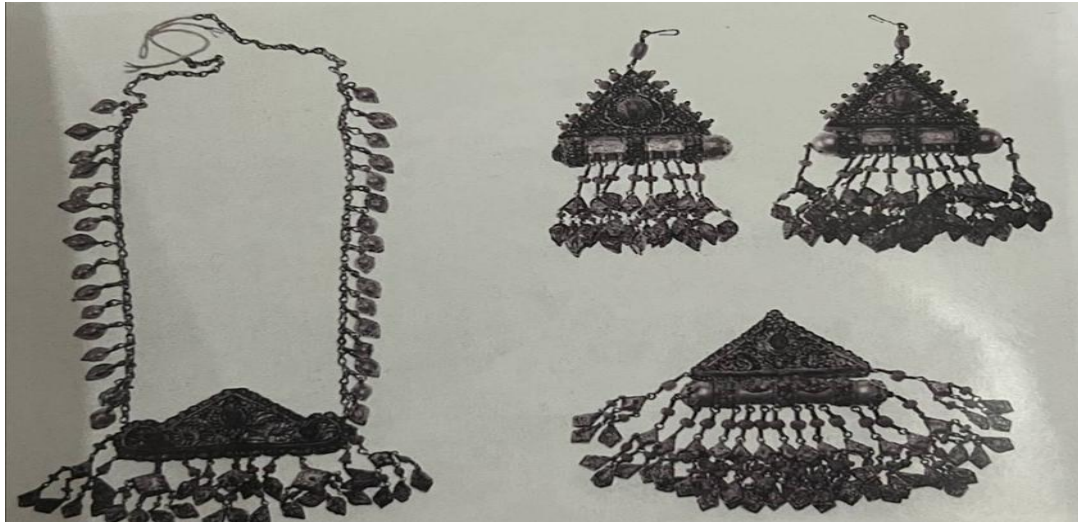
2. Methodology

The research utilizes historical and comparative analysis, the examination of ethnographic data, and art-historical evaluation. The structural and artistic composition of 19th-century Khorezmian jewelry complexes and their arrangement on the human body were analyzed.

3. Results and discussion

One of the fundamental features of Khorezmian jewelry art is the presence of biological synergy principles in the structural organization of the complexes. The decor of the items is dominated by vegetative ornaments, while the constituent elements are closely linked to biological forms found in nature.

- **The "Shokila" Complex:** Among Khorezmian women, the "shokila" is the most popular ensemble, consisting of a diadem, multi-layered chains, and colorful enamel. The main decorative elements are referred to as "guza" (shaped like a cotton boll, bud, or ripe fruit), which represent the synergistic expression of floral elements in jewelry.



- **Peshkhalta and Jevak Complexes:** These complexes exhibit a synthesis of the Khorezm and Bukhara jewelry schools. Crafted through the combination of coral, amber, pearls, and silver, they serve not only an aesthetic function but also a medical and magical protective function. Amber was traditionally associated with health preservation, while

- coral was considered a symbol of marital fidelity.



The sets are assembled in multiple layers, and dangling parts resembling keys are attached to the lower section. Though these keys cannot actually open any lock, they form a cohesive and aesthetically complete structural system.

4. Conclusion

Khorezmian jewelry complexes are not merely a collection of ornaments; they represent a synergistic unity of form, material, and spiritual worldview. Each small component complements the central composition to create a complete artistic image. Applying these principles to modern industrial design can make the structural organization of objects more refined and aesthetically enriched.

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