Bio forms in the Interior

Sagina Khakberdieva — 2nd year Master's degree Samarkand University of Architecture and Civil Engineering

B.B. Mustaev — Doctoral student (DSc) Samarkand University of Architecture and Civil Engineering

ABSTRACT

Human needs for bionics and bioforms, as well as scientific information about the history of its origin, development and promising ways of this art are covered in a short article

Keywords: bionics, bioforms, bionic equipment, polymers, architect and designer, interior, plants, high-tech, cybernetics, wildlife

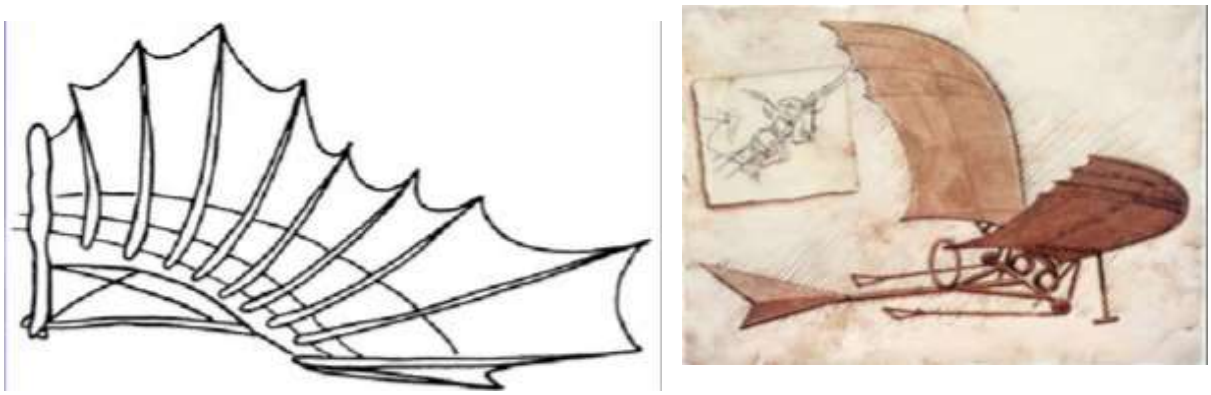
The use of bioforms in interiors and equipment is considered to be from relatively new directions. Many people think that with the help of new technologies, the invention of modern organic chemical products - materials produced thanks to polymers-began with the formation of this trend. But, as a result of the needs of people, the natural forms in the jewelry, home furnishings, weapons of the ancient world are worked out in Bionic forms, and to this day they are improved and stylized, which in turn is associated with the consistent development of the use of bionic forms in their environment surrounding a person.

Bionics-the principles, features, functions and structures of the organization of a living nature, that is, life forms in nature and their industrial analogues, is a practical science used in technical devices and systems.

Bionics is closely related to the sciences of biology, physics, chemistry, cybernetics and Engineering: Electronics, navigation, communication, etc [1].

More bioforms affect everything that is created by human, from household appliances and medical equipment to whole cities. With the development of technology and the emergence of new materials, the possibilities of using bionic forms in design and architecture are becoming almost limitless.

In 1960, the first symposium on Bionics was held in Dayton, United States, officially cementing the birth of the new discipline. The idea of applying knowledge of living nature to solve engineering problems was attributed to Leonardo da Vinci, who tried to build a plane with wings like birds. (Figure 1).



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For thousands of years, people have lived among countless different forms, surrounded by vibrant nature, millions of colors, but today a person who is almost forcibly immersed in the urban environment has become accustomed to the aesthetics of metal and concrete, to living in an environment of synthetic life. The city, the pale blue smoke is the bright light of the sunset. These and other phenomena became a source of inspiration for photographers, artists and architects, as well as designers, thanks to which the hi-tech style in the interior remained at its peak for several years [1].

(Figure 2).

General view of the interior, equipped in the style of hi-tech (Figure 2).

Especially workers who live in high-rise buildings built and built in cities, or who work the main part in public buildings at work, dream of getting closer to nature-that is, to plants. Plants have been found by scientists to be one of the most important factors in increasing the coefficient of human performance. To implement such efficiency, 1m.kv. as long as the field needs 1 Plant [2]. Therefore, at the same time that today we have more days in the workhouse and urban environment, the interior elements in the bionic style in our apartment at least help to partially fill the lack of natural beauty.

The emergence of cybernetics, which considers the general principles of control and communication in living organisms and machines, was the impetus for a broader study of their structure and functions in order to clarify the commonality of living systems with technical systems. the use of information obtained about living organisms to create new devices, mechanisms, materials, etc. [1].

The "Dom balo" is located in Paseo de Grasia, one of the most important boulevards in central Barcelona (Figure 3).

In the 19th century, the Spanish architect Antonio Gaudi created unusual projects of schools and residential buildings, close to natural forms of functionality. In turn, not only did the external manifestations of the buildings create in a bionic style, but also developed their internal environments separately, respectively. An example is the reconstruction of the original building, built in 1877, owned since 1900 by textile magnate José Balo (Figure 3).

The equipment produced by the architect's project is not often mentioned in the context of his work. But Gaudí's individual works in this area deserve attention. For example, the double sofa in the prom House is an example of the ergonomics adopted by many masters: two seats with a common armrest and the ideal shape for the human body, which is already traditional for Gaudi, also emphasizes the connection with nature — the seat backs look like apples. Balo house was added to the UNESCO World Heritage List in 2005 [3].

We briefly looked at the building and their interiors, designed in the bionic style. Such examples can be cited in large numbers. But, it is worth noting that we think that it would be advisable not only to study Bionics in the field of construction in other states, but also to use the bioshacks created by our ancestors in their separate historical and existing state of affairs in modern construction.

Bionics has a rich historical background and plays an important role in design today, being one of the most modern and promising areas of design, providing practical unlimited opportunities for creating the atmosphere of interiors and architectural structures.

Bibliography

1. Бабакандов, О. Н., Олимова, О. О., & Нарзикулова, Ф. Ш. (2018). ПРИМЕРЫ БИОНИКИ В АРХИТЕКТУРЕ И ДИЗАЙНЕ. *Актуальные научные исследования в современном мире*, (4-12), 9-10.
2. РАУПОВ, Б. Р. У., НОРКУЛОВ, О. О., & БАБАКАНДОВ, О. Н. (2016). ОСОБЕННОСТИ ОФОРМЛЕНИЯ ИНТЕРЬЕРОВ. In *Молодежь и XXI век-2016* (pp. 301-302).
3. Бабакандов, О. Н., & Тоштемиров, Б. Р. (2022). ТЕМИР ЙЎЛ ЁҚАСИНИ КЎКАЛАМЗОРЛАШТИРИШ ВА УНДАГИ ЯШИЛ ҲУДУДЛАР. *Gospodarka i Innowacje.*, *23*, 109-112.
4. Nuritdinovich, B. O. Forms That Are Transparent and Reflect the Environment in Modern Architecture. *International Journal of Innovations in Engineering Research and Technology*, (1), 1-5.
5. Nuritdinovich, B. O. (2022). The Principles of Landscape Design in

Making Compositions. *Journal of Architectural Design*, *6*, 32-34.
6. https://obrazovanie-gid.ru/referaty/bionika-v-dizajne-referat.html
7. https://www.asienda.ru/landshaftnyj-dizajn/fitosteny-i-fitokartiny/
8. https://realty.rbc.ru/news/603e0a809a79473f5ac566bc