

# THE USE OF THE STRUCTURE OF NATURAL FORMS IN THE COLLECTIONS OF MODERN DESIGNERS

MYKHAILIUK Olha<sup>1</sup>, TERESHCHENKO Olha<sup>2</sup>, MAMLAI Anastasiia<sup>3</sup>

<sup>1</sup> Kyiv National University of Technology and Design

\*Corresponding author: TERESHCHENKO Olha: e-mail [kira1284@ukr.net](mailto:kira1284@ukr.net)

**Abstract:** *The collections of modern designers and bioforms as a creative source for modern designers are characterized. Methods and means of designing modern collections are analyzed. The expediency of using bioform as a means of creating forms and textures in design is substantiated. Means of interpretation in the development of author's collections using folk motifs in combination with bioform are determined.*

**Keywords:** *clothing design, bioforms, textures, decorative art, costume decoration, fashion trends.*

## 1. INTRODUCTION

The development of modern fashion is impossible without the analysis and use of folk heritage. The transformation of the bioform in combination with national traditional motifs gives an unusual and bright result in the creation of collections. In modern design, bionics and national motifs are one of the main elements in the work of designers. Since ancient times, folk craftsmen, and then designers used natural forms to create their collections. Stylized bioforms can be seen on the ornaments of Ukrainian embroidery. Today, most designers use bioforms and national heritage as a creative source for their collections.

## 2. SETTING OBJECTIVES

The purpose of the work is to analyze the artistic and compositional characteristics of the bioform, its use and transformation in the creation of collections. Decorating current modern models with ornaments and using bioform as a creative source. The following tasks were formed and solved in the work:

- Modern collections of designers whose creative source was bionic forms were analyzed.
- The directions and methods of creating invoices were analyzed.
- The spheres of activity of designers using bionic forms were studied
- Analyzed folk traditional embroideries using bionic forms.

## 3. RESEARCH RESULTS AND THEIR DISCUSSION

Characterizing the outer shape of the suit, it can be divided according to certain features. The form of clothing can be soft, hard or medium hard, which is usually determined by the properties of the materials from which the product is made. Using the properties and plasticity of materials, the designer can create associative collections that convey the character of a certain creative source that was taken as a basis. For more than one season, designers have been using biofoams as a creative

source. Some use form with meaning, others are simply inspired by ordinary objects. This approach enables designers to create highly aesthetic collections that will go down in history as the last collection of creative designer Daniel Roseberry, Schiaparelli.

The main conceptual support of the designer was Dante Alighieri's magnum opus "Divine Comedy" of the 14th century. Roseberry took on the role of Virgil: an avid artist, a determined guide, a clear-eyed storyteller. In the Schiaparelli collection, the designer explored three books: "Hell", "Purgatory" and "Paradise". In particular, Roseberry referred to the animalistic symbolism of the Inferno: "a leopard, a lion and a she-wolf representing lust, pride and greed". This is how the "artificial taxidermy" was born - controversial animal heads, hand-crafted from foam, resin, wool and silk faux fur. Their realism is intentional [1].



**Figure1:** Daniel Roseberry Collection, Schiaparelli Haute Couture 2023 [6]

Modern science uses all the necessary concepts and tools to study the smallest features of living organisms. The rapid development of technologies encourages the search for the transformation of biological forms into design objects. Today, the use of bionics is widespread in fashion modeling.

Collections such as Simon Porte Jacquemus 'Raphia', "inspired by straw" demonstrate a transformation of form. Under the "straw storm from above" one can watch his huge wheeled hats appear, contrasting with the fragile figures. Hats decorated with raffia fringes, triangular poufs made of straw were presented. In addition, the collection featured a coat made of material with a pile structure created in collaboration with the French high fashion house Lesage [3].



**Figure 2:** Jacquemus Spring 2023 [6]

Using the methods of bionics, they get original and creative solutions for modern costumes. Harmonious images are the result of combining specific characteristics of the structure of natural forms. The variety of natural forms, their plastic properties allow you to design new design objects. Most designers use bioforms in particular and in combination with ornament and decor [4].

Analyzing the collection of Dion Lee, who was inspired by plant motifs, you can see products in which the constructive motifs of monstera leaves are traced. Rigid linear construction as the principle of building a plant leaf is the basis of the images of his collection. Fig.3. Dion Lee SS 2023 [6]

The Area collection uses the principle of transforming the structure of fruit shapes, in particular the banana.



**Figure 4:** a -d Area Spring 2023, e- Bruna Marquexine в embroidered crystal banana top & skirt Area for Carnaval 2023 [6]

Bioforms are often used in jewelry collections. In particular, the Area brand uses shells as a source of inspiration when designing new products.



**Figure 5:** Area, jewelry collection 2023 [6]

#### 4. CONCLUSIONS

So, considering the creativity of designers, it can be noted that the transformation of bioforms is a scientific direction that investigates structures and forms, tectonic structures and processes of living nature and their application in various areas of design. Trigenic forms are the best material for the work of designers. Therefore, the use of bionics will allow to diversify and improve the external forms of design. Since ancient times, folk crafts have used bionic forms to create ornamental motifs and plastic costume forms.

#### 5. REFERENCES

1. Kuznetsova I. O. Using the structure of natural forms in objects of biodesign. Theory and practice of design: collection. of science works Kyiv: Kyiv National Aviation University, 2013. No. 4. P. 81-90
2. A.V. Moshchenko Research on the formation of a collection of women's clothing based on the bionic objects of the Red Sea. Bulletin of the Kyiv National University of Technology and Design No. 4, 2015. C. 220-224.
3. Shandrenko O.M. Bionic design in the context of modern scientific research. Bulletin of KNUKiM: coll. of science pr. Series: Art history. 2014. Issue 30. P. 124-129.
4. Mykhaylenko V.E. Kashchenko O.V. Basics of biodesign: teaching. manual. Kyiv: Caravela, 2011. 224p.
5. O. Yu. Mykhailiuk, M. V. Kolosnichenko, N. V. Ostapenko, I. L. Gaiova, A. Yu. Antonyuzhenko. Generalized systematization of types of material textures for clothing design, Art and Design. 2018. No. 1. P. 103-113.
6. [online]. [accesat 10.11.2015]. Disponibil: <https://www.vogue.com/fashion-shows/spring-2023-ready-to-wear/dion-lee>