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## THE ROLE AND PRINCIPLES FOR THE USE OF THE MATERIAL IN ETHNOFUTURISM BY THE EXAMPLE OF ART OBJECT IN THE SPIRIT OF PERM ANIMAL STYLE MADE OF STONECASTING

*Study investigates the role of the material in the spiritual value of art-works. Object of study is ethno futurism of art. In the study formulated principles for the use of the material in ethnofuturist genre.*

**Keywords:** Perm animal style, Ethnofuturism, stone casting

Conference participant

*Science explains the world,  
but we can reconcile with him can only art  
Stanislaw Lem*

Modern art leaves no one indifferent, and always raises conflicting views. Many art historians believe that contemporary artists influenced by the processes of urbanization and globalization, so their work is not enough connection with nature. The absence of such a connection leads to disharmony. In order that would restore the relationship of nature and art artists begin to focus on ethnic trends in style. As a result, there are new trends of contemporary art, one of the most promising is Ethnofuturism [1].

This trend in art, there are about twenty-five years, originated in Scandinavia. In Russia Ethnofuturism began to develop in the 80's of XX c. This trend in art distinguished by the absence of strict canons, often the main source of inspiration for artists – ethnofuturists traditions of the Finno-Ugric peoples [2].

In the literature there are many different versions of a definition of «Ethnofuturism». In our view the most loyal to is the definition ethnofuturism as a new form of presentation (representation) of popular culture, adapted for modern man. Ethnofuturistic artwork of art are those that contain any of the bright elements of national culture, or link to them (the ornaments, household objects, rituals, myths, etc.).

In the culture of many pagan peoples choice of material for the creation of any artwork or household items was based on the magical ideas about the properties of the material and its place in the universe. This cultural feature can be used by artists in the Ethnofuturism, that is, to convey the connection with nature and the ancestors, you can use certain materials or methods for their processing. This questions has devoted to our research.

The aim is - an overview of the materials of which were manufactured attributes of folk art to archaeological finds, the inter-

pretation of the role of the material in the cultural value of these products and make recommendations on the proposal of images of folk art by means of non-traditional materials - stonecasting.

Object of study is a small archaeological sculpture related to the Perm animal style (PAS).

Perm animal style (PAS) - a characteristic manner of images of animals or birds with hypertrophied powerful claws, fangs and claws of predators, herbivores have horns, etc. PAS was formed in relative isolation of the northern regions of the Urals. Distinguishing features of PAS - frugality representational resources (the artist conveys the image and ignore the details). For example, the image replaces the image of the head of animal entirely. Some PAS images are fantastic, such as griffins - a creature combines features of a beast, and bird of prey or creatures combining human and animal signs [3].

There are three basic types of plot PAS: zoomorphism, anthropomorphism, zooantropomorphism, fitoantropomorphism.

Zoomorphism images simply reproducing species (herbivores, carnivores, birds, amphibians, insects), they are divided into two groups: simple and complex. Simple animal zoomorphism images reproduce all or parts of the body. Among the archaeological finds there are three kinds of products: solid, hollow and flat. On flat plates, the animal depicted in profile (with four legs and only two) or a view from above. Complex zoomorphism images are divided into three groups: blending, multiplication, and combinations thereof. Overlay - the basis of composition are simple zoomorphism images, which are superimposed on each other. Multiplication - the animals are depicted with multiple (identical or different)

heads, limbs or other body parts. Combination - shows signs of being combining different animals.

Typical plots are PAS images of elk, bear, birds and snakes. Elk or deer are the protectors of rights, represent the upper world, and participates in its creation. Giant moose may serve as the sun. Birds (geese, ducks) in the mythology of the messengers of the gods, often symbolizing the divine in man. Snake - picture element of the sun, the sun is depicted as a circle, entwined by a snake. Bear in the mythology of the Urals is the ancestor of man, in the Karelian-Finnish epos progenitor of the world and all living things is a duck.

Anthropomorphism depict man as divided into simple and complex. Complex anthropomorphic, there are also three species (overlay, multiply, mix). Complex anthropomorphic creatures portrayed with a combination of both signs on - fishing. Special is the way of the shaman as a mediator between the heavenly and the earthly world, conductor of the three worlds. Image of man and the shaman is not identical. The shaman is not just a man, it's something more.

Zooantropomorphism depict creatures with a combination of signs of animal and human, there are 2 kinds (overlay and combination). Shortcut depict beings who have the lower torso to the waist belongs beast, and the top - man.

Fitoantropomorphism images depict the man and the world of plants. Fitoantropomorphism are not characteristic of the PAS, these stories were more typical of Celtic culture.

All products PAS in its plot, describe the model of the world at the time - the concept of "world tree". Art of the "world tree" is characteristic of a positive contrast (divine) and negative (the underworld). The

three-dimensional picture of the world embodied three-tier composition: the lower world is pangolin, upper - elk, the middle world – people, in centre image of man, but it does not represent a person, he represents part of the material world.

Items PAS were symbols of the ancient clan, group, which included the people themselves and "selected" their totem animals. Ornaments with images of animals is an important attribute of the female costume and served as distinguishing marks that determine tribal affiliation of women. Figurines found in tombs, often depicted flying birds, most researchers agree on the fact that these images represent the human spirit is released from the body after his death. Ancient people believed that products PAS possess magical powers. Perhaps these ideas were borrowed from the totemic culture (totem animals bring good luck, protect from danger, are the progenitors). Often in the plots of ornaments PAS image of a horse is found. There are opinions that there was a cult horse, honoring all the horses as a symbol of the sun and fertility.

PAS remained the leitmotif of the culture of the peoples of the Urals for a long time. Trace the development of world people can be to change the plot of PAS. Technology development can be traced to what kind of material used for making handicrafts.

The oldest of them date from the VIII-III century BC. Initially, the product PAS were bone and horn, ornaments in the style of the PAS found on the stone ritual and household products, in the Bronze and Iron Ages, there are products made from ceramic and metal. The most common are bronze ware PAS, they are made by casting technology in the two-way shape and processed manually.

Most of the archaeological finds of products PAS refers to the Bronze Age. Of course, in the Bronze Age materials, developed by mankind before (bone, stone, wood, etc.), continued to be used. Metal at the time was rare and precious materials. Then people do not appreciate the operational quality of the metal, and attributed to him magical powers. The very process of obtaining the metal and its treatment were equated to the magical mysteries. There is a theory that people who were treated with metal, were equal to shamans.

Ancient members of the Finno-Ugric peoples believed that metals can affect the supernatural virtue by his brilliance and



Fig. 1. Metal figurines Perm animal style

The chemical composition of archaeological finds products PAS in the Perm region

Table 1

Product	Concentration of the element, %					
	Cu	Sn	Pb	Zn	Ni	P
Buckle	basis	18,8	12,2	1	0,2	0,2
Suspension	basis	-	-	0,2	-	0,1

ability to sound (ringing).

At that time it was thought that possess magical properties and some types of stone. One of these was the obsidian (volcanic glass). Obsidian was not available in the territory of the Finno-Ugric peoples, but these areas were rich deposits of copper ore.

Metal and the ability to handle it were perceived by ancient peoples as a gift from the gods. Given their divine origin, originally, people used metal for manufacturing occult subjects.

Archaeological finds, dating from the middle of I millennium BC, are divided into two groups according to functionality. The first group - a bronze art plastic iconic destination, the second group - Jewelry and Accessories Costume.

Products PAS, the first group (beads, the hrynyia, suspension, etc.) are personal things, and remained with the owners even after death. Many of the findings found it on the ground burials.

Material of archaeological finds interesting, in terms of reconstruction of ancient technologies. Carried out by X-ray analysis of several archaeological finds products PAS (Fig. 1) from the funds of the Perm Regional Museum has allowed to establish their chemical composition (Table 1).

A distinctive feature of the products found in the Perm region sufficiently smooth chemical composition, rare admixture of iron, aluminum and arsenic.

It is known, that ancient metallurgists at the initial stage of copper smelting production changed concentration of arsenic

in order to achieve that particular color of the metal. Among the archaeological finds of the Middle East and south you can find items made of bronze, whose color changes from bright red to pale yellow. Oriental peoples attached particular importance is the color of products, we know that a special relationship to the red color remained in their culture so far.

The concentration of arsenic in the investigated products PAS is 0,5-2%, this means that their production did not seek to change the color. This means that the main cultural and spiritual value of the product was laid in his subject, and not in color.

Contemporary artist - ethnofuturists can use bronze, similar in composition to archaeological finds, «to quote a» tradition of the PAS. But this approach does not reflect the ideas ethnofuturism because Ethnofuturism is not copying, it's a modern interpretation of ancient traditions, the representation of an ancient culture, the adaptation of sacred knowledge for the modern man.

Given this, we have identified four ways of expressing ideas through ethnofuturist stuff works:

- Use of traditional material, process it in a reconstructed ancient technologies, introduce new elements into traditional subjects;
- Use traditional materials and subjects, but the process material on modern technologies;
- Use modern materials (synthetic plastics, polymers, etc.) for an embodiment of traditional subjects;
- Use of alternative and non-synthetic

materials. For example, it can be natural materials are not specific to a historical era or geographical location «of the archaeological prototype». This method allows you to not lose touch with nature and most complete representative character of the artwork.

Having decided to create ethnofuturist work of art, it is necessary to determine it's subject. We recommend the use of contrast, for example, the contrast between the human world and the spiritual world, between the modern world and the past, etc. The general idea of most ethnofuturist work of art of description of the interaction between material and spiritual worlds.

As part of its investigation, we have created several articles in etonofuturistic style based on the PAS.

In order that would implement harmonious future products in modern life and to emphasize their cultural and historical significance, we decided to implement them in the form of small plastic (casting desk). In order that would simultaneously provide the connection with nature and modernity, we used no modern not-synthetic material, which is based on the most ancient material - stone. This material is called **stonecast**.

Stonecasting - a material derived from the natural rock, using their transference. Products made of stonecasting is made by casting. The structure of the stonecasting material similar to that of obsidian - stone endowed with magical powers according to the ancients.

This material combines the traditional technology (casting), on the principle of casting were made and the first products PAS, and connection with nature, raw materials for manufacturing is the oldest material on earth - a stone. Ability to handle a stone cast was not available to ancient people, the technology is modern.

It is known that in the Bronze Age there was a "fight" between a rock and metal for the "title" of the sacred material. Stone casting is the epitome of a settlement agreement between them. The stone remains as a basis, but uses the method of processing characteristic of the metal. This combination represents the evolution of technology and the world of ancient man, it gives new



**Fig. 2. Composition «Perm Phoenix»** meaning to the product - a retrospective look into the past, his comprehension.

Stonecasting material is not characteristic of primitive PAS products, but it is completely natural, natural in origin, method of processing close to traditional technologies of the first millennium BC, so it fully reflects the ideas ethnofuturism.

Initially, the special role played by the organoleptic properties of products PAS (shine and sound). For modern man the sound not important, but gloss is a symbol of solemnity. Using the technology of stonecasting, we can control the organoleptic properties of the material, and therefore can get the specified level of brightness. This allows us to achieve the desired visual effect.

The main plot of the future products are the main images of the Finno-Ugric culture: a bird, a bear and snakes.

Bird in a special way throughout the northern mythology. There was a cult of waterfowl, which according to legend is the progenitor of the world. The Nordic peoples believed that the soul of deceased ancestors sent into the afterlife in the form of a bird. The heroes of the myths were mostly birds of prey. In products PAS them depicted with spread wings. Separately identifiable image of a raven as a messenger trouble, misfortune or death.

We decided that our first job will be as archaic. Statuette of a three-dimensional image mythical bird with human eyes and wide open wings (Fig. 2). So we wanted to convey the idea



**Fig. 3. Composition «Fight and search»** that our ancestors were spiritually united with us. This bird is like a biblical dove, or the phoenix symbolizes the aspiration of the human spirit of continuous improvement, to the spiritual purity, to the belief in immortality and endless life of the spirit.

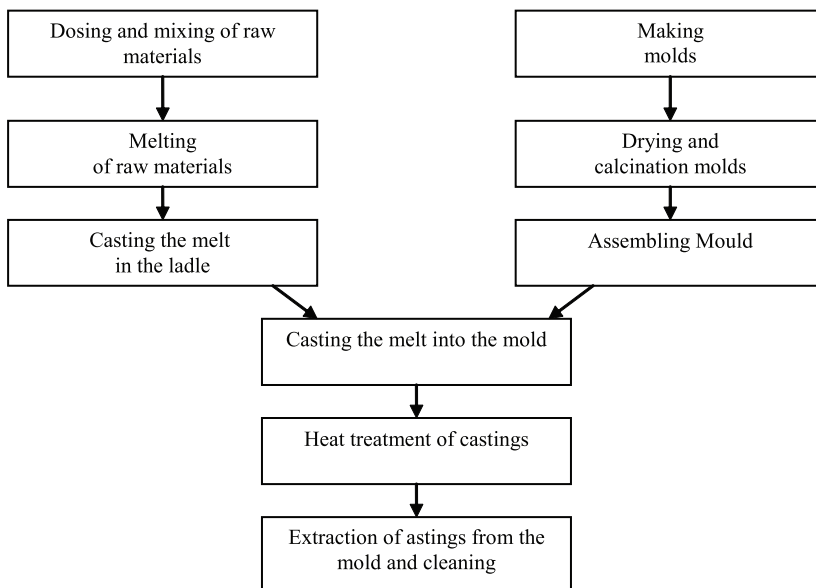
The plot is our second job is more complicated, as it includes three characters: a bear, snakes and birds (Fig. 3). In modern interpretation, we consider the image of a bear as a way of uniting all the peoples of northern Russia (Siberia, Far East and the Urals).

The size of both our products 20-25x15-20x4-6 cm.

Russian researchers note: *"The snake symbolized the underworld and was part of the complex compositions. "Lower World" - this is the underworld, where the governor Lizard. Snakes in the animal style - and even a symbol of the river (water, rain), which connects the sky and underground. Thus, snakes are on a par with the man and, apparently, can be transformed into a man - "to share guise."*

In the mythological serpent consciousness associated with the world of stones and not to the world of living beings.

Ethnofuturism - is a step forward in looking back and we decided to use the traditional heraldic organization of the PAS, and divided the plot into three levels. Lower (lizard) - this is the underworld. Medium (bear) - the world of animals and humans. Upper (bird) - the celestial world of the gods. Heroes of our story are fighting each other, it symbolizes the chaotic search of our



**Fig. 4. Technological scheme of manufacturing castings of stonecasting**

**Chemical composition of raw material for stonecasting**

**Table 2**

Chemical composition, %								
SiO <sub>2</sub>	MnO	Al <sub>2</sub> O <sub>3</sub>	CaO	FeO	MgO	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	K <sub>2</sub> O+Na <sub>2</sub> O
47-49,3	0,09-0,1	11,3-14,9	3,6-10	-	3,9-7,2	15-12,2	1-1,5	2,3-3,6

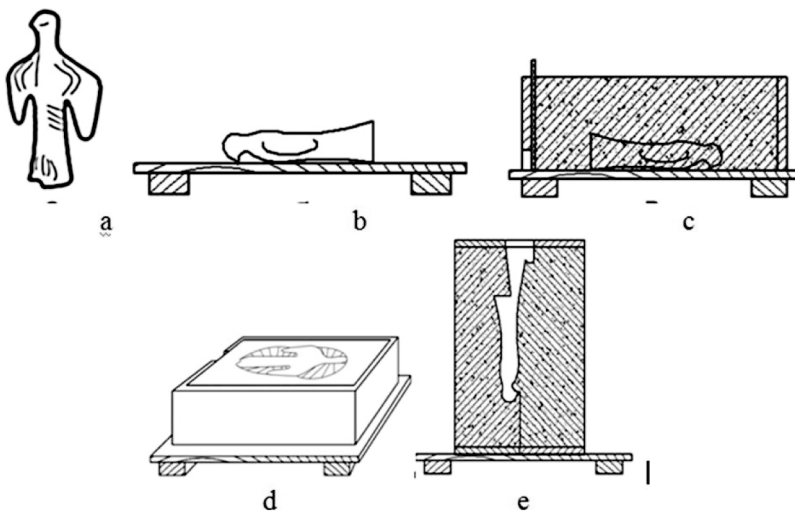
connection with nature and the past.

Products were manufactured by the method of casting a single sand-clay molds. Scheme of the process shown in Fig. 4. Chemical composition of raw materials is presented in Table. 2.

Model for the manufacture of castings was made of gypsum. On the quality of the surface quality of the model

depends on the casting surface. Therefore, the model carefully machining was done manually, after the dried and varnished (that would cast does not absorb excess moisture).

Mold were made of two types of molding mixture: facing and filling. Facing used for the manufacture of the imprint in mold, filling mixture - for



**Fig. 5. The scheme of making molds (a - model, b - model set out at moulding board, c - the lower half of the mold, d- the lower half of the mold with a carved figured parting plane, e - The assembled mold)**

filling mold. Both species are composed of a mixture of sand and clay, differ in their dispersion.

Mold produced by hand buy technology presented in (Fig. 5), after they were dried at a temperature of 50-60 °C and calcined to a temperature of 800-850 °C in an electric chamber furnace. Stone melt was poured in hot form.

Melting of raw materials was carried out in two-electrode arc furnace. The temperature of molten rock with the release of the furnace was 1500-1520 °C. The temperature of molten rock when filling in the mold was 1250-1320 °C.

After the casting of castings are heat treated in an electric crystallization - annealing furnace tunnel. After the heat treatment were removed from the casting molds and brush away the remnants of sand mixture.

All our products are shown in Fig. 6.



**Fig. 6. All our art object in the spirit of perm animal style made of stonecasting**

Thus we have established and proved by the special role of the material in the spiritual value of works of ancient art. On this basis, formulate principles for the use of the material in ethnofuturist genre. Created etnofuturistics art objects based on the Perm animal style. Selected the most original and meaningful material for the realization of creative ideas - stonecasting.

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