



THE “TREE OF LIFE” SYMBOL IN JEWELLERY

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Abstract: *History and tradition play a very important role in the development of a society. Designed objects were and are adorned with signs and symbols holding various messages and aesthetic particularities. These objects have the ability of spreading emotions through their shape, material, finishing or graphic and are made using different materials, techniques and technologies. By particularising a sign one must take into account its orientation towards certain objects regarding the significance, the culture and the historical period. The sacred geometry, a sum of shapes with religious and cultural values, can be analysed from a scientific, philosophical, aesthetic and mystic point of view. The origin, the nature and the relationship between these shapes are considered to be determined by the surrounding universe. The symbol is an intermediary which favours the communication from the visible reality to the invisible, non-figurative one. One of the shapes with a symbol value, frequently used, is the tree of life. The tree of life is a symbol dating from the Neolithic, but still applied nowadays. Bearing information and witness of the history of a civilisation, the “Tree of life” symbol inspired the artisans and artists from different cultures, being graphically readapted, both due to the technology development, as well as to the society’s maturation. The present paper presents the evolution of the “tree of life” sign, the manner in which it followed the history and civilisation flow, the diversity of objects adorned with it through various working techniques, as well as its evolution through new interpretations in the jewellery design applications. The paper presents the experiment of making a silver pendant with the “Tree of life” symbol, reinterpreted and made using a 3D program.*

Key words: *sign, technologies, material, product, silver.*

1. INTRODUCTION

The tree symbol dates from the 1st century B.C. The tree of life shown on wood, stone, metal, embroideries, fabrics, knitting and tapestry, in object and textile graphics, has emphasized into images the symbols of basic elements, traditional in ancient cult doctrines. The sacred tree becomes a symbol without losing its formal-concrete attributes (the palm-tree and the date palm at Mesopotamians, the oak tree at Scandinavians, Asvattha and ryagrodha at Hindu, etc.), after certain mental step were surpassed and the symbol is detached from the concrete shapes, becoming sketchy and abstract [1]. In **Fig. 1, Fig. 2, Fig. 3, Fig. 4, Fig. 5** one can notice the diversity and the continuity of the “Tree of life” symbol as inspiration source. Along the evolution of human society, this symbol was used as a decorative element on charms, fabrics, clothes, vessels, jewellery, showing its potential through the richness of its messages. History presents the graphic, geometric

evolution of the “Tree of life” symbol, but also the way in which it can be found on various personal use, household or religious objects.

The tree of life originating from the Neolithic of Ancient Europe is made of 3 regenerating symbols, shown in **Fig. 1**: the “V” symbol of the Great Goddess, the *bucranium-uterus* and the *tooth comb-brush*. All these symbols have the purpose of amplifying the sacred significance in a certain order which was maintained throughout time. This representation of the tree of life can be seen on female anthropomorphic statuettes discovered in the necropolis from the Bronze era culture (Gârla Mare, Mehedinți county and Orsoia, Montana in Bulgaria).

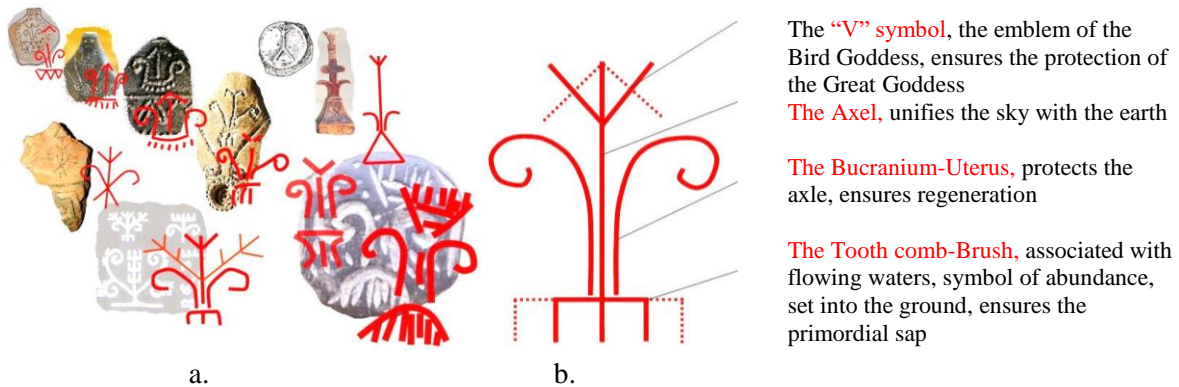


Fig. 1: a. Ancient objects with the “Tree of life” symbol; b. The scheme with the “Tree of life” which comprises the 3 regenerating symbols [2, 6]

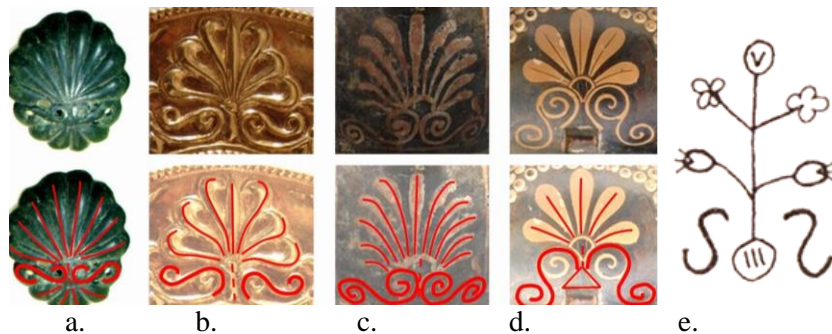


Fig. 2: a. The Thracian tree of life, southern Oltenia, 5th – 4th century B.C.; b. The Thracian tree of life, northern Bulgaria, 4th century B.C.; c. The Etruscan tree of life, Italy, 4th century B.C.; d. The Greek tree of life, Greece, 6th century B.C.; e. The tree of life from Bardar [2]

2. GENERAL INFORMATION

2.1 The symbol’s evolution

The “Tree of life” symbol can be found on the territory of different peoples. Archeologic discoveries prove the existence of this symbol **Fig. 2** in many cultures, from the oldest times. In **Fig. 2. e**, the symbol of life from Bardar, life and its spring meet in a single sign. The angle with the tip towards the earth is situated in the circled ear of the column. The birth axle is shown as pairs of flower shaped rhombuses. The self-recognition axle, situated on the next level, is shown as being a growing fruit and the theme axle, marked at the base through a circle containing three oblique parallel lines, situated between the “S” sign, represents a symbol of a rich and eternal earthly life, of the whole eternity. This symbol archaically describes the entire existence. The tree symbol made by

incision, fretwork, embroidery, knitting, fabrics, in textile and ceramics graphics, metallic ornaments and not only, emphasizes the basic elements of the ancient cult doctrines, creating at the same time the technical profile that existed in a certain historical period, **Fig. 3**. The sign's evolution represents a global phenomenon based on the development of technologies and the society's maturation.

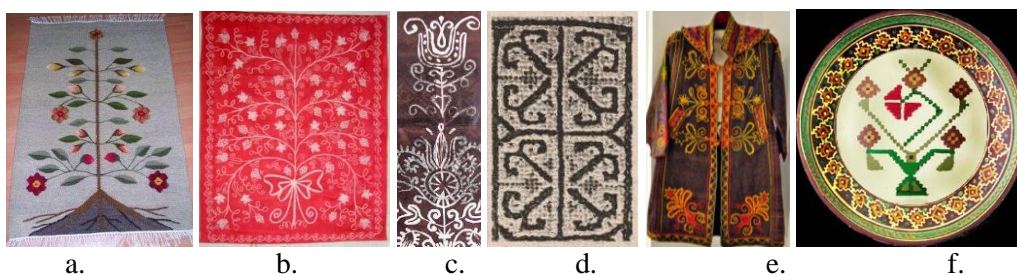


Fig. 3: a. b. The "Tree of life" woven and represented on carpets (Rădăuți); c. d. The "Tree of life" on embroideries; e. Coat with interpretations of the symbol; f. The "Tree of life" represented on a Moldavian painted plate [2]



Fig. 4: Precious metal objects with the "Tree of life" symbol: a. The "Tree of life" on the silver fibula, Ostrovul Mare, 4th century B.C.; b. The "Tree of life" on the gold bracelet, Sarmisegetuza Regia, 2nd – 1st century B.C.; c. The "Tree of life" on the silver bracelet, Valisoara; d. The "Tree of life" in the shape of a fir tree on a gold ring, Romania, 2nd century A.C.; e. The "Tree of life" in the shape of a fir tree on a gold ring, 1st – 2nd century A.C. [2, 6]

2.2 Using the "Tree of life" symbol in the field of jewellery

The symbol can be found in the adornment of various objects, offering aesthetical and material value to them. Since ancient times to the present moment, the symbol is applied, in various interpretations, on different jewels, **Fig. 4** and **Fig. 5**. The development of technologies has allowed these symbols to be transposed by designers into an aesthetically reinterpreted manner, with a focus on the guide mark's quality. The area of artistic possibilities of interpreting and reproducing the details of a symbol is getting broader, the artist having the advantage of 3D technologies, **Fig. 5. b, c, d**.



Fig. 5: a. The "Tree of life" in the shape of a fir tree multiplied on silver helmet plated with gold, Agighiol; b. c. d. The "Tree of life" in different contemporary stylistic interpretations, applied on silver [2, 6]

3. TECHNOLOGIES USED IN JEWELLERY DESIGN



Fig. 6: The way of making a silver pendant with the “Tree of life” symbol. The symbol is made by the designer Negru Diana in relief (in two graphic variants)

3.1. The jewel as expression of the relationship between symbol, material, technology

Jewellery designers have aesthetically exploited the sacred symbols. By associating the symbol’s power with the qualities of the precious metal (silver), elements with a common history trail [3], the designer creates jewellery with an aesthetic impact, psychological qualities and material value, capitalizing both the symbol’s graphic, as well as the aesthetic, mystical, septic and technologic qualities of silver. Creating a piece of jewellery means choosing: the design, the material, the semi-finished goods and the fabrication process. The objective is obtaining pieces with aesthetic surfaces of high quality, having an aesthetically and technically controlled rugosity, and with a good mechanic toughness. The technologies used in jewellery processing must ensure a material and manual labour economy, a pleasant aesthetic look without defects or traces of processing [4, 5]. The elements of detail designed by the jewellery designer, with various



significations and symbols, are reproduced through working techniques and materials with different colours and structures, having the ability to generate aesthetic creations (through size, materiality, lustre, contrast) compatible with the outfit, emphasizing the user's personality.

Nowadays, the fabrication process of jewellery represents a combination of traditional manual methods and modern techniques, fact which allows processing, finishing and fixings with a high degree of precision and accuracy. The used materials are precious metals or common metals.

3.2 Traditional processing technologies

Processing a piece of jewellery through classic methods is made by splinting, cold or hot plastic deformation and casting. Currently, manual processing (which requires a long period of time, a big quantity of material and hard manual labour) makes complex jewellery design difficult in order to satisfy the sophisticated requirements of customers.

3.3 Modern processing technologies

3D printing is a simple and fast method of making an object. Through fast prototyping, the ideas, sketches, 2D planes and 3D models can become real objects in a very short time. Unlike traditional methods of fabrication, 3D printing allows the designer to quickly visualise the concept, to offer micro geometric details which aesthetically improve the jewel's macro geometry. [7] The designer's role in creating jewellery represents its transformation from a market product into an art object. The modern processing technologies offer the possibility to make details, processing, welds, mounting and finishing hard to equal through manual processing. After the concept, the computer model with fine details, difficult to realise with traditional tools, the master model is then made from a special epoxydic wax made on a 3D micronic machine, afterwards following the making of the moulds, the casting with programable machinery and the finishing.

3.4 The steps of making a piece of jewellery with the "Tree of life" symbol

The steps of making a jewel concept with the "Tree of life" symbol, are presented in **Fig. 6**: generating the ideas; choosing the best solution; the 3D project (through the 3Design Cad, 3D Rhino Gold, Matrix programs); conceiving and creating the wax master model (in which the models are fixed) on the "printer"; its setting into a metal cylinder over which a paste is placed using vacuum, paste which solidifies and copies the details of the wax models, resulting a multi mould; the placing of the metal cylinders in a computerized oven programmed at a sequential baking cycle at high temperatures for melting the wax, obtaining the details of wax models impregnated on the negative; the casting of the silver at high pressure and controlled temperatures; the cooling of the metal cylinder after casting in water bath (water jet of min. 120-160 bars), resulting the autocleaning of the hardened paste cylinder through drying and baking (due to hot water bubbling); cleaning the slag generated by the incandescent metal, in a pickling solution, followed by a supplementary cleaning in an ultrasound bath; after pickling, the precious metal trees are prepared to be introduced in the technological steps of processing through debiting, micro-splinting, micro-locksmith, micro-finishing and polishing (automatized, semi-automatized and manual). **The modern processing techniques of jewellery** used in this study have numerous **advantages**: cost reduction, design optimization, personalisation opportunity, lowering the production time, material economy, promoting the principle of sustainability, recycling and planned recovery. The process of fast prototyping helps in: improving the communication manner regarding the development of new products, the shortage of the design cycle, superior quality, model precision, elimination of errors, innovation, the optimization of the collaboration between clients, designers and marketing.



Fig. 7: The Tree of life in various stylistic interpretations, applied on silver, designer Negru Diana

For the experiment regarding the application of the stylised “Tree of life” on a piece of jewellery, the designer tried to transpose the aesthetic detail stylised differently, on different geometric shapes presented in **Fig. 7**. The resulted models, in which micro geometry and macro geometry, the precision of 3D technologies and the proprieties of the metal material, the silver, confirm the aesthetic and technic requirements. The designed and 3D produced pendants, with full and empty detail elements, geometric shapes with closed or open outlines, outline with connection rays which are bigger or smaller to sharp angles, as well as imprints or engravings applied on different depths, in positive or negative relief, express the aesthetic quality and technique accuracy.

4. CONCLUSIONS

Applied from ancient times on different interpretations, the tree of life was, is and will remain an inspiration symbol with an aesthetic value, proving cultural continuity, the technical level of a certain historical period and the existence of globalisation. Updated and reinterpreted, made of various materials, through various technologies with different aesthetic effects of the surfaces, the symbol shows the aesthetic refinement and the technologic support capable of expressing the quality of the concept of design. Full and empty, in positive or negative relief, through shiny or mate surfaces, using different materials and technologies, the designer generates various objects with aesthetic value which can express messages to the society. The paper points out the efficiency and the importance of 3D technologies in the jewellery design. Using a Neolithic inspiration source, having as objective the satisfaction of the modern client (styled and educated) and having state-of-the-art technologies, the designer can create jewellery with a potential of transmitting emotional messages in a short time, ensuring the concept’s quality.

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