



A GEOMETRIC TRANSPOSITION OF TRADITIONAL WEAVED MOTIFS INTO NATURAL STONE MOSAICS

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ABSTRACT: Inspired by the ethnographic collection, brought together by Serbian ethnologist Hristifor Crnilović (1886 – 1963), today on display in Manak's House in Belgrade, a series of experiments have been done within the Mosaic School Kamen & Lom, tending to transpose traditional Balkan motifs into the natural stone mosaics. After briefly introducing the notion of transposition between the two techniques, and the Crnilović Collection, in this study we analyse selected motifs and their stone mosaic interpretations, paying a special attention on geometric characteristics of the two ancient techniques. Similarities and differences of the two techniques has been analysed and some important aspects of the process of geometric transposition are highlighted. The paper is accompanied by the exhibition of mosaics inspired by Pirot rugs, titled "Stone Weaving", that was previously displayed in Manak's House in Belgrade, as well as in the city of Pirot and in other cities around Serbia.

Keywords: Traditional weaving, natural stone mosaic, geometry, transposition.

GEOMETRIJSKO TRANSPONOVANJE TRADICIONALNE TKANE GEOMETRIJSKE ŠARE U MOZAIKE OD PRIRODNOG KAMENA

APSTRAKT: Inspirisana etnografskom zbirkom koju je prikupio etnolog Hristifor Crnilović (1886 – 1963), a koja je danas izložena u Manakovoj kući u Beogradu, realizovana je serija eksperimenata u okviru Škole mozaika Kamen & Lom, sa težnjom da se tradicionalni balkanski motivi transponuju u mozaike od prirodnog kamena. Nakon opisa etnografske kolekcije Hristifora Crnilovića, u ovom istraživanju su analizirani izabrani motivi i njihove interpretacije u mozaiku od prirodnog kamena. Pri tome se



posebna pažnja obraća na geometrijske karakteristike dve drevne tehnike. Analiziraju se sličnosti i razlike ove dve tehnike i izdvajaju se važni aspekti geometrijske transpozicije. Uz ovaj rad pripremljena je za prikazivanje i izložba mozaika inspirisana pirotskim ćilimom, pod naslovom “Tkanje kamenom”, koja je ranije organizovana u Manakovoj kući u Beogradu, kao i u Pirotu i drugim gradovima u Srbiji.

Ključne reči: Tradicionalno tkanje, mozaik, prirodni kamen, geometrija, transpozicija.

1. INTRODUCTION

The influences of Eastern and Western cultures have intertwined and permeated the Balkan region since ancient times, forming, alongside various ethnic, national, social, and other differences, a treasury of similar and unique forms of folk creativity throughout history.

Traditional weaving in the Balkans, especially in Serbia, holds a significant cultural and historical role, reflecting the region's rich heritage and artistic expression [2]. This craft, practiced for centuries, showcases the unique blend of influences from Eastern and Western cultures, as well as the distinct identities of various ethnic groups within the region. Weaving has been an integral part of Balkan culture since ancient times. The region's strategic location as a crossroads between East and West [3] facilitated the exchange of techniques, patterns, and materials, enriching the local weaving traditions. In Serbia, weaving was not just a practical activity for producing household textiles but also an important artistic expression and a means of cultural preservation [4]. Traditional Serbian weaving often utilizes vertical looms (Figure 1), which have been in use since at least the 19th century. This type of loom, also known as a “standing” or “upright” loom, allows weavers to create large, intricate patterns and is particularly suited for rug-making [5].

Horizontal looms are also used, especially for making narrower items like belts and sashes. The primary materials used in traditional Serbian weaving include wool, cotton, and flax. Wool, sourced from local sheep, is particularly valued for its durability and warmth. Cotton and flax are used for finer textiles, such as clothing and decorative household items. Natural dyes derived from plants, minerals, and insects are traditionally used to color the yarns. These dyes produce a range of vibrant and earthy tones, which are characteristic of Balkan textiles. The designs in Serbian weaving are rich in symbolism and vary significantly across different regions. Common motifs include geometric shapes, floral patterns, and stylized animal figures. Each motif carries specific meanings and is often associated with local folklore, beliefs, and social status [6].

Geometric Patterns are among the most prevalent in Serbian textiles, with intricate combinations of squares, diamonds, and other shapes creating complex, symmetrical designs. Traditional Serbian weavings often feature bold color combinations, with reds, blues, blacks, and whites being dominant. The choice of colors and their arrangement is not only aesthetic but also culturally significant.



Figure 1: Weaving on a vertical loom, Pirot, second half of the 19th century, Photograph, reproduction of the watercolor by Carl Peter Goebel (1824-1899), Ethnographic Museum in Belgrade, Inv. No. 7903., [1]

Different regions of Serbia have distinct weaving styles and traditions:

Pirot: Known for the famous Pirot carpet (Pirotski ćilim), this region's textiles are characterized by their high quality and intricate patterns. Pirot carpets are often woven with wool and feature vivid geometric designs [5], [7].

Sjenica and Zlatibor: These regions are known for their woolen textiles, particularly blankets and rugs, which are often decorated with simple, bold patterns.

Kosovo and Metohija: This area is renowned for its elaborate textiles that often incorporate gold and silver threads, reflecting the influence of Byzantine and Ottoman aesthetics.

Traditional weaving in Serbia is more than just a craft; it is a cultural legacy passed down through generations. Weaving techniques and patterns are often taught within families, preserving the knowledge and skills of ancestors. This craft plays a vital role in community identity, especially in rural areas, where woven textiles are used in everyday life, from clothing to home decoration.

On the other hand, mosaic is one of the oldest artistic techniques [8]. The oldest known mosaics were found in Mesopotamia, featuring geometric patterns made from cone-shaped fired clay. Mosaic art was particularly popular in ancient times, including in Greece (Pella) and during the Roman Empire [9]. It was used to decorate homes, markets, religious buildings, and public spaces across numerous locations from ancient times onwards. From this period, one could observe a division into two main styles of mosaic art: Western and Eastern. The Western style is characterized by simple geometric forms and monochromatic color schemes suited for functional spaces. In contrast, the Eastern style is complex, vibrant in color, and highly decorative, often reminiscent of modern rugs [10].

In the act of research and creative boundary-pushing [11], blending seemingly incompatible techniques and materials, the exhibition "Stone Weaving" and the experiments in transposition weaved patterns into mosaics, inspiringly explored and utilized Serbia's cultural heritage, specifically the Pirot carpet [12].

2. MANAK'S HOUSE AND THE COLLECTION OF HRISTIFOR CRNILOVIĆ

Manak's House, known as „Manakova kuća“ in Serbian, is a historic building and museum located in Belgrade, Serbia. It is part of Ethnographic Museum in Belgrade. The house dates back to the 1830s and is one of the few surviving examples of traditional Serbian urban architecture from that period in Belgrade.

Hristifor Crnilović (1886-1963) was a prominent Serbian ethnographer and collector who dedicated his life to preserving the cultural heritage of Serbia and the broader Balkan region. His extensive collection is displayed in Manak's House and is one of the most comprehensive ethnographic collections in Serbia [13]. The collection includes a wide variety of traditional Serbian costumes, representing different regions and time periods.

These garments showcase the intricate embroidery, weaving techniques, and vibrant colors typical of Serbian folk attire. Among the most valuable items are the handwoven textiles and rugs, including the famous Pirot carpets. These pieces highlight the skill and artistry of Serbian weavers and provide insight into traditional weaving techniques (Figure 2).

Manak's House, or Manakova kuća, is a precious landmark in Belgrade that offers a unique window into the past. As both a museum and a cultural hub, it serves to educate and inspire visitors about the traditions, craftsmanship, and everyday life of 19th-century Serbia. Its preservation underscores the importance of safeguarding historical buildings and promoting cultural heritage for future generations to appreciate and cherish.



Figure 2: Motifs from the collection of Hristifor Crnilović



3. THE EXHIBITION „STONE WEAVING“

Artistic schools have existed since ancient times. Their significance is immense because they reflect the continuity of achieved skills and enable the ongoing life of what we call tradition. Thus, in ancient times, weavers in the Balkans received technology and patterns for their work, but their personal experience and talent added to the meaning and artistic and/or craft expression and achievement. This element of expanded creative field during work is extremely valuable and contributes to the uniqueness of the local scene [14], [15]. Discovering these elements nowadays does not mean merely repeating old patterns but transposing them into a contemporary expression in a completely new way. This is preceded by the path of studying the work process and interpreting the depth of usable symbols. This is precisely what forms the core of the project “Stone Weaving”. It aims to give a higher meaning to the very learning of the artistic craft, but also to uncover the most valuable aspects of tradition, thereby enabling it to have a new life, providing with great artistic inspiration and personal achievement [1].

Members of the Kamen & Lom studio have been "weaving" collective mosaic carpets for over a decade, giving these works a specific character, and inspiring studio members through new inspiration and challenging tasks/undertakings, which allows for a deeper and different way of exploring both the past and personal improvement and acquaintance with the possibilities of mosaic expression. Collective work is particularly important, as it determines not only the work itself but also the character of life and Eastern peoples and the Balkans.

This area of tradition was chosen because it allows for a direct and easy view of some contemporary trends and directions in fine arts [16], [17]. For example, dealing with symbolism but even more so with the choice of forms from traditional carpets, and then reducing them to basic expressions and fitting them in with the choice of colors and basic tones, students gradually "enter" into the visual problems of suprematism and modern abstraction, especially those of geometric direction.

The exhibition, where the work is presented, was especially important. It was the Gallery of Manak's House (an exceptional building in itself), which houses the splendid ethnographic collection of Hristifor Crnilović. In addition to direct contact with the motifs and objects that inspired this project, there was another very important moment for the organizers. Namely, during his schooling in Skopje, Alexander Tomasevic, the founder of modern mosaic in the 20th century, was a student of Hristifor Crnilović. He often helped his professor draw artifacts that he collected on his travels through the Balkans. This, among other things, significantly influenced Tomasevic's artistic expression, especially his work in mosaic.



Figure 3: Mosaics from the exhibition “Stone Weaving”

By combining these two moments, ethnological material and contemporary mosaic, at the exhibition and workshop that accompanies it, the intention was to achieve an atmosphere in which visitors can see and experience the heritage of their ancestors in a new way (Figure 3, Figure 4). To see that the past is not over, it's not finished, but that people still live it today, although they often aren't aware of it, and that it largely determines their current life.



Figure 4: Mosaics from the exhibition „Stone Weaving“

3. THE PROCESS OF TRANSPOSITION – STUDY OF THE CASE

The process of the transposition of a traditional geometric pattern into a mosaic, started with a careful selection of a motif. In the presented case the motif is selected from the rich

collection of Hristifor Crnilović in Manak's House, and is part of a traditional towel (Figure 5, left). The selected motif was photographed, and the desired detail was cropped.

The nature of the pattern and the geometry were then examined through several sketches, two manual and one digital. The first manual sketch (Figure 5, middle) served to get familiar with the pattern. In this sketch the horizontality of the pattern was highlighted and the number of horizontal threads of weaving was reduced. It was obvious that, thinking about the stone mosaic, the horizontal lines couldn't be thin as in weavings.

The second manual sketch (Figure 5, right) served to simulate a natural stone mosaic. Compared to the previous sketch, the number of horizontal threads was further reduced, in terms of accomplish desired horizontality of the mosaic rows. In this sketch the colour was introduced and the three characteristic colours were identified for the future mosaic.

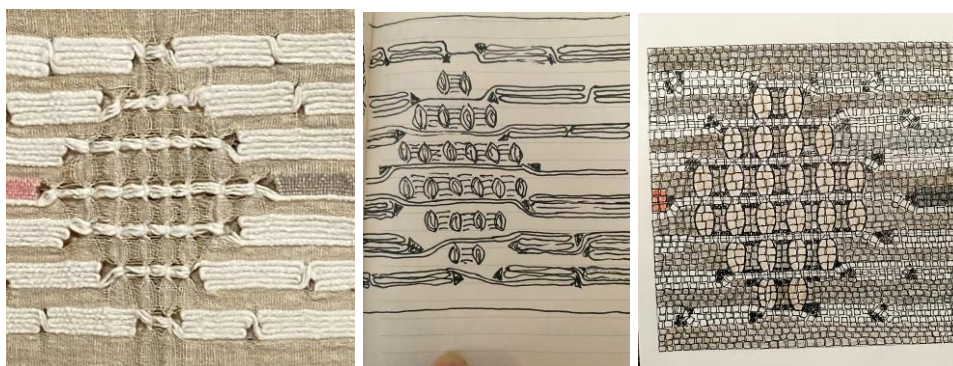


Figure 5: From left to right: selected motif, transposition into a sketch, mosaic-like sketch

Finally, a digital sketch/simple drawing was created, to serve as a base for claying stones (tesserae) of the future mosaic, which has been completed in an inverse mode. Figure 6, left, shows the printed digital sketch and a selection of natural stones was prepared.

The completed mosaic is given on the Figure 6, right. The horizontality of the threads was preserved thanks to the white stone rows, while the rhomboid pattern has been realized in the beige stone. The size of the stones (tesserae) was maximally reduced, so that it could be appropriate to represent the nature of the woven tissue.

The mosaic is selected to be exhibited at the Belgrade Mosaic Festival IV in June 2024 in the Kuća Legata Gallery in Belgrade [10].



Figure 6: Usage of digital drawing as a base (left) and the completed mosaic

3. CONCLUSION

The connection between traditional weaving and stone mosaic is quite captivating, as both techniques often use geometric motifs to create intricate and meaningful designs. Similar to the process of weaving where threads are interlaced to form patterns, in mosaics stones are meticulously placed to form the desired design. The careful arrangement ensures that the geometric integrity of the pattern is maintained.

Mosaic designs inspired by traditional weaving, can be used in flooring, wall decorations and architectural accents in smaller spaces, public buildings and places of worship. Transpositions of traditional woven motifs into stone mosaics, yields a continuity of cultural expression. This can be particularly expressive in public and sacred spaces.

By transposing traditional woven geometries into natural stone mosaics, the timeless beauty and cultural significance of these patterns can be preserved and showcased in new and enduring forms. This approach not only honours the heritage of weaving, but also expands its reach into different artistic and architectural domains.

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