HEADGEAR IN FERGANA VALLEY IN KHOKAND KHANATE DURING THE 13TH CENTURY AH/19AD: AN ARTISTIC ARCHAEOLOGICAL STUDY

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1. Introduction
The present research paper highlights the impact of headgears in Wadi Ferghana, Uzbekistan in the period of the Khanate (the 12th -13th H./18th -19th G. centuries) through an archaeological and artistic study. It found out that the examined headgears were famous for floral motifs and geometric decorations. They were made of plant sources, e.g., cotton, or animal sources, e.g., silkworm that produces silk. Wadi Ferghana is a large state in Turkestan[1]. Its capital was Kokand[2]. Before being seized by the Russians, it was affiliated with the Khanate of Kokand. Currently, it is the most important state in Uzbekistan[3]. Republics of Central Asia (Former Soviet Union), fig. (1): [4] It takes the form of a triangle whose base is in the east and head is in the west that is 186 miles long and 93 miles wide. It has an area of 8404 miles. After the death of his father Abu Saeed Merza in 900 AH/1494 AD., Omar Shiekh Merza became the ruler of Ferghana. Babur[5] reported that Ferghana comprised seven major cities, including the capital Andujan, Akhsy, Osh, Magellan, and Kokand. After his unsuccessful attempt to seize Samarkand (906-908 AH/1500-1502 AD.), he fled to Ferghana (909-910 AH./1503-1504 AD.) [6,7].

Figure (1) Shows Republics of Central Asia, “Former Soviet Union” (After, CA C Map, 2021).
2. Industrial Methods

2.1. Raw materials

Various raw materials were used in the headgears in Central Asia, in general, and the Valley of Ferghana, in particular, including cotton, silk, and wool.

2.1.1. Fibers

*) Cotton is a cellulose fiber consisting of fibers of surface filaments that grow on the seeds. They form one cell in one direction [8]. It has several unique characteristics, such as ease of manufacture and preparation and durability. It does not change or lose its shape. Moreover, it can be waved to make good textiles crafts [9].

*) Silk; Turkestan is one of the main regions of silk production worldwide because Uzbekistan began an interest in the silk cycle in the 4th century [10]. The breeding of the silk cycle is mainly focused on the Valley of Ferghana [11]. Researchers differed on the date of the first local production of silk in Central Asia. For instance, Zernkel reports that using silkworm in Western Turkestan dates back to the 2nd G. century, whereas argues that it dates back to the 3rd/4th century [9].

2.1.2. Dyeing

Dyeing is one of the most important industrial processes on covers [12] to color the fibers, threads, or covers with natural or industrial dyes. It is the most accurate stage of the textile industry because the value of the textile artifact is estimated by the beauty and grandeur of the colors used in the fabric. In terms of source and composition, dyes are categorized into three groups: [13].

*) Plant dyes, are extracted from the roots, stems, leaves, flowers, fruits, and scales of plants. Using plant dyes is a delicate and family process from a generation to another. No other dyes resemble the plant ones because they are stable with a special beauty. They are more beautiful over time [14]. They include. Blue color has been extracted from the indigo plant in Iran, Eastern India, and Central Asia since time immemorial [15]. Only Indigofera Tinctoria gives good dyeing. It is a meter high tree whose trunks are cut twice or three times a year, then removed by the end of the year to be planted again at the beginning of each year [16]. This species does not grow in the dry climate of Central Asia but is imported by caravans from India and Kabul [10]. Red color is extracted from the roots of the Madder plant. It is sold after being extracted (a reddish color) or being grained after drought (bright red). It is called Rubia Tinctoria. The Madder is planted and exported to Central Asia. It was an important source of income in the Khanate era, especially in the surrounding area of Kokand. Different degrees of the color from scarlet to purple could be obtained using different degrees of the powder of the madder with color stabilizers [10]. Yellow color, it could be obtained from several plants, including safflower that almost produces a dissolvable color. Most of the yellow dyes are fixed. They could be obtained from plants growing abundantly in the plains, such as Senecio that is similar to the European Senecio but it is toxic to animals, the florets of some plans known among the Uzbek as Isparak that is abundant in the valley, and I-Choub Zahr that is collected and dried in Spring [10]. Black color is obtained from pomegranate peel with iron filings in fertile areas. In remote areas, it is obtained from pistachios Malvaceae that is known locally as "Karachup" [10]. Green color is one of the most important colors used in embroidery threads and making decorative items, especially...
the branches and leaves of the plant in the headgears in question. They were obtained from a plant called Osma. The dark green was obtained from the husk of walnut. \textit{White color}, it was obtained directly from cotton or natural silk [9].

*) \textbf{Animal dyes}, they were limited to two colors: red and yellow. \textit{Red color} was taken from the silkworm living on the mulberry tree. Alexander Boris, the deputy of the East India Company who was deported to the Gihon region in 1246 AH./1830 AD., reported that he got the red color from a round worm living on the roots of the shrubs on the river banks. The red color was extracted from the females of an insect called "Margarodes Polonicus" that were heated and ground to give beautiful colors from red to purple. The reddish color was also obtained from bull blood. \textit{Yellow color}, it was extracted from the gall bladder of animals after drying and crushing [15].

\textbf{2.2. Weaving methods}

Weaving, after preparing and dyeing the threads, the weaving begins. Every house almost had a loom\textsuperscript{(e)} [17] for the manufacture of silk textiles. However, these looms were not widely found in Central Asia. Rather, most looms were simple. The weaving of the threads continued on manual looms until the 13\textsuperscript{th} H./19\textsuperscript{th} G. century. There are two types of horizontal looms\textsuperscript{(f)} [17] in Central Asia: Wide and narrow:

*) \textbf{Wide looms} were hardly used in the Valley of Ferghana in weaving threads and preparing various fabrics in homes or tents. They were almost 1 meter wide [18].

*) \textbf{Narrow looms}, these looms are the most common in most villages and cities. They are easy to disassemble [18].

\textbf{2.3. Decoration methods}

Various decorative methods were used in the examined headgears in terms of natural-like floral elements, including branches, leaves, flowers, and rosettes. Moreover, other modified items of arabesque\textsuperscript{(g)} [19] and geometric items were utilized.

\textbf{2.3.1. Floral motifs}

They played a key role in decorating the headgears under study. They were almost natural-like or modified, such as branches, leaves, rosettes, and some types of flowers. Some of them were implemented in triangles or square frames that decorate the areas of the headgears, fig. (2-a) and others were implemented inside triangles.

*) \textbf{Real floral motifs} include imitated items of plants and flowers. They are more real. They mimic nature [20].

*) \textbf{Leaves}, they are directly made of branches and stems. They are implemented in a manner appropriate for the interlining and extending of stems and branches to match the bends and curves [20]. \textit{Simple leaves and buds}, they are the most common in the headgears under study. They penetrate the floral motifs to link the branches together. They sometimes end the branch or crown the composite leaves, fig. (2-b).

*) \textbf{Flowers}; they are not as much as the other items adopted. Some of them come out of branches, whereas others are included in decorative ribbons, fig. (2-b). \textit{The lotus flowers} are embroidered on silk, see the headgear, fig. (2-c). The lotus is a perennial aquatic plant that grows in shallow water, such as ponds, small streams, and permanent swamps. Its leaves are heart-shaped, split in the middle deeply in the form of a semicircle on long necks. They include three types: The white lotus, the blue lotus, and the pink lotus. This flower has spread since time immemorial. In ancient Egypt, the ancient Egyptians preferred and heavily relied on the lotus in their political slogans and religious symbols, giving it several names, e.g., Sashn, Sarid, Nukhba, or Nahb [21].
\*\* Arabesque (Modified floral motifs) \*\*

is one of the most important modified decorations. It consists of fine branches of various scrolls, such as small plant flowers. The scrolls curl to form intertwining and interlinking triangles. They cover large areas of the headgear. They are implemented as an independent item or enclosed in decorative items. When used as a major item, they consist of fine branches emerging from intertwining four-lobbed or five-lobbed leaves, fig. (2-b).

\*\* Key designs \*\*

they occupy a wide area of the headgear. They are the most common among other sub-designs. They mainly consist of branches or half palmettes, as follows: Plant branches, this design consists mainly of plant branches from which leaves emerge, fig. (2-d), as well as various flowers and rosettes, fig. (2-e, f). Branches are the most important floral decorative item because almost no floral decorative element is void of branches [15]. Leafy plant branches, leaves, including the lanceolate, four-lobed, five-lobed, and palmette, emerge from these branches. They form the main item of the decoration of some headgears under study. They are also used in decorating the medallions and non-connected areas decorating some headgears. They decorate the frames of the headgears, taking the form of a branch in a frame from which various types of leaves emerge, fig. (2-b). Flowering plant branches, they consist of simple branches from which different flowers emerge. They appear in the headgears under study in the decoration of some medallions and areas of different shapes and sizes. For example, a blooming flower or rosette is implemented on the headgear, fig. (2-d). Flowering and leafy plant branches, these plant branches combine leaves and flowers from which flowers, leaves, and half-palmettes of different size emerge. They take the form of a straight plant branch from whose sides multiple leaves emerge. This branch ends with a blooming flower or rosette, fig. (2-b, d). Main plant branches and shrubs, these plant branches and shrubs cover a large area of the headgear compared to other decorative items covering the headgear, fig. (2-a, b, d).

Plant leaves, they are the main decorative items, which are implemented in the headgears under study in different positions, shapes, and styles in the decorative designs. Modified plants, these simple plant leaves almost emerge from wavy and spiraling branches, fig. (2-b, d). Round leaves, they are small round and modified plants, such as the headgear, fig. (2-a). Four-lobbed leaves, it is a four-lobed leaf from which branches or flowers emerges to form some modified floral designs "aslimi" emerge. This leaf is known as "Chor Barg", i.e., the four-lobed leaf, Shah Barg, i.e., the leaf of the king or the shah, or Turt Barg [9]. Five-lobed leaf, it consists of lobes, fig. (2-d). Almond-like leaf, it resembles the lanceolate leaf but the top binds to the right or the left. It is more to the shape of the almond. It is known as "Barji-Bodum" [22]. They are common in the headgear under study because of the spread of almond trees in the Valley of Ferghana [23]. Therefore, engravers imitated this leaf on most of their artifacts, fig. (2-e). Star rosettes, they take the form of a star. They are implemented independently beside other decorative items. Their shapes vary, and they contain five or six petals, fig. (2-d).

2.3.2. Geometric designs

Geometric designs are basic elements in Islamic decorations. They are ranked second after floral motifs. They consist of the straight line, square, rectangle, and triangle. They received considerable attention from manufacturers and engravers. Thus, they were implemented on the various artifacts. They were implemented in the frames separating the floral motifs. They are the main designs in the headgears under study [15], fig. (2-a, b, d, e).
*) **Point** is one of the key geometric designs that make up the composite geometric shapes. They are implemented in the headgears under study.

*) **Line** is the space between two points or several contiguous points. It can form various geometric shapes simply. There are various types of lines based on their path or shape, such as straight, wavy, and zigzag. The line plays a considerable role in decorating the headgears under study, as follows *Straight line* is the space between two points, fig. (2-c). *Zigzag line*, it is a long zigzag line decor- orating the entire frame with varying thickness of the line from thin to thick, encompassing the zigzag decorations, fig. (2-f). *Rectangles*, some rectangles are used as geometric divisions decorated with geometric shapes and floral items. They appear in the rectangle areas of the headgears under study. For example, fig. (2-a, b, d, f). *Squares*, they appear on the headgears under study, fig. (2-a). *Triangles*, they are simple geometric figures in the form of triangular areas "Otshorbortchak" [22], fig. (2-b) at the Museum of the Jama Masjid and fig. (2-f) at the State Museum of Applied Arts of Uzbekistan.

**3. Results**

In this part of the study, some important results were extracted and they could be divided as follows: 1) Cotton and silk are the most important raw materials for the production of capes and head coverings in the Ferghana Valley. 2) Botanical and geo-
metric decorations are the most common types of decorations used in the decoration of caps or head-scarves. 3) The spiral decorations are the most used in decorating headscarves in the Ferghana Valley. 4) The study showed that most of the boats are owned by girls, as the shape shown in figs. (2-a,b,d,f,), and a few of them are owned by boys as the shape shown in fig. (2-e). 5) It turns out that on happy occasions, girls wear caps while preparing for their apparatus and at weddings, while boys wear caps on sad occasions, such as visiting cemeteries and funerals.

4. Discussion
In the present paper, the author found out that cotton headgears were square and divided into four triangles. Each triangle included floral decoration in red, yellow, and green on a black background. Headgears made of embroidered silk were circular, and the decoration was duplicated, including four decorative units. The quadripartite star form was the dominant one. The triangular areas were decorated with duplicated decorative units of geometric decorations in white, red, green, yellow, gold, and blue on a black background in all headgears. Furthermore, the almond-like leaves with pointed endings were used to decorate the space and frame of the headgears. Ferghana was best known for this decoration.

5. Conclusion
The present study is artistic, analytical, and descriptive. It examined headgears in Wadi Ferghana, Uzbekistan in the period of the Khanaate (the 12th-13th H./18th-19th G. centuries) through an archaeological and artistic study. It mainly focused on the decorations of these headgears at the time. It found out that floral motifs were the most common decorations. The study recommends carrying out a broader artistic, analytical, and descriptive analysis of decorations in Wadi Ferghana at the time and earlier periods to link the decorations and their spread causes in the examined centuries.

Endnotes
(a) Turkestan is currently divided into Eastern Turkestan (Chinese) and Western Turkestan (Russian) that was divided into six countries after the Russian occupation, namely Kazakhstan, Kyrgyzstan, Uzbekistan, Turkestan, Tajikistan, and Qurah.
(b) Kokand (the former capital of Ferghana) is 200 km from the capital Tashkent.
(c) Uzbekistan (est. 1924) is to the west of Central Asia.
(d) Zahir ud-Din Muhammad Babur was born in 888 AH./1483 AD. He became the ruler of Ferghana after the death of his father in 932 AH./1525 AD. He passed away in 937 AH./1530AD.
(e) A loom was used for weaving composite textiles. It has multiple warps from two up to six and more according to the various colors used in the weft. Its rolls vary because of the multiple weft threads.
(f) A horizontal loom consists of two rolls to separate threads and two pedals connected to the rolls. One sitting worker can run this loom.
(g) Arabesque relies on the floral items inspired by the botanical world, such as flowers, fruits, leaves, trees, and stems. Its main unit is the half-palmette. While the Ottomans call it Roumi, the Europeans call it Arabesque, i.e., Arab decorations.

References


