

Central Asian textiles between technique & phenotype and their application in design of printed upholstery fabrics

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ABSTRACT: One of the most important features in Central Asia was the Silk Road, which connected China and Europe through Central Asia. Cultural exchanges were made through this network of paths. Religion, technology, textiles, most notably silk, spread from China to the Western world. Central Asia, on which the Silk Road passed, was also greatly affected by the Silk Road. Religion and certain textile weaving skills were transferred. Not only merchants, but also raiders and conquerors followed this path, making Central Asia rather turbulent. This active cultural exchange through the Silk Road enabled Central Asian culture to be culturally diverse, thus making its textiles colorful and intricate in pattern. In eighth century due to the spread of Islam in the Central Asian countries and its influence by the values of Islamic Art that prohibits the use of human elements and limits the use of animal and birds elements which has had the greatest impact on the spread of the vegetal elements and innovate artistic treatments for them. According to that, the research will investigate Central Asia's textiles history and then introduce an artistic analytical study to compare the vegetal elements in the Central Asian textiles (*Suzani-Ikat*). After that, the research will attempt to mix between those techniques to create contemporary upholstery designs that carry the originality of Central Asia's textiles.

KEYWORDS: Central Asia, *Suzani*, *Ikat*, Vegetal elements.

1 INTRODUCTION

Central Asia has evocatively been called (the land of furs and fans): it is a land of contrasts, of immensely high mountain ranges, where nomadic tribes struggled to exist in the high valleys. And it is a land of vast deserts, where oases provided rich agricultural land amid barren scrub and where other nomadic tribes struggled against the environment. (Harris,2010,91)

Historically, Central Asia has a long, complex and often violent history further complicated by its being a melting pot of different civilizations. Over many centuries the surrounding eastern and western cultures — China, Europe, India and Persia — exchanged their goods and ideas via the Silk Road, which passed through the middle of Central Asia. Continual interaction took place via these trade routes between raiders and conquerors, traders nomads and oasis dwellers, resulting among other things in the transfer and blending of ideas, motifs, technique and commodities. This cultural exchange impacted on the arts and crafts of Central Asia, and in turn the materials and techniques of this vast region were transferred to neighboring cultures. (A. Forsgren , 2002,193)



Fig. 1. Map represents Central Asian countries. (Hattstein and Delius,2004, 432)

The definition of Central Asia is not strictly fixed. This research focuses on regions covering from Turkey to Mongolia. Xinjiang and Tibet, although they are frequently included in the definition of Central Asia, are not discussed here because their textiles were deeply influenced by Buddhism, while most other Central Asian textiles were mainly connected with Islam. (Stone,2006,95) Therefore the research will focus on the area of Central Asia that presently divided into the Republics of Turkmenistan, Uzbekistan, Tajikistan, Kyrgyzstan and Kazakhstan and reaches over into north-eastern Iran and northern Afghanistan fig (1). (Harris,2010,91)

1.1 RESEARCH PROBLEM

- Although textiles of Central Asia is among the longest arts to continue and to last, it did not receive adequate artistic studies showing the richness of their designs' layout and vegetal elements, which may be useful to the contemporary art trends in the field of upholsteries textile printing.
- Taking advantage of the aesthetic values of vegetal elements, which vary according to the technique used (*suzani- ikat*), which is on the artistic vision to innovate of designs suitable for printed upholstery fabrics.

1.2 RESEARCH IMPORTANCE

- The research importance lies in the artistic analytical study of (*suzani- ikat*) designs' layout and vegetal elements, to explain the extent of variation of designs and elements depending on the technique used in the fabric, and to clarify what is contained in these elements of highly creative and innovative artistic values.
- Putting innovative design solutions suitable for printed upholstery fabrics, inspired from the artistic values of Central Asia textiles' (*suzani- ikat*) elements, resulted from the artistic analytical study.

1.3 RESEARCH OBJECTIVES

The research aims to:

- Do an artistic analytical study for some samples of Central Asia textiles (*suzani- ikat*) to show the aesthetic values of their designs' layout and their vegetal elements.
- The research aims to design printed upholstery fabrics which inspired from various artistic treatments of vegetal elements on Central Asia textiles (*suzani- ikat*).

1.4 RESEARCH HYPOTHESES

Research supposed that:

- Central Asian textiles considered as one of the most unique handmade arts, so the artistic analytical study of selective samples of (*suzani- ikat*), will clarify the artistic characteristic features of these textiles and the difference of artist treatment of these elements depending on the technique used in making it.
- The different treatments of vegetal elements, depending on the technique used (*suzani- ikat*), may give rich textile designs, and various artistic solutions, that through mixing them together, may produce innovative and rich upholstery fabric designs by the diversity of treatment techniques of its elements.

1.5 RESEARCH LIMITATIONS

Objective limits: An artistic analytical study on various textiles from Central Asia (*suzani- ikat*), and making use of this study in the innovation of suitable designs for printing contemporary upholstery fabrics.

Spatial limits: The study is based on the Central Asia.

Temporal limits: The research temporal study is limited between the 18th century and 19th century.

1.6 RESEARCH METHODOLOGY

The research is based on the following methodologies:

The historical method: Tracking the historical development of (*suzani- ikat*) on textiles in Central Asia.

Artistic analytical method: The research addresses, in an artistic analytical study for vegetal elements in a selected Central Asia textiles (*suzani- ikat*), as well as an artistic study of the designs that inspired from Central Asia's textiles elements.

2 THE HISTORICAL STUDY

History of clothing might have started in Central Asia because of cold winters in the region. In order to keep people from freezing to death, clothes were of huge importance to Central Asians. It is not a coincidence that the oldest needles, which had been made of bone and ivory around 40,000 BC, were found in Central Asia. For this finding, Central Asians are generally attributed for inventing sewing.

The first textile found in Central Asia is that of 3,200 BC, from the North Caucasus culture. This textile is made of wool and is so far the oldest archaeological record made of that material. By 3,000 BC, herders in Central Asia used sheep's wool to make striped cloaks and skirts. They also made costumes out of hemp, which is a wild plant growing all over Central Asia. However, there are hardly any existing textile samples during this period because wool and plant-fiber threads, with which textiles are mainly made of, cannot survive millennia. This makes it difficult to identify textile traditions of the early years of Central Asia. Thus, textiles of Central Asia during and before Bronze Age are not very much known.

2.1 BEFORE THE ESTABLISHMENT OF THE SILK ROAD

The earliest nomads are considered to have mounted during the 7th century BC. Since then, many nomadic cultures entered Central Asia. Incoming of many nomads led to violence in the region. Fights over grasslands often caused conflicts between nomads. The winner took the grasslands and the loser had to move to another place to feed its herd. Through this process, some of the nomadic cultures such as the Scythians and Cimmerians succeeded in extending their influences over large areas. The nomads used their textiles for practical uses. Textiles were highly decorative yet still were necessity because their nomadic lifestyle required textiles for various pragmatic purposes. For instance, the ground inside the yurts had to be covered with rugs in order to make them habitable. Bands hung around the yurts were for realistic function of insulation. (Lee,2009,5-7)

2.2 THE SILK ROAD INFLUENCE

In 200 BC to 1400 AD as trade routes between China and Europe were activated, small sedentary cities were established along the Silk Road. These cities were usually located near oases where their inhabitants could supply themselves with

enough water required for living. They functioned as intermediate stations of the Silk Road. Merchants would stay at those cities and prepare their long journey. The Silk Road brought great wealth into Central Asia. Silk was introduced into this region from China. *ikat* weaving skills, although it is uncertain where it exactly came from, was brought into the region. Along with the wealth, also transported through the Silk Road were culture, religion and technology. Such Cultural influences were greater in oasis cities than in nomadic societies, mainly because oasis cities had more contact with merchants traveling along the Silk Road.

Oasis dwellers had more decorative textiles than nomads did. Urban population developed more ornamented textiles because they needed indicators of rank and wealth. Rich residents wanted to wear complex textiles to show their wealth and high rank. General idea was that the more intricate a person's clothes were, the higher his social stature was. Those who were in the upper class of the society required more and more decorated clothes. Finally, clothes making reached a level where an individual artisan could not make prestige textiles without help from others. Specialized groups of textile makers emerged to make it easier to produce prestige textiles. (Lee,2009,8)

2.3 ISLAMIC INFLUENCE

Islam came into Central Asia in about the 8th century. The Battle of Talas in 751 between Abassid Chaliphate and Chinese Tang Dynasty signaled mass conversion to Islam in Central Asia. Since then, Islamisation took place in the region. Islam culture fused with Central Asian native culture, forming many Islamic practices known as folk Islam. Samarqand, Bukhara, Shakhrisabz and Urgench flourished as centers for Islamic learning, culture and art in the region until the 13th century Mongol invasion.

Influx of Islamic culture brought the new forms of pattern and design into Central Asia. Textiles of oasis dwellers before Islamic influence mostly had motifs of antler horns, ram horns, or other animal figures that can be perhaps associated with animism cult of the region that predated Islam. However, as Islam spread into Central Asia, those animal motifs disappeared. (Lee, 2009,12) Instead, abstract patterns replaced their place. One of the reasons for this shift was that Islamic religion prohibits the use of realistic images. (Mack,2006,4) Using realistic figures is feared by Muslims because they believe it is idolatry and thereby a sin against Allah, which is forbidden by the Qur'an. It is also conjecture that infinitely repeating patterns symbolized Islamic understanding that Allah's presence is without end. (Lee, 2009,12) As a result Central Asia had fully entered the cultural orbit of the Middle East, and was no longer as open as it had once been to Chinese and Indian influences. (Lunde,1988,35)

2.4 MONGOL INFLUENCE

Islamic expansion stopped when the Mongols came into Central Asia in the 13th century. Genghis khan established the largest contiguous empire in history. The empire reached from the Danube to the East Sea.

Starting from 1220, Genghis Khan conquered city after city in Central Asia-Bukhara, Samarqand, Balkh, Nishapur, Herat, Merv. As the cities fell, hundreds of thousands people were slaughtered. The massacres were of appalling scale and cruelty. Textile makers of Central Asia were relatively lucky under Mongol rule. The Mongols enslaved artisans and took them to cities in Mongolia and eastern Central Asia before the massacres began. Artisans who were forced to leave their homeland worked for the Mongols by making luxury textiles. Mongol silks with exotic floral and animal patterns, which were not used under Islamic influence, was again acquired for clothing and furnishings for the clergy and nobility. Such patterns were also used by painters as models for hangings or garments.

Under Mongol rule, Central Asian culture was also affected by other cultures and in turn affected them. Central Asian textile culture was mixed with that of China under Mongol Empire. Artisans were drafted not only from Central Asia, but also from China. Central Asian and Chinese artisans were together confined in Mongol cities, where they exchanged textile weaving skills. Central Asia was a part of the Mongol empire until the legendary conqueror Timur established Timurid Empire in the 14th century. (Lee, 2009, 11-14)

2.5 TIMURID INFLUENCE

The history of the "Timurids" is dominated by the figure of the dynasty's founder, Timur, the paramount conqueror and (ruler of the world). (Hattstein and Delius,2004, 408) The campaigns of Timur-I lang (Meaning " Timur the lame"), better known in the West as Tamerlane, were devastating and far-reaching. (Khalili,2008,24)

Tamerlane established the Timurid Empire in 1370 and embellished his capital in Samarqand. The Timurids were Turks who conquered much of Greater Iran and Central Asia. (Ekhtiar and others, 2012,28) Tamerlane later converted to Islam, thus bringing the religion back to Central Asia, and became the ruler of the Islamic world and the whole of Asia. (Hattstein and Delius,2004, 408) As a result the Islamic art values appeared again, and the artists returned to use inscriptions, geometric elements and vegetal elements.

2.6 SHAYBANID UZBEK EMPIRE (EMIRATE OF BUKHARA)

The map of the eastern Islamic world was completely redrawn after the Timurid Empire was disestablished in 1526. Three new empires, with their centers far apart, developed out of inheritance left by the Timurid Empire: the Shaybanid Uzbek Empire in Central Asia, the Safavid Empire in Iran, and the Indian Mughal Empire. This new regional order remained remarkably stable for over two hundred years and led to a second flowering of Islamic civilization in all three empires. (Hattstein and Delius,2004, 430)

As a result under the Shaybanids, Bukhara was given the necessary infrastructure to replace Samarqand and the mercantile center of Central Asia and become an important junction in the widely extended trading network that now took in Siberia, China, India, Iran, Moscow and the Ottoman Empire. (Hattstein and Delius,2004, 433) Also, the city Bukhara became the center of textile culture in this era, an ancient city where various workshops for weavers, dyers, designers, and wealthy consumers resided.

In 1882, the emirate of Bukhara was incorporated as a Russian state. This had little cultural effect to Central Asians because European art still remained unknown to them. Traditional culture remained predominant in the region. In fact, the Soviet authorities wanted to maintain the existing carpet and textile industries, although they encouraged some cosmetic changes to them. (Lee, 2009, 18)

3 CENTRAL ASIAN TEXTILES

In the past, Islamic courtly and trade textiles always played a highly important role in the social and economic life of the Muslim world. (Anikst and others ,2011, 1) And Central Asia was historically an area where a variety of textiles were in evidence over a long period of time because of its position on the Silk Road. (Izrailova, 1998, 301) The making and trading of fine fabrics had been one of Central Asia's chief economic activities ever since the beginnings of the Silk Road, and through the long period of Islamic dominance, crucial skills and standards of judgment were preserved. (Clark , 2008,21) . Textiles, both for furnishings and costume, were an extremely important part of ceremonial and court life. There was a strictly regulated industry where silks, velvets and embroideries of superlative quality and design were produced in royal ateliers. The best were for the sole use of the ruler and his court, but they were also an important means of trade and diplomacy. (Anikst and others ,2011, 2)

The oldest surviving textiles are from the late 18th and early 19th centuries, but it seems likely that they were in use long before that. (Gough, 2003, 679). In central Asia there were two types of textiles famous the most: *suzani* and *ikat*. Firstly: *suzani*, the very root of it is believed to be in the Fergana Valley that spreads across eastern Uzbekistan, Kyrgyzstan and Tajikistan' (<https://sites.google.com/site/suzani,2015>) *Suzanis* were traditionally made by Central Asian brides as part of their dowry, and were presented to the groom on the wedding day. (Khalili, 2008, 145) Secondly: *ikat*, is a dyeing technique used to pattern textiles that employs a resist dyeing process on the warp fibers, the weft fibers, or in the rare and costly 'double *ikat*' both warp and weft, prior to dyeing and weaving. ([http:// wikipedia.org//Ikat,2015](http://wikipedia.org//Ikat,2015))

In the following, there is a historical and artistic study of both *suzani* and *ikat*, the research will tackle their historical development and the technique used to implement them. An artistic analytical study followed the previously mentioned this study depended on (460) pieces of (*suzani - ikat*) ,and it is based on two axes:

Firstly: artistic analysis for the used layout in designing the pieces of *suzani* and *ikat*.

Secondly: artistic analysis for the used vegetal elements in each (*suzani - ikat*) by sketching their elements to see the difference between their treatments.

3.1 SUZANI

Suzani is a type of embroidered and decorative tribal textile made in Tajikistan, Uzbekistan, Kazakhstan and other Central Asian countries. (<http://en.wikipedia.org/wiki/Suzan, 2015>) Since ancient times *suzanis* have been integral parts of the common home interior decoration in the region. (<http://www.centralasia-travel.com/en/publication/suzane,2015.>)

The word *suzani* comes from the Persian *Suzan* which means needle, suggesting its Persian, and then Tajik roots. (<http://www.santarosa.edu/art-gallery>, 2015) The birthplace of *suzanis* is in what is now Uzbekistan, the area along the Silk Roads that interconnected the cultures of Europe, Turkey and China with the Muslim world. (Stone,2006,97) All *suzanis* are both a nomadic and urban tradition. Most of the surviving *suzanis* are thought to have been made in the urban region of Bukhara in Uzbekistan. In the old times female family and friends of a young girl joined together to help her make textiles furnishings that would become part of her dowry and the décor of her home upon marriage. (Dukes, 2011) They were an important part of a girl's dowry and were used for decorative purposes in Central Asian households. *Suzanis* were displayed at the wedding and then used to drape the walls of the bride's new home. It was always placed on the wall opposite the entrance door, so that the guests saw the most dramatic piece (of size, color and design) as soon as they entered the house fig (2,3,4). (Izrailova, 1998, 304)

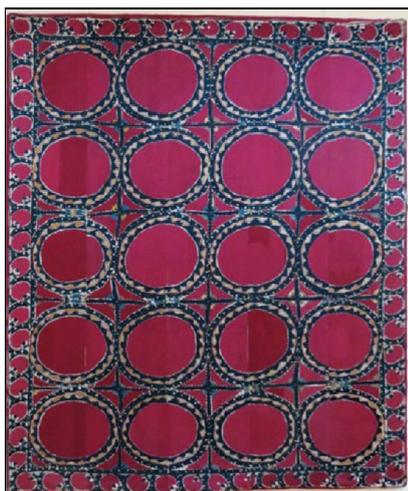


Fig (2)

Large embroidered *suzani*-Tashkent-18th century. (Gillow, 2013,187)



Fig (3)

Large embroidered hanging of *suzani*- Turkistan- 19th century. ((Harris,2010,92)



Fig (4)

Large embroidered *suzani*-Paskent-19th century. (Gillow, 2013,187)

3.1.1 TECHNIQUE

In making a *suzani*, it was rarely the embroiderer herself who sketched the design. Traditionally, an older woman in the family or village would be the one to draw and design the motives for the embroideries in her family, and pass on these personal designs and motives to a younger woman of her family before her death. (<https://sites.google.com/site/suzanicapetown>, 2015) But most commonly, when a girl's dowry was being prepared, fabric would be taken to *akalamkash*, an older woman who acted as the local designer. Here lies the uniqueness of the *suzani*. In its asymmetry, in its inconsistencies, in its delightful flaws lies its beauty. (Harris, 2010, 93)

Suzanis are characteristically worked on four to six narrow strips of cotton, linen or silk, which before 1900 were generally home-woven. After the design is drawn, the strips are divided up to be worked by different members of the family. When the embroidery was complete, the strips were sewn together again. (Gillow, 2013, 186) As a result, the patterns of the *suzani* can appear slightly misaligned or asymmetrical, and it is not uncommon for the shades of color to vary from one strip to the next, for no two batches of natural dye come out exactly the same. (Stone, 2006, 99).

The fabrics are often lightly dyed in a "tea bath" to produce a soft beige tint, the so-called "tea wash". *Suzanis* usually have a cotton (sometimes silk) fabric base, while the *suzani* embroidery threads are normally silk, or sometimes cotton, and very rarely wool. (<http://en.wikipedia.org/wiki/Suzan>, 2015) There are two traditional stitches used in a majority of the pieces: primarily *basma* stitch fig (5), sometimes called *Bukhara couching*, and less often, chain stitch fig (6). With the *basma* stitch, long strands are first laid across the fabric surface. Then these are secured with short couching stitches that are normally aligned diagonally. This stitch is especially effective for covering sizeable areas. The appearance can vary in character: some of the stitching is smooth, fine, regular and flat; on other examples, the stitched areas assume an almost three-dimensional character and texture, which shows off the lustrous silks to their full advantage. In any case, this

technique makes large, generous, dramatic motifs possible. Sensitive artisans match the scale of the stitching perfectly to the designs in their luxurious pieces. (<http://www.marlamallett.com/suzanis.htm>, 2015).

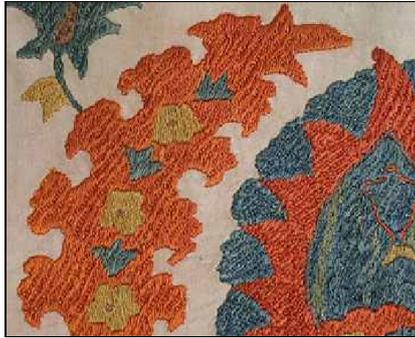


Fig (5)
Basma stitch, or Bukhara couching, worked in silk on an Uzbek Suzani .



Fig (6)
Detail of an Uzbek Suzani which is all chain stitch done with a tambour hook.

In the older pieces, of course, natural dyes were used: indigo from India for blue, cochineal and madder for red, saffron from the wild crocus for yellow, pomegranate skins or pistachio galls with iron for black. The background color of the earliest and finest pieces tends to be the natural cotton or linen; the use of colored grounds—yellow, pink, red or sometimes violet—seems to be a later development. Silk backgrounds are associated with certain nomad groups such as the Lakai and with the brilliantly colored. (Stone, 2006,101).

3.1.2 FIRSTLY: ARTISTIC ANALYSIS OF SUZANIS' LAYOUT

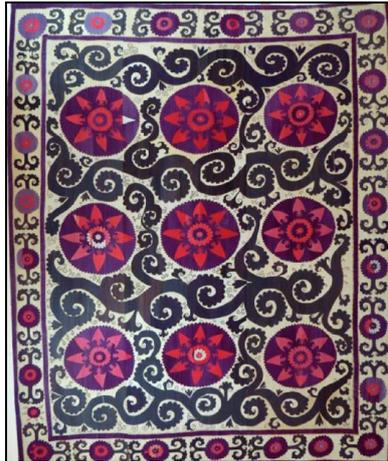
The most common type of designs in the center of Asia is a design depends on dividing the workspace geometrically to squares, filled with highly abstracted floral elements that take circular shape occasionally with a star, and is often stylized to look like giant flowers, surrounded by a thin vegetal frames fig.(7), and in some cases the spiral branches have been used as a mean to divide the workspace, fig.(8). In some times, the vegetal element is used as a pattern, repeated in the workspace of the *suzani*, these elements, sometimes, came in its normal form fig.(9,10), and in other times it appeared abstracted fig.(11,12).

Another layout appeared for the *suzani's* designs, relied on the usage of a wide vegetal border that takes the form of a rectangle, this frame consists of a varied group of flowers, its branches are repeated over and over regularly in a beautiful coherent, as the flower is repeated interchangeably with vegetal branches around the frame, as it eventually create a sort of wavy lines, which an abstract big flowers with different shapes fill its blank, but these flowers are somehow characterized with a convergence of colors and sizes. These *suzanis* frequently have a central field; its decoration consists of lattice compartments with single fig.(13,14) or multiple floral motifs fig.(15,16).

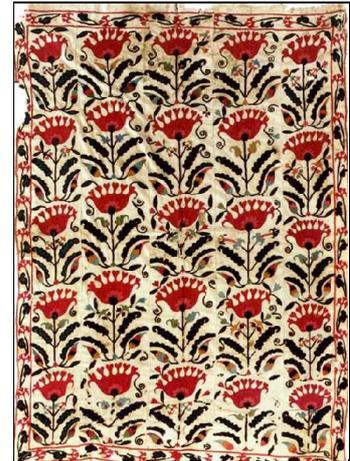
Although this style is commonly used, thin frame has been used instead of the wide one, fig.(17). But sometimes, these floral motifs that exist in the middle of the design did not take that exact geometric coherence, instead, they took different sizes and shapes and fluently overlapped with leaves and vegetal branches, as the flexibility, overlapping, and spreading are dominant in the elements fig.(18,19).



Fig(7)



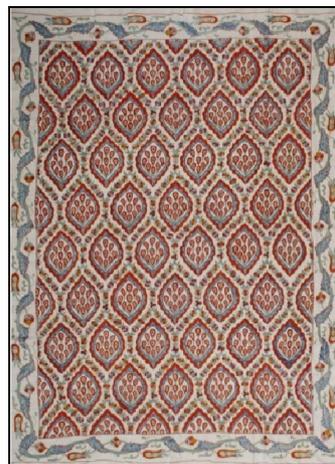
Fig(8)



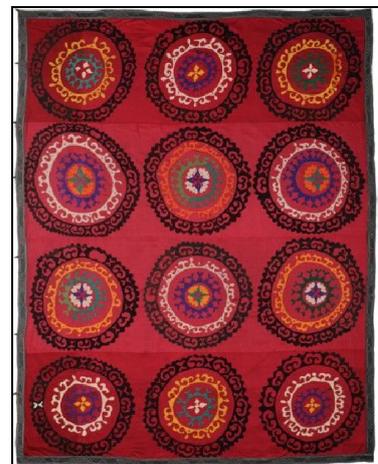
Fig(9)



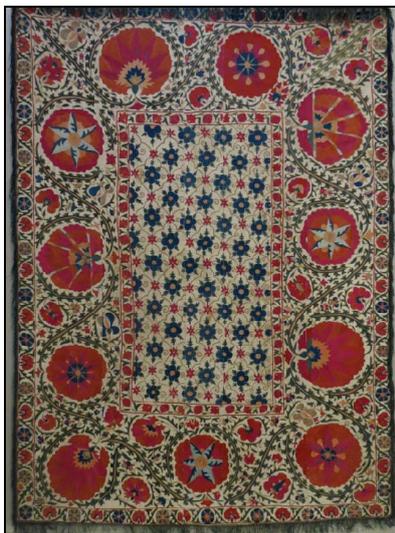
Fig(10)



Fig(11)



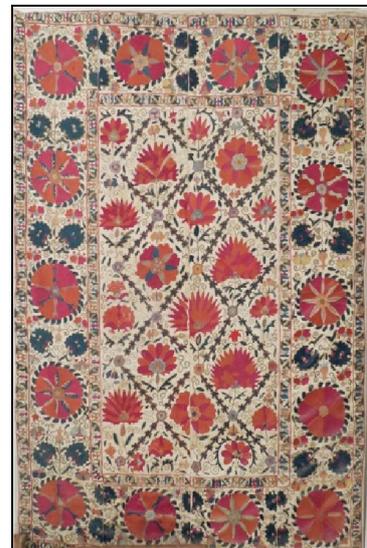
Fig(12)



Fig(13)



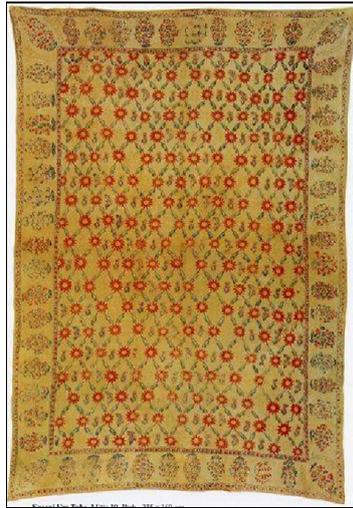
Fig(14)



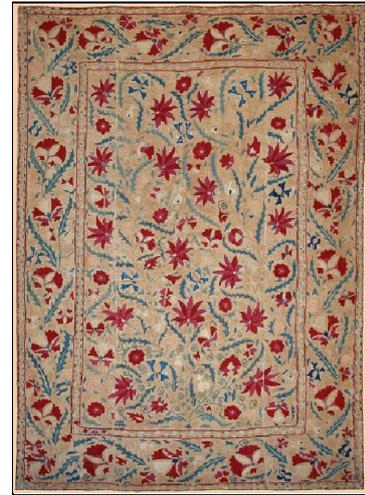
Fig(15)



Fig(16)



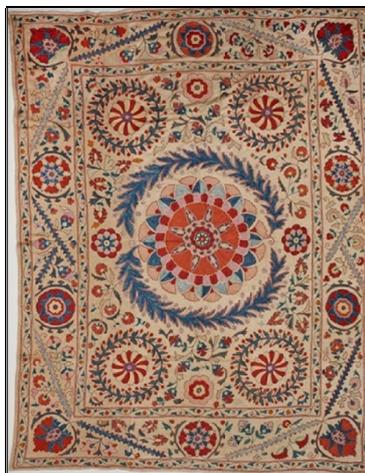
Fig(17)



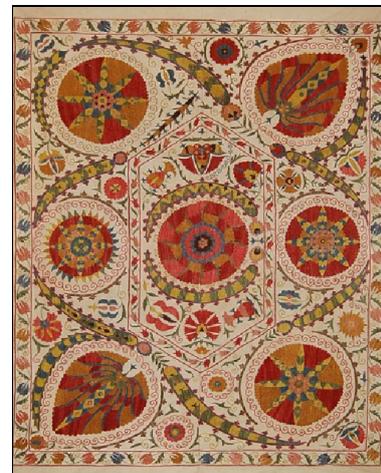
Fig(18)



Fig(19)



Fig(20)



Fig(21)



Fig(22)



Fig(23)



Fig(24)

One of the most spread designs on large *suzani* consisted of a big central rosette, where the main decoration consists of a large roundel of flowers blossoms and leaves surrounding a rosette framed in narrow borders. The rosettes were known as *lola* (tulip), and were arranged in symmetrical order fig.(20,21,22) . The artist sometimes replaced the rosettes with astral

shape with eight fig.(23,24), twelve fig.(25), or sixteen points fig.(26), this star consist of a group of different sizes, shapes, and colors of flowers, and linked with a punch of vegetal branches.

As shown previously, most *suzani* designs derive from the same compositional scheme; a central field surrounded by borders on all four sides. This scheme has a long tradition in the arts of central Asia and in Islamic art in general. But occasionally there was another layout as a result of using these *suzanis* as a prayer rug, it had a pointed niche, *mihrab*, its arch usually decorated with floral motifs and arabesque forms, leaving the central field either empty or with a single motif at the top of the niche fig.(27). (Izrailova, 1998,303)



Fig(25)



Fig(26)

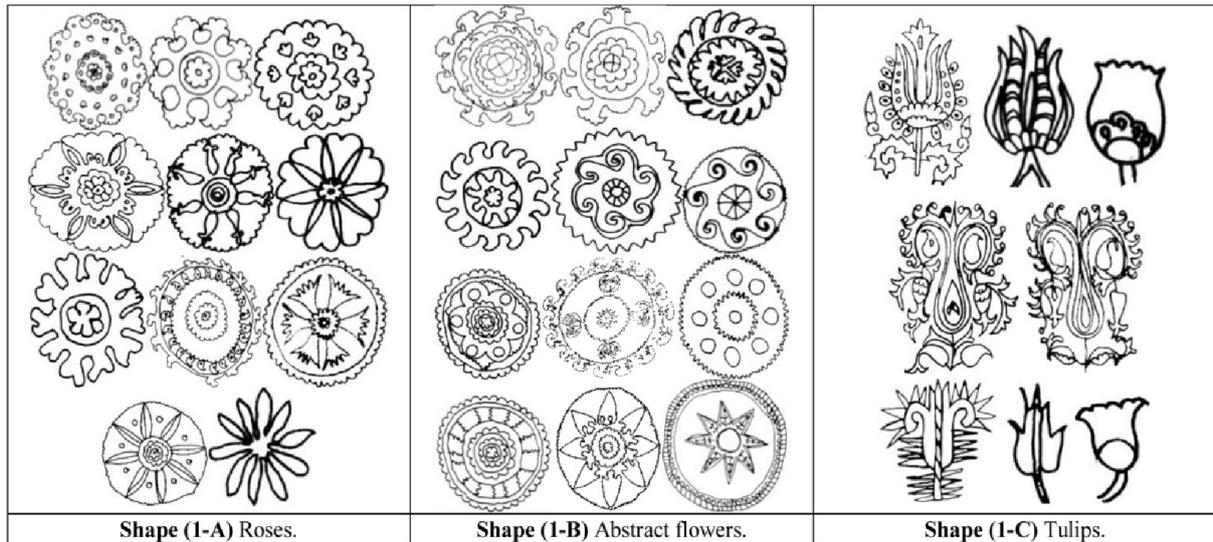


Fig(27)

3.1.3 SECONDLY: ARTISTIC ANALYSIS OF SUZANIS UNITS

The motifs on the *suzanis* go back much further, however, and they are linked to trade. The wealthy families of the cities of the Silk Roads and of the Khanates of Bukhara and Khokand had long had contact with the textiles of India, China and Persia, as well as decorative motifs from the West. Flowers and leaves are the most common motifs found in *suzani* designs, not surprising in a region where agriculture is the major economy and many homes have courtyard gardens. These magnificent floral designs were symbols of a Muslim paradise garden, and a *suzani* drawing came to represent the image of an ideal universe. (Dukes, 2011)

On *suzanis* many of the flowers were represented, using the motif of the same plant, in their full life-cycle, from bud to full bloom to withered remnant. (Stone,2006,104)The most frequently embroidered flowers were roses shape (1-A) in table (1) which appeared on some pieces very abstracted shape (1-B), tulips shape (1-C), wild hyacinths shape (1-D), peony flowers shape (1-E), lotuses shape (1-F), poppy shape (1-G), lily shape (1-H), floral palmettos shape (1-I), narcissus shape (1-J), irises shape (1-K), chrysanthemums shape (1-L),carnation shape (1-M) and buds shape (1-N).



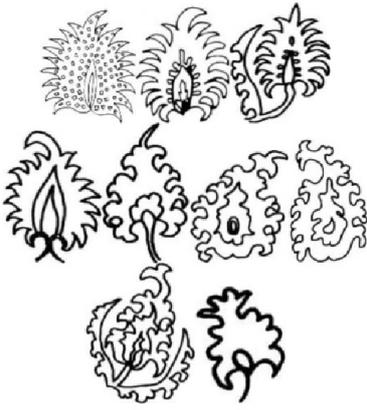
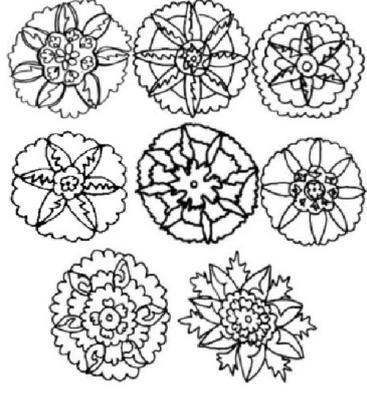
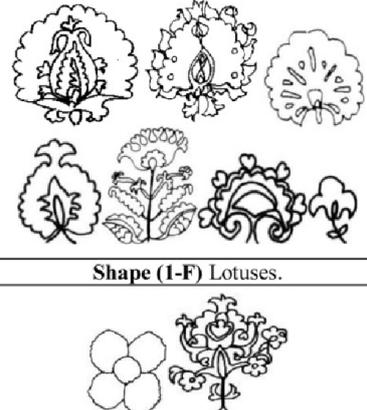
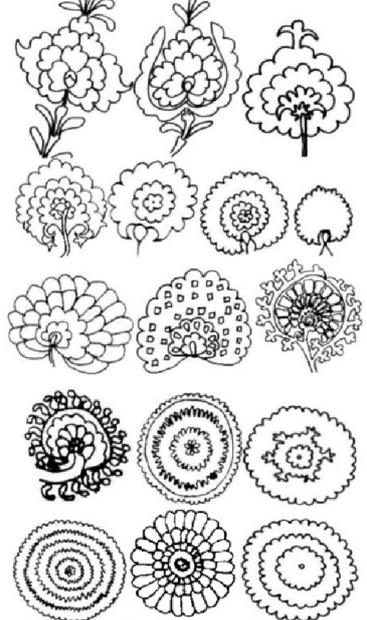
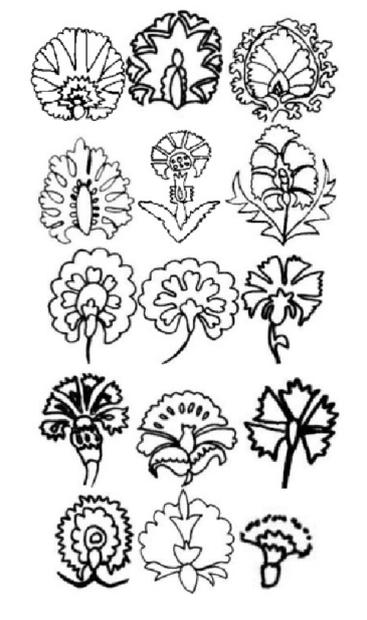
		 <p style="text-align: center;">Shape (1-F) Lotuses.</p>
<p style="text-align: center;">Shape (1-D) Wild hyacinths.</p>	<p style="text-align: center;">Shape (1-E) Peony flowers.</p>	<p style="text-align: center;">Shape (1-G) Poppy.</p>
		 <p style="text-align: center;">Shape (1-J) Narcissus.</p>
<p style="text-align: center;">Shape (1-H) Lily.</p>	<p style="text-align: center;">Shape (1-I) Floral palmettos.</p>	<p style="text-align: center;">Shape (1-K) Irises.</p>
		 <p style="text-align: center;">Shape (1-N) Buds.</p>
<p style="text-align: center;">Shape (1-L) Chrysanthemums.</p>	<p style="text-align: center;">Shape (1-M) Carnation flowers.</p>	<p style="text-align: center;">Shape (1-N) Buds.</p>

Table (1)
Suzanis' flowers.

Table (2) showing the most frequently embroidered fruits were pomegranates shape (2-A), cherries shape (2-B) and almond flowers shape (2-C). The *botah* motif "paisley", shaped like a teardrop and perhaps a version of the "tree of life" design, reached this area from Persia as early as the fifth century BC and it took many forms in *suzanis* as shown in shape (2-D). Many people in central Asia believed the floral motifs, as well as paisley and pomegranate motifs, are symbols of fertility and prosperity.

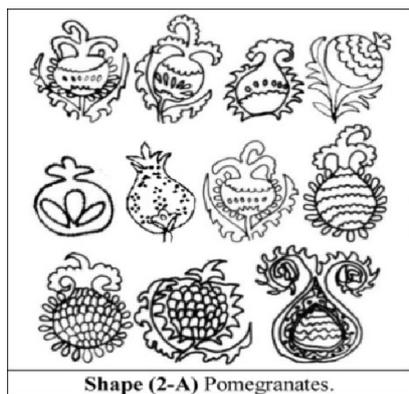
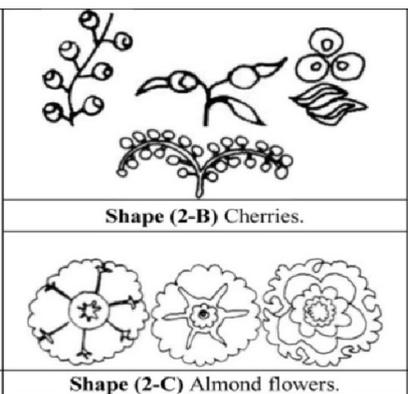
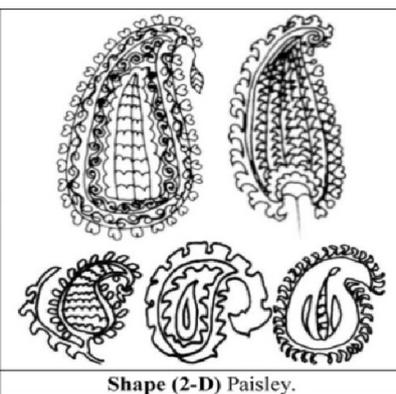
 <p>Shape (2-A) Pomegranates.</p>	 <p>Shape (2-B) Cherries.</p> <p>Shape (2-C) Almond flowers.</p>	 <p>Shape (2-D) Paisley.</p>
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Table (2)
Suzanis' fruits & Paisley.

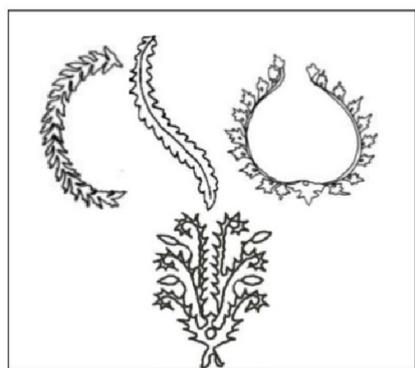
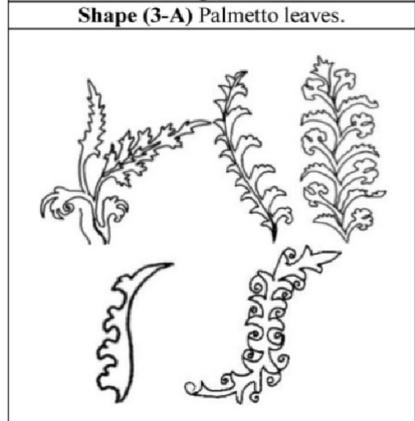
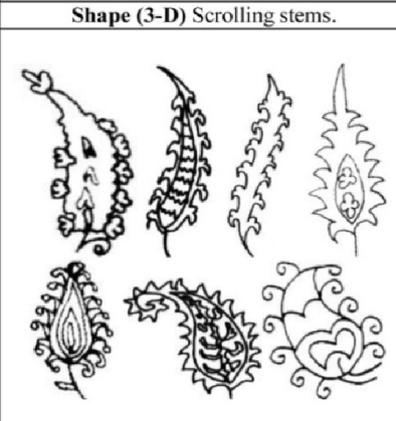
 <p>Shape (3-A) Palmetto leaves.</p>	 <p>Shape (3-B) Lancel leaves.</p>	 <p>Shape (3-C) Sinuous leaves.</p>
 <p>Shape (3-D) Scrolling stems.</p>	 <p>Shape (3-E) Saz leaves.</p>	 <p>Shape (3-F) Garlands.</p>

Table (3)
Suzanis' vegetal leaves.

Vegetal leaves were used as well as flowers as appeared in table (3), the Central Asia artists created compositions with palmettos shape (3-A), lancet leaves shape (3-B), sinuous leaves shape (3-C), floral scrolling stems shape (3-D) and long dentate tulip leaves so called as Saz leaves shape (3-E). Leaves in vegetative patterns can be of several shapes, and garlands of leaves are widely used shape (3-F) as a boarder surrounding flowers.

Floral rosettes widespread on *suzanis*, they used as a primary unite consisted of several kinds of flowers surrounded with stems and leaves. The rosettes took roundel shapes as in shape (4-A) or astral figures shape (4-B).

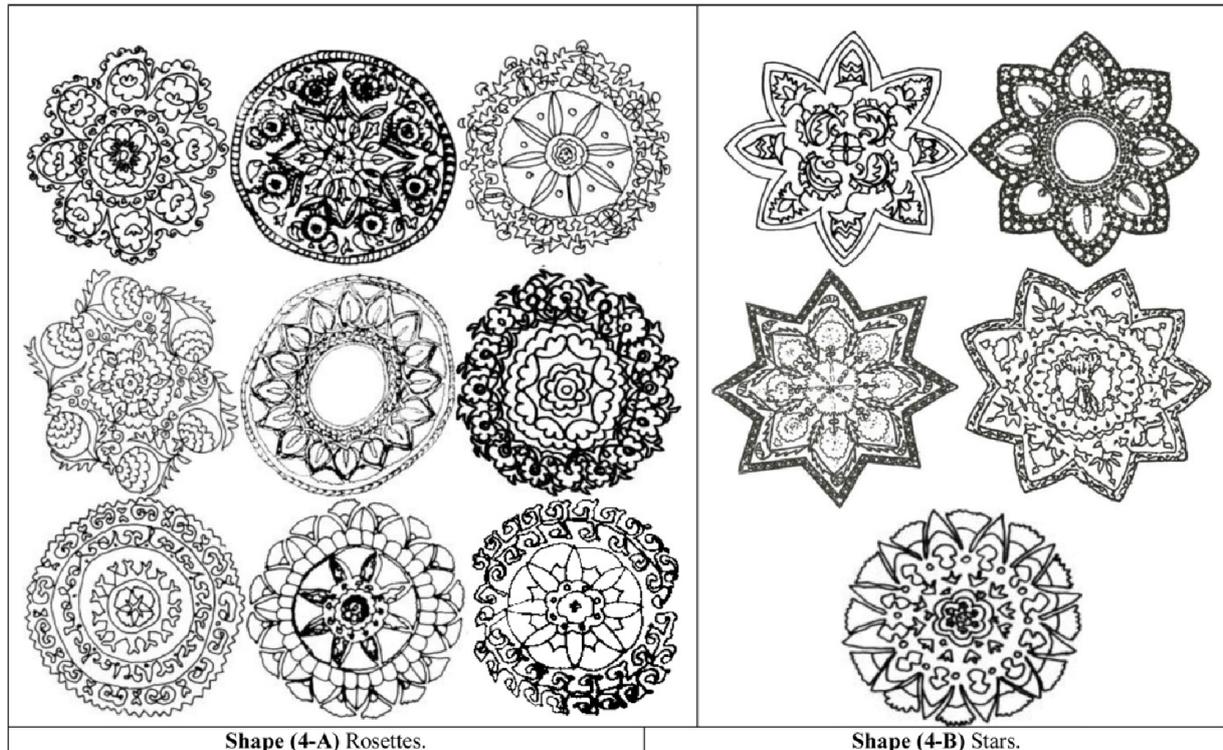


Table (4)
Suzanis' rosettes.

3.2 IKAT

The word 'ikat' (pronounced 'ee-KAHT') comes from the Malaysian word 'mengikat' or 'to tie' (<http://www.anahitagallery.com>, 2015). *Ikat* is now the word used worldwide, even though the traditional word in Central Asia was *abrbandi*, which joins the Persian words for "cloud" and "workshop," and in common usage, the term came to refer to both the woven products and the workshops. The region of Central Asia that took *abrbandi* to its greatest artistic height is now mostly within Uzbekistan. (Yulo, 2015,6)

Unlike a majority of textiles that are woven with solid-colored thread or are printed or dyed after weaving, *ikat* is produced using the reverse process. Individual threads are first dyed with several colors that, when woven together, produce the energetic patterns unique to this textile tradition. Successful application of this complex technique requires extensive forethought and teamwork between various craftsmen and the designer. For this reason, *ikat* has been celebrated in Central Asia as one of the region's great arts. (Russo, 2012, 47) *Ikats* were shaped into more or less elaborate personal costumes fig (28,29), or suitably enlarged and employed as hangings within the home fig (30). Hence they became crucial indicators of social power. Richness and originality of design, especially in a person's ceremonial robes, came to be more and more a key marker of age and social standing. Some high-ranking officials wore up to ten robes at once according to their wealth and status. (Harris,2010,94) Naturally, the royal courts took a leading role: *ikats* became a preferred item of diplomatic gift giving, with especially sumptuous and intricate examples exchanged between rulers and honored guests. (Clark, 2008,23)



Fig(28)

Man's coat, Bukhara, 19th century, silk ikat. (Hattstein, 2004, 434)



Fig(29)

Silk ikat coat- Central Asia – 19th century. (Khalili, 2008, 152)



Fig(30)

Ikat panels – Samarqand-19th century. (Gillow, 2013, 197)

In all its variations, there were different levels of *ikat* quality. The best used silk for both warp and weft; at the very top was a velvet weave that required an extra set of warp threads to make the pile. The plainest used cotton in the weft and silk only in the warp. (De Guise, 2007, 16).

In the 1800s, Central Asia experienced a period of economic and cultural growth, and the golden age of *ikat* making was closely bound up with this new dynamism. (Meller, 2013) Various types of traditional high-quality fabrics, brightly coloured and with an ingenuity of design, were being made in the cities and villages of Central Asian Samarqand and Bukhara in modern-day Uzbekistan and Kabul and Kunduz in Afghanistan (Clark, 2008, 22) Such fabrics, as well as robes made from them, played a leading role in both the external and internal trade of the Bukhara emirate during this century. (Russo, 2012, 47)

3.2.1 TECHNIQUE

Ikat from Central Asia is warp *ikat*. The craftsmen used to use silk warp yarns, while silk or cotton were used for the weft yarns. (Gough, 2003, 670) The production of fabrics with *ikat* (*abr*) patterns was the most labor-intensive of the decorative methods. It required a craftsman artist to draw a pattern onto the silk warp yarns and then, according to a predetermined sequence of colors, (Russo, 2012, 47) parts of the warp bundles were tightly bound with cotton threads that resisted dye penetration when they were immersed in vats of dye, once, or several times, depending on the complexity of the pattern. (Gough, 2003, 670) This technique is still used today in Uzbekistan. The *arb* technique added hidden movement to the decoration of the fabrics, eliminating a strict symmetry to the design. (Russo, 2012, 47)

Above all, color was the most vital ingredient in the luxuriance of *ikat*: the more colors, the more prestigious the result. Before inexpensive industrial aniline dyes brightened the look of all textiles in the second half of the 19th century with their harsher colors, the cloths of Central Asia were dependent on pomegranate peel for black dyes, crushed cochineal insects for deep reds, the madder plant for lighter reds and mauves, and other sources for a wide palette of greens, yellows, indigos, pinks and violets, all used extensively by the *ikat* dyers. (De Guise, 2007, 19)

The most exciting *abra* was made in Bokhara or Ferghana in Uzbekistan, but much of the more common work was made at Penjikent, Khojent and other centers in Tajikistan. (Gillow, 2013, 214)

Finally, it could be saying that according to the difficulty of *ikat* production, it required the expertise of highly specialized craftsmen and their assistants and apprentices. (Gough, 2003, 670)

3.2.2 FIRSTLY: ARTISTIC ANALYSIS OF IKAT'S LAYOUT

In Central Asia's countries highly dramatic *warp-ikat* robes were worn by the men, women and children of wealthy or prominent families, and the walls of their rooms were clad with the finest *ikat* hangings. ^(Gillow, 2013, 184)

From here, a varied group of *ikat* designs appeared, but differed in their layout. Some *ikat*'s fabrics were relied on the organized repetition of distributing the motifs as a pattern all over the textile space, that mostly depended on one vegetal element fig.(31), or on a group of vegetal elements which formed the composition fig.(32,33). These units are mostly abstracted as most of the used units in the *ikat*, but sometimes the vegetal elements were simulated to nature as in fig.(34,35). In dying those pieces, most often the artist used more than a color, and occasionally used one color which is often red. There was a disparity in those designs, from simple designs to complicated ones fig.(36,37,38).

A group of designs has appeared that depend on the reflectance feature of vegetal decorations, so the elements and its reflection appear on the vertical axis or the horizontal axis, and sometimes on the both axes fig.(39,40) which created symmetrical shapes.

But the most difficult *ikat*'s designs to implement is the ones that rely in its construction on the strips form, as the workspace is divided into a group of vertical strips that are filled with vegetal and geometric elements, more than three colors were used in making it fig.(41,42), which require a high-skilled artisans because of the richness of the design and its highly number of details.

To sum up it could be conclude that in Central Asia, the design spirit was as bold as the topography, abstract designs and vibrant colors, the result of painstaking and highly skilled work by craftsmen throughout the region. (Gough,2003,670)



Fig(31)



Fig(32)



Fig(33)



Fig(34)



Fig(35)



Fig(36)



Fig(37)



Fig(38)



Fig(39)



Fig(40)



Fig(41)



Fig(42)

3.2.3 SECONDLY: ARTISTIC ANALYZE OF IKAT'S VEGETAL ELEMENTS:

Central Asia is among the finest in the long history of the technique of *ikat*. The continually inventive range of patterns, vivid use of color and the mastery of the technique achieved by teams of dyers and weavers all combined to produce magnificent, striking textiles. (Clark ,2008,24)

The patterns that were dyed and woven into the cloths used motifs that date back millennia.(De Guise, 2007,19) The *ikat* was used frequently in the tree of life as it appeared in many shapes and depended deeply on combining more than a fruit type or flowers with vegetal branches, as in shape (5-A). However, in many motifs the tree of life was so abstracted which made it difficult to differentiate between what the branches carries, whether it was fruits or flowers, shape (5-B).

The spread of the usage of the lotus appeared in many *ikat* pieces and took different shapes and artistic treatments, the geometric and abstracted shapes appeared thereof, shape (5-C). The *ikat*, as well as the *suzani*, used the tulip shape (5-D), lily flowers shape (5-E), and the roses that varied in its shapes, between detailed unit in an attempt to simulate the nature shape (5-F), and other simplified and abstracted units shape (5-G). Buds shape (5-H)and wild hyacinths shape (5-I)were used too.

The use of the paisley (*boteh*) was restricted to be an assistant element that appeared near the main element which fill the blanks in the background, so most of the time, a simplified shapes appear, shape (5-J). As for the fruits, a varied group of it appeared such as: pomegranate shape (5-K) and cherries shape (5-L).

Many shapes of vegetal leaves, like the oak leaves, that took the shape of the S letter shape (5-M), the vegetal elements also took many shapes and appeared near the main element shape (5-N).

Generally, one can conclude that the vegetal elements that have been used in the *ikat* were characterized by severe abstraction and modulation sometimes, and these vegetal elements had two styles; the first is a single vegetal element, while the second is a composition of numerous plants or abstracted flowers.

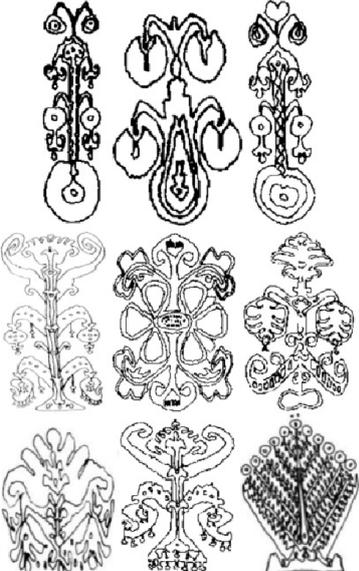
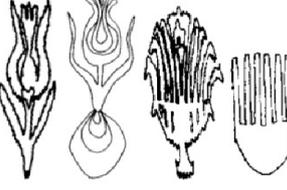
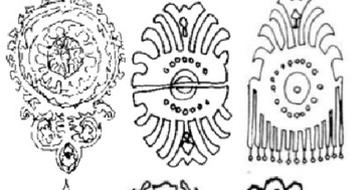
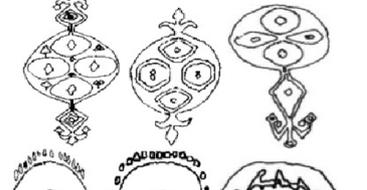
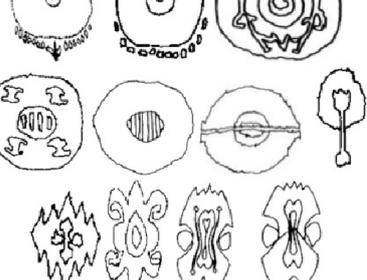
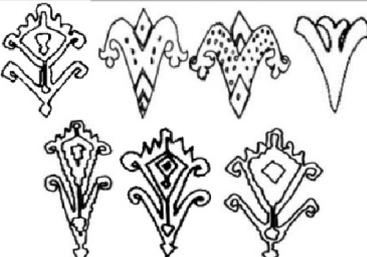
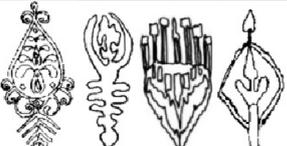
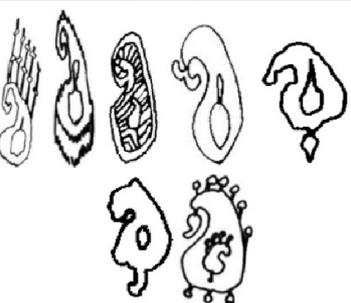
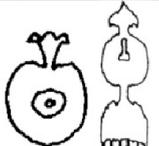
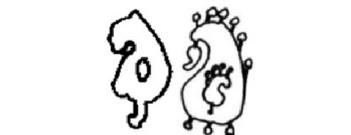
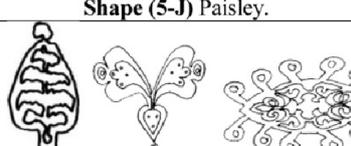
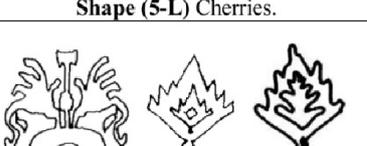
		
<p>Shape (5-A) Life tree.</p>	<p>Shape (5-B) Abstract life tree.</p>	<p>Shape (5-C) Lotuses.</p>
		
<p>Shape (5-D) Tulip.</p>		
	<p>Shape (5-F) Roses.</p>	<p>Shape (5-G) Abstract roses.</p>
		
<p>Shape (5-H) Buds.</p>		<p>Shape (5-K) Pomegranates.</p>
	<p>Shape (5-J) Paisley.</p>	<p>Shape (5-L) Cherries.</p>
<p>Shape (5-I) Wild hyacinths.</p>		
	<p>Shape (5-N) Leaves.</p>	
<p>Shape (5-M) Oak leaves.</p>	<p>Shape (5-N) Leaves.</p>	<p>Shape (5-N) Leaves.</p>

Table (5)
Ikat's vegetal elements.

4 DESIGN IDEAS

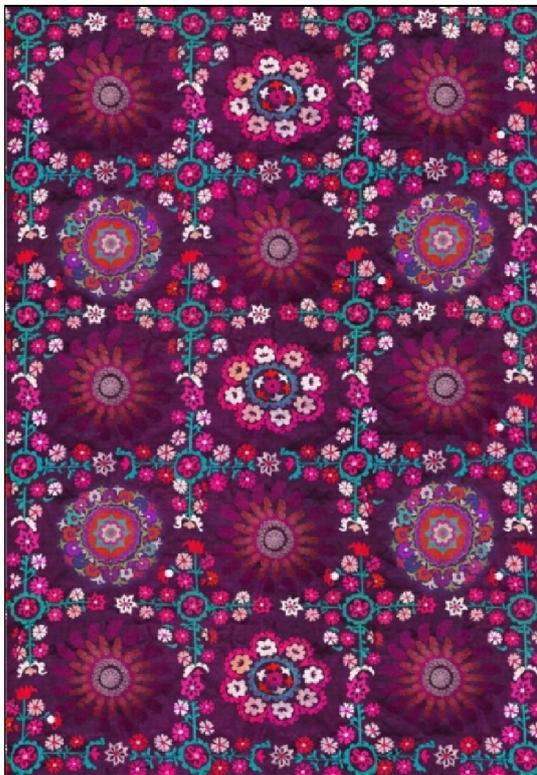
In the following a number of design ideas, and the outcomes of its treatment using computer are illustrated. It has been taken into account in regards of these ideas, the structural, plastic and aesthetic basics of design that are suitable for printed upholstery fabrics. An artistic analysis is attached with each independent design idea.

4.1 DESIGN IDEA NO.(1)

This design idea used more than one of the rosette's shape that are derived from the *suzani's* embroideries, which consist of a group of similar flowers that are linked together with vegetal branches, in addition to other rosette depending on the paisley elements in its structure.

The rosettes have appeared in one size and have been repeated regularly within vegetarian network that depend in its structure on a varied group of vegetal elements like flowers, leaves, and branches.

Derived idea was inspired from the original one that can serve as curtain fabrics, it depends intensively on the distribution of the vegetal elements inside the reticular shape in the lower part of the design, while the rosettes are diffused and repeated in the upper part of the work, the colors has appeared vivid and strong as was used in the *suzani*.



Design idea no.(1).



Derived idea.



Suggested usage.

4.2 DESIGN IDEA NO.(2)

A group of *ikat* elements that were combined together, was used in this design as it take the same style of the central Asian *ikat*, to assure the connection between the idea and the style of the artists of Central Asia, the vegetal elements have been repeated a regular repetition in the form of strips interchangeably with geometric elements.

It also used the reflectance feature scattered in the art of designing *ikat* in repeating those strips reflectively around the horizontal axis as it was a mirror. The brown color and its shades were used in the design, without using any other color.



Design idea no.(2).

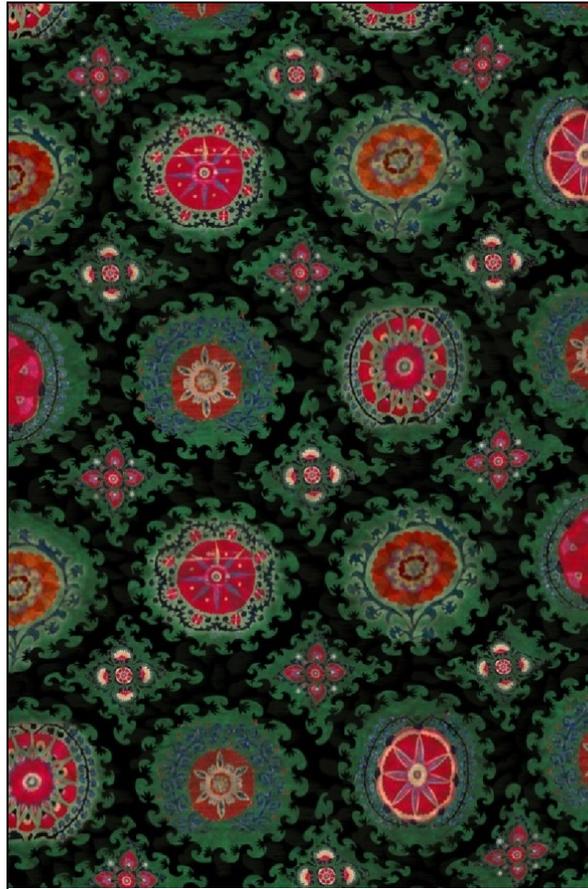


Suggested usage.

4.3 DESIGN IDEA NO.(3)

This idea depended on a network of a set of identical circuits consisting of spiral vegetal branches, this shape was commonly used on the textiles of Central Asia. A circular spaces was resulted from this network which have been filled with rosettes that are derived from the *suzanis*, and the diamond-shapes that have been filled with a form of a rose with four petals, each petal takes the shape of flower.

The *ikat* technique has been added to the background, the design combines between the aesthetic of the *suzani* and the *ikat* technique. A set of compatible colors were used in this design, and the frames in black assured the unity of the varied elements in this design.



Design idea no.(3).

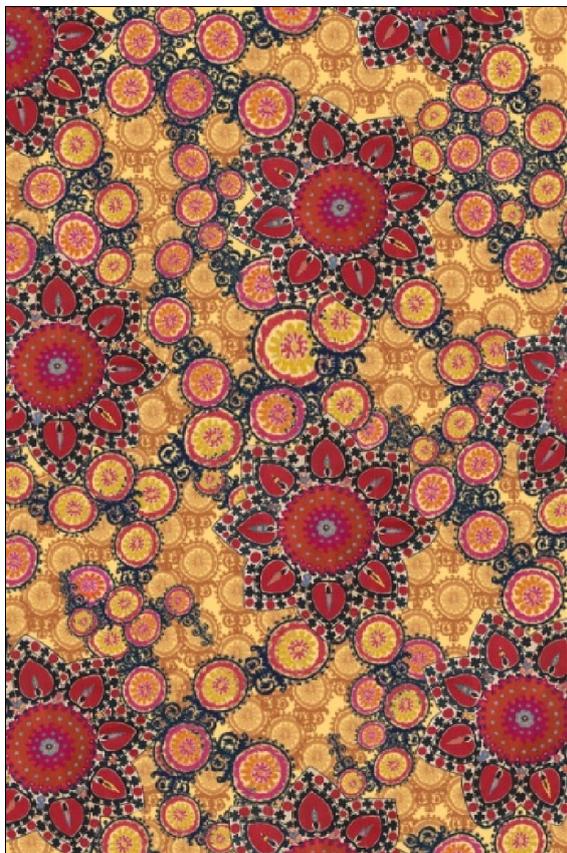


Suggested usage.

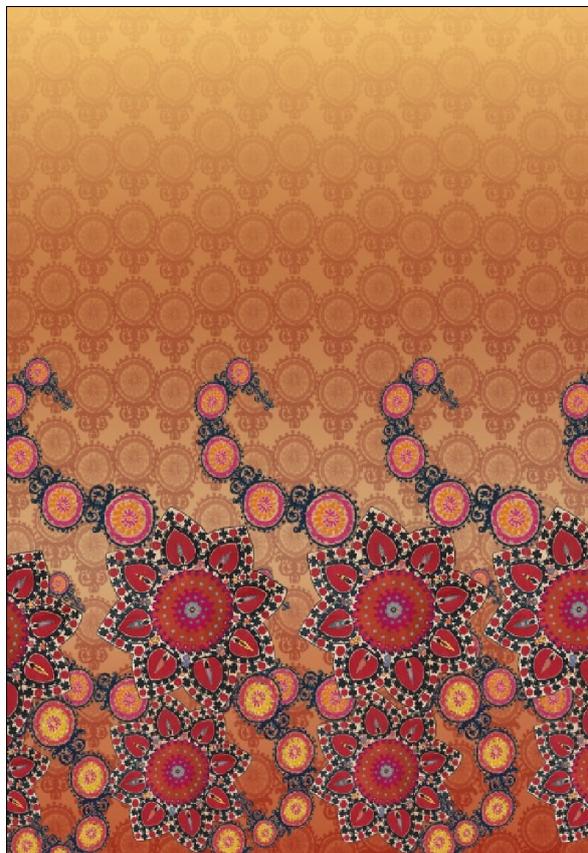
4.4 DESIGN IDEA NO.(4)

The basis of this design was the merging between the *suzanis'* elements and the *ikat's* to enrich the design. The eight-pointed star which derived from the *suzani* is the basis that filled the ground of this idea, as it repeated randomly with only one size. As for the background it has been filled with the element of an abstract flower derived from *ikat*, it has been repeated randomly with different sizes and colors as they overlapped with each other intensively.

An idea emerged from the main idea which suits curtain fabrics, as it depended on intensifying the elements in the lower part of the idea to create strip, while the density of the elements lessen as we head to the top. The warm colors were used in the design idea which gives the impression of vitality and optimism.



Design idea no.(4).



Derived idea.



Suggested usage.



4.5 DESIGN IDEA NO.(5)

This idea depended on the inspiration of *Suzani's* abstracted vegetal strips that consist of flowers, leaves, and vegetal branches. These strips were duplicated as they take the vertical direction, but after that, the sizes of the strips were changed to take a conical shape. The reason of using only the blue color and its shades in this work is to add unity on the vegetal elements used in the design.



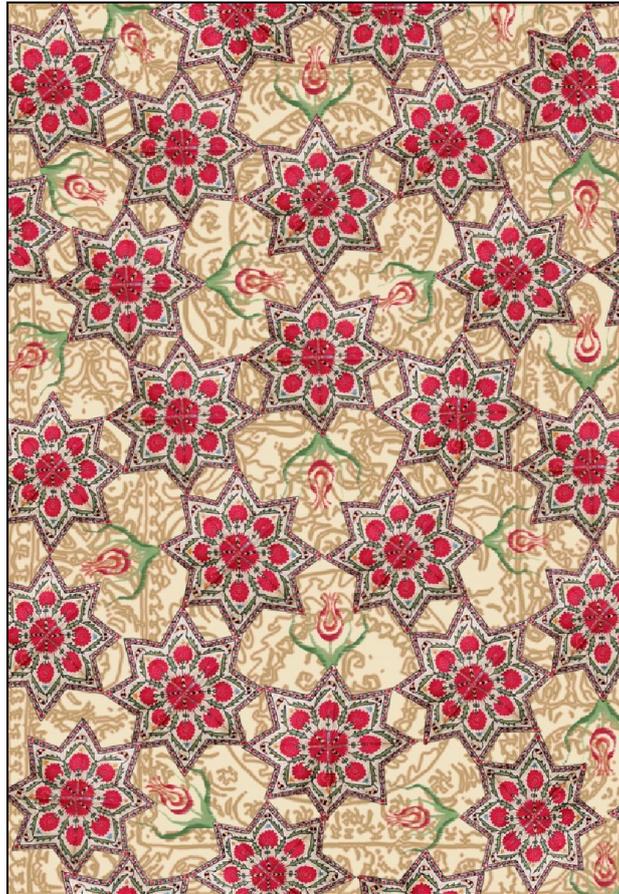
Design idea no.(5).



Suggested usage.

4.6 DESIGN IDEA NO.(6)

The *suzani's* units represented in the astral figure (consisted of carnation flowers) and *ikat's* units represented in the tulip are combined in this design. The astral figure has been duplicated using the repetition style of the Islamic art, between all of these astral figures, similar spaces are created but they take different directions. These spaces are filled with light brown textures, while the tulip overlaps on it. The geometric feature is all of the design despite the fact that the used units are vegetal, which gives it as much as stability and gravity. The design mostly used the red color, while the color beige was used in the background. This mixture of colors gives the design the vitality that balances with stability, which is achieved by the particular layout of the design.



Design idea no.(6).



Suggested usage.

5 RESULTS

- The artistic analytical study of vegetal elements on Central Asian textile (*suzani- ikat*) provided an opportunity to get acquainted with the extension of the difference of artist treatment of these elements depending on the technique used in making it, which has led to greater understanding of such techniques and different methods of treatment of decorations.

- The vegetal element in the Central Asian art, including a variety of plastic and aesthetic relationships that differ depending on the technique used in fabric decoration is considered an important source of artistic design creation which is suitable for upholstery printed fabrics through combining different treatments of vegetal elements.
- The research has provided a number of artistic experiments to suit the functional purpose (printed upholstery fabrics), to take advantage of the impact of aesthetic values of vegetal elements on contemporary art.

6 RECOMMENDATIONS

- The necessity to pay attention to studying art decorations influenced with the values and aesthetics of Asian art, through artistic analytical studies due to its historical and artistic importance that can be used in design printed textiles.
- Studying and inspiring new plastic values of the Central Asian arts elements, and to connect them with the contemporary applied art.
- The necessity of implementing applied artistic scientific researches, and following an optimal utilization to link between art and industry fields.

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