

## Revival and reuse of traditional design of carpets and kilim and develop it to keep up with the modern age

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### Abstract

There is no doubt that all humane arts generally in the beginning were created to perform a beneficial function to help the human to face nature and satisfy his daily needs, with life development he cared for enriching this function and added aesthetical side that converted such daily actions into works of art with high value and they are being collected for itself not for its function.

One of the most significant type of arts is the art of carpets and kilim manufacture that its basics weren't known till the 24th century B.C, but for certain it evolved when the first human needed a cover to keep his body from heat and humidity while sleeping on the ground that caused him illness, in addition to roughness of the floor and its rigidity, which forced him to invent a mattress and a cover to protect his body. We can say that ancient Egyptians had manufactured handlooms for carpets around the year 2400 B.C as they weaved rugs made of papyrus as they had to cover floors of their temples with what fits the greatness of the worshiped god, and that was the first step for kilim manufacture.

The evidence is what was found engraved on the graves of Beni Hassan which represented women weaving carpets on looms that much resemble the ones that the east produces nowadays, figure no. 1. We find that Arab and eastern generally have excelled in such industry due to the nature of their lands that have many pastures which provide the materials required for carpet manufacture, due to their life style of continuous moving that made them skillful in handmade industries using the available materials around them and use them with methods which are resulting from the experience of long centuries, also the spread of this industry among women and children and they compete to produce good models with much creativity.

In the modern age we can find in Iran –Turkey – and Egypt many artistically complete and impeccable models with a distinguished artistic personality in their designs that characterize each city from the other, which provide a wide collection of shapes and designs related to this art field. The features of this distinguished personality are identified through the used materials whether cotton, wool or silk etc. also the decorative units

### Keywords:

Revival•traditional design•modern age

### المخلص :

توصل المصري القديم الى معرفة وعمل النول عام ٢٤٠٠ ق.م وقد نسجوا عليه السجاد والكليم من الصوف والحصير والبردى واكد ذلك ما وجد محفورا بجداريات مقابر بني حسين من نساء تنسج على أنوال تشبه الحالية من السجاد متواجدة بالمتاحف المصرية وتحمل صفات خاصة بتصميمات وخامات تميز كل بلد عن الاخرى، ويحددها عناصر ووحدات زخرفية في التصميم تختلف من حيث البيئة

واللون وطريقة الإنتاج وهناك السجاد العجمي - التركي - القوقازي - التركماني - المصري بأنواعه ومدارسه الجويلان - الاسيوطي - حلوان - الحارانية - كرداسة - الواحات .

**الهدف من البحث :** تحليل لبعض أنواع السجاد المتواجد بالمتاحف المصرية من حيث عناصر التصميم ومفرداته الفنية، وطرق الإنتاج على النول سواء الرأسى أو الأفقى أو الأرضي وكذلك نوعيات النسيج لاستنباط تصميمات لسجاد محمل بالاصالة ويتناسب مع الفكر الفلسفي المعاصر .

**التجارب العملية :** عمل مجموعة من التجارب التصميمية تحمل صفات وعناصر ووحدات من السجاد القديم بفكر معاصر اعتمادا على اللون في المدرسة التأثيرية والحركة والخاصية الديناميكية والتوافق مع العناصر القديمة والخط المستقيم إضافة للكتابات العربية وعمل تأثيرات لونية في السجاد لتجذب الملتقي للاستمتاع بالفكر الحديث .

**أهم النتائج :** توصل البحث الي إنتاج العديد من الافكار التصميمية الناتجة من الدراسة بأسلوب فني معاصر وبطريقة نسيج السوماك و التابستري على النول الراسي وعرض المنتجات في المعارض وتلقت قبولا لدى المتذوق المصري والعالمي .

أكد البحث على أهم العناصر والرموز الفنية المستخدمة في تصميم السجاد القديم لتكون مرجعا فنيا للمصممين في هذا المجال. كما أكد على أن عدد السجاد بالمناطق المصرية يزيد عن ثلاثمائة الف سجادة أثرية شرقية .

**الاستنتاج والتوصيات :** أن صناعة السجاد تعتمد على فكرة النول المصري القديم كما ظهر في الجداريات المصرية في صناعة السجاد تقدر ثروة يمكن الاستفادة منها وتصويرها، ويوصى بالاستفادة من دراسة العناصر الفنية من البحث في الاستفادة منها في التصميم الحديث بعد تطويرها .

### الكلمات المفتاحية :

تصميم السجاد - الكليم - التابستري - السوماك .

## Introduction

There is no doubt that all humane arts generally in the beginning were created to perform a beneficial function to help the human to face nature and satisfy his daily needs, with life development he cared for enriching this function and added aesthetical side that converted such daily actions into works of art with high value and they are being collected for itself not for its function.

One of the most significant type of arts is the art of carpets and kilim manufacture that its basics weren't known till the 24<sup>th</sup> century B.C, but for certain it evolved when the first human needed a cover to keep his body from heat and humidity while sleeping on the ground that caused him illness, in addition to roughness of the floor and its rigidity, which forced him to invent a mattress and a cover to protect his body. We can say that ancient Egyptians had manufactured handlooms for carpets around the year 2400 B.C as they weaved rugs made of papyrus as they had to cover floors of their temples with what fits the greatness of the worshiped god, and that was the first step for kilim manufacture.

The evidence is what was found engraved on the graves of Beni Hassan which represented women weaving carpets on looms that much resemble the ones that the east produces nowadays, figure no. 1. We find that Arab and eastern generally have excelled in such industry due to the nature of their lands that have many pastures which provide the materials required for carpet manufacture, due to their life style of continuous moving that made them skillful in handmade

industries using the available materials around them and use them with methods which are resulting from the experience of long centuries, also the spread of this industry among women and children and they compete to produce good models with much creativity.

In the modern age we can find in Iran –Turkey – and Egypt many artistically complete and impeccable models with a distinguished artistic personality in their designs that characterize each city from the other, which provide a wide collection of shapes and designs related to this art field. The features of this distinguished personality are identified through the used materials whether cotton, wool or silk etc. also the decorative units extended from the surrounding heritage and environment, also basic or natural colors or mixing them to produce carpets that are characterized with authenticity and originality.



Figure (1) clarifies a mural illustration for industry of weaving and textile in ancient Egypt, at the tomb of Khnumhotep in the graves of Beni Hassan- the middle dynasty, the illustration demonstrates 2 ladies who are doing horizontal weaving and at the bottom appears a pieces of fabric, while the other illustration shows means of hand weaving.

### The research problem:

Look at studies about the history of design of carpets and kilim and benefit from them for the purpose of creation of modern designs.

**The research aim:** create designs that carry characteristics of authenticity and contemporary in the intellect and application of the art of carpet and kilim manufacture.

### Out of such aim, the research paper was limited to these steps:

**First:** Study of qualities of carpets and kilim in some special countries.

**Second:** Study some ancient artistic elements and symbols in carpets and kilim.

**Third:** A study about carpets and kilim in Egypt.

**Fourth:** Analysis of some modern thoughts and designs inspired from old carpets and kilims.

**Fifth:** Technological means to apply modern designs through (innovation of old handmade methods and their development)

**Sixth:** Results of the applied research and its effect on the receiver.

**First: Study of qualities of carpets and kilim at some special countries:**

Carpets can be classified into four main types according to the region of manufacture:

Persian- Turkish –Caucasian –and Turkman carpets.

Turkman	Caucasian	Turkish	Persian
Turkestan	Dagestan	Izmir	Azerbaijan
Russian Turkestan	Balkarian Republic	Konya	Farstan
East Turkestan	Erivan	Kurdistan	Khorasan
Baluchistan			Arak
			Ardalan
			Kerman

**Most important types:**

Turkman	Caucasian	Turkish	Persian
Bukhara	Kazakh	Izmir	Isfahan
Samarqand	Sumac	Elazig	Herat
Baluchistan	Shirvan	Gordes	Lorestan
Keyf	Cabestan	Oshshaq	Qash'an
Eskisehir	Dagestan	Bergman	Kermanshah
Turkman tech	Derbent	Kirsehir	Ardabil
	Quba	Konya	Kerman
		Ladik	Hamdan
		Mosul	Saravan
		Kavala	Khorasan
			Shiraz
			Tehran
			Sarband
			Qom

Each type of them could be distinguished according to its decorations and colors, for example the Persian carpets are full of plant motifs, trees, animals and birds inspired by nature, while the Turkish carpets deviated the botanic shapes into geometrical shapes and disregarded shapes of animals and birds or humans, Caucasian carpets all their units are geometrical or abstract animal shapes so far from their shapes in nature, also the Turkman decorations but they differ from the Caucasian ones. It is noticed that the carpet has one decorative unit that is kept repeated next to each other in the middle of the carpet. **We are going to give detailed explanation for each type of the four types of carpets:**

**The Persian carpet:**

They excelled all other types whether in their decorations or colors, it was divided according to the motifs into multiple types:

**First type:** Carpets with middle bundle: It has various shapes and there are cartridges or pendants connected to it and each one is decorated with a bundle, motifs of such type are plant

branches and different forms of flowers, hunting scenes or animal shapes could be added as well.

**Second type:** Carpets with animal motifs: This type has its floor filled with flower shapes. Among them there are motifs of persons or animals.

Another famous type is a type that is filled with flowers, botanic decorations, palm fronds and clouds, they are existed heavily in museums all around the world, it is called Herat carpet at the east of Iran, while Isfahan carpet is less graceful, and its colors are less matching. Persian carpet generally is characterized by the beauty of its colors and the use of color contrast, it is distinguished by dark colors especially the dark blue, as for materials, some use wool in warp, weft, and dander and some use cotton in sewing. They used some symbols that have significance for them such as the holy noose, the Persian victory, fish bones, tree of life, and pears.

**Figure (2) demonstrates some types of ancient Persian carpets as the following:**

- Heriz carpet of the 18<sup>th</sup> century, design feature is alligator, basis of handmade knots without using cartoon or executive drawings.
- Heriz carpet 340 \* 240cm<sup>2</sup>, 115000 knots/m<sup>2</sup>.
- Heriz carpet of the 18<sup>th</sup> century, 1890 A.D, the design is imitation for Gordes carpet which is a complicated frame of intersected botanic motifs and in the middle there is a niche where a lamp is hanging from it in the shape of a vase with flowers and down of the niche there are 5 vases of red color while the niche is dark blue.
- Qom carpet 218\* 139 cm<sup>2</sup>, 27800 knots/m<sup>2</sup>

This design has been used in multiple forms in Kashan and Isfahan carpets while the frame has design features of the Qom carpet in the motif units and the red color used on a silk floor with dark blue color.

- Qom carpet of Zerah Benjamin works from the beginning of the 19<sup>th</sup> century, the design is a niche on the shape of horseshoe surrounded by a frame of qur'anic verses at the top and botanic motifs in the bottom.
- Prayer rug of the 19<sup>th</sup> century by Qashqai Clans southern west of Persia, the design is a niche filled with flowers collected in a vase that has a beautiful geometrical design, we notice the light color of the niche surrounded by the red color and outer frame of dark blue with simplified botanic decorative elements.
- Tafresh carpet of Hemdan collection 206\* 136 cm and this collection is characterized by the production of individual weft carpet as an unchangeable tradition and it is known by the fixed shape of the bundle that is called the face of the hour and mostly it is divided into 16 parts, composed mainly of light plain red on a dark blue floor also some dark and light shades of these two colors in addition to green and orange.
- Mixed units' carpet from Qashqai Clans from the 9<sup>th</sup> century, 228122 cm<sup>2</sup>.
- Kermanshah carpet 67\*46 inch<sup>2</sup>, 108 knots of pure wool.



Figure 2, a collection of Persian carpets

### Turkish carpets

It includes all types of carpets made in Anatolia that the Seljuk acquired in those countries with their own style that is characterized by many geometrical shapes, the Turkish carpets can be divided into two collections:

**First collection: carpets made in the palace factories.**

**Second collection: carpets made by countryside people.**

**First collection:** The most important of them are prayer rugs which were attributed to Damascus for a long time, they mostly have floral sprouts including, clove flower, iris and wild crops, most of those pieces were produced at the Sultan palace in Astana or close to it in Bursa, a huge contrast in the type and quality among the floral carpets was found, some of them were rough with bright colors which are likely were manufactured at some private factories then were added to the palace collection, the clearer color is red which is seen to be covering the rug floor, frames are on this red floor, and motifs were painted in yellow, green, red and blue. Prayer rugs have major significance for those who are interested in the study of carpets as they are

considered the main origin for all prayer rugs that were manufactured afterwards at Gordes and Kavala during the 18<sup>th</sup> century.

**Second collection:** The production depends on specific industrial methodologies as European and Americans constructed factories where workers were women and children around the age of 4-13 years, while Muslim women and children used to practice this industry at their homes and then deliver their products when they are done, so it is clear that the commercial spirit granted the Turkish carpet a special style, most of their dyes was Aniline and the textile became rougher with longer dander than in the Persian style, they also mixed wool with goat hair so it became of less quality than the Persian carpet in general. Their drawings were botanic in a geometrical mold, and they didn't draw birds or animals because they were forbidden by their religion doctrine. Green color was spread as a color specific for Muslims especially in prayer rugs also Turkish red, dark blue, black, blue, turquoise, white and cream colors were applied. It is predicted that the used knot is the Turkish knot or Gordes knot in the count between 12-48/cm<sup>2</sup>, the most important used symbols are comb, lamb, mouse teeth, stars, sundial and swastika, most motifs are floral sprouts from cloves, crops and lilies, most dominated color is red where yellow and green motifs are drawn over it, figure no. 3 clarifies some kinds of Turkish carpets as follows:

- Gordes carpet of the 17<sup>th</sup> century A.D made of pure wool in Transylvania.
- Prayer rug from the 19<sup>th</sup> century (Bergman).
- Ladik prayer rug with triple arched niche surrounded by three frames of floral motif elements on a light and dark blue floor within the inner frame.
- Gordes prayer rug from the 19<sup>th</sup> century of pure wool (middle of Anatole) surrounded by 3 frames of intersected floral and geometrical elements, in the middle there is a niche with one pointed and graduated knitting on a red floor.
- Gordes Prayer rug from the 18<sup>th</sup> century of pure wool in Transylvania.
- Carpet from Bahila tripe Darab frail the 19<sup>th</sup> century, its dimension is 122\*190/cm<sup>2</sup>, sewing, weft and knot from pure wool, color of the floor is light yellow, and frame is crimson red with motifs elements of green and blue.
- A Turkish carpet combines all motifs from Ardabil, Farhan, Shiraz and Baluchistan surrounded by one frame of intersected floral and geometrical elements at interfering composition.
- Caesarean Turkish carpet: design taken from a carpet belonged to the 14<sup>th</sup> century and it is manufactured now by mass production to be used in mosques for praying and they are made of industrial silk.

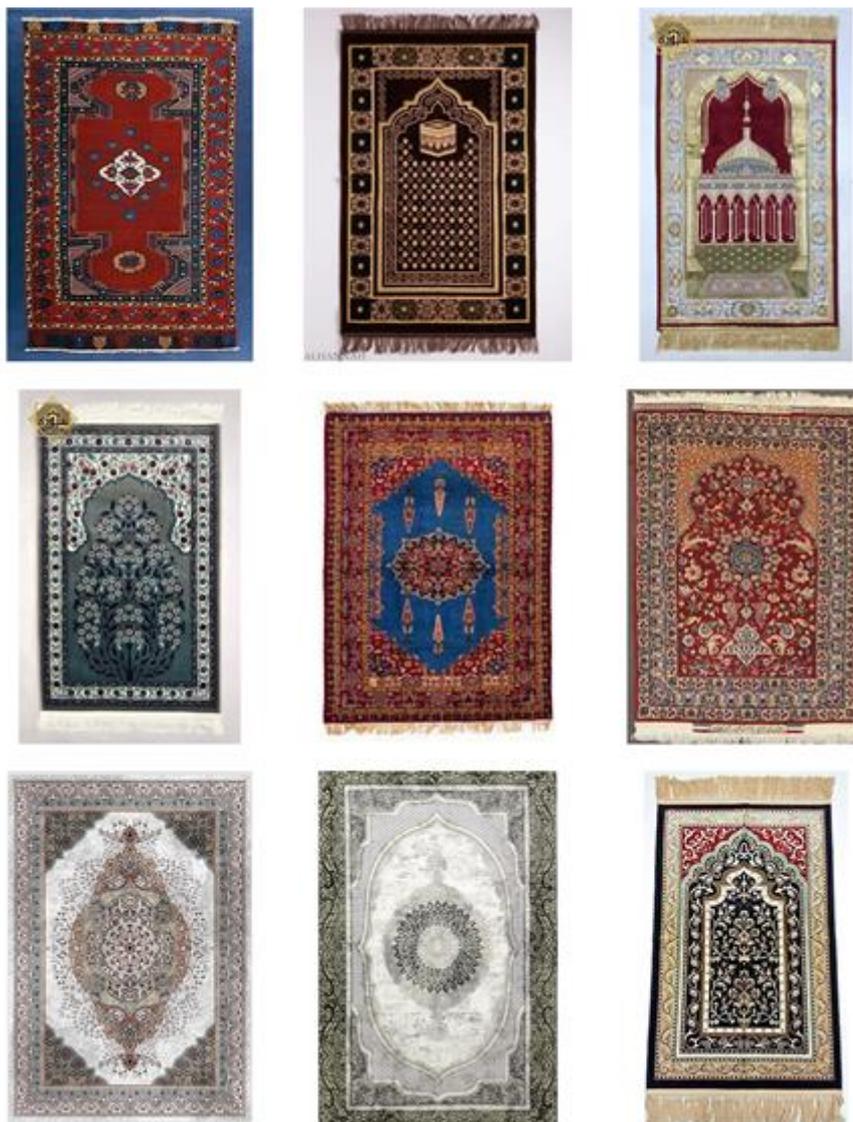


Figure 13, a collection of Turkish carpets.

#### Caucasian carpet:

Caucasus tribes used to live between the black sea and Caspian Sea, they took great care of their carpets yet their designs are known for their stiffness and color contrast, their drawings are extended from inherited ancient origins such as tarantula, swastika, tree of life, angled hook, Greek cross, Russian armor and some rigid geometrical drawings and delightful colors, also the use of stars and pear shape in the middle with frames with rims that might reach 5, one of them mostly is the main and full of geometrical branches and pendants, but what was manufactured in the eastern regions of the Caucasus which were submissive to the Iranian ruler but now follow the Russian government since 1813 A.D, their frames are characterizing with the presence of fleto, their materials are always wool in the warp, weft and knot and we rarely see large sizes as in the Persian or the Turkman, Caucasian used the Turkish knot and rarely used the Persian knot, their colors were mostly blue and yellow.

**Figure 4 shows some Caucasian carpets as follows:**

- A carpet from the 18<sup>th</sup> century the shield (the barrier)
- Dagestan carpet size 2.25\*1.5/m<sup>2</sup>
- Laurie Yumpak carpet- Kazak- western south of Caucasus in the 19<sup>th</sup> century.
- A carpet from the 18<sup>th</sup> century it is called the geometrical Persian garden with narrow water canals, central pond and shading trees that emperors of Persia and Mongols loved.
- Shirvan carpet 129\*95/cm<sup>2</sup>, the 19<sup>th</sup> century it was produced in the eastern north of Azerbaijan and Dagestan, design depends on successive flowers on the net floor, this design belongs to the 16<sup>th</sup> century.
- Buah Kuba dukhaani – rahimlou- Qashqai near khormoj from the 19<sup>th</sup> century with dimensions 132\*185 cm<sup>2</sup> of pure wool, 3600 knots in cm<sup>2</sup>, light yellow floor in a reddish-brown frame.



**Figure 4, collection of Caucasian carpets**

### **Turkman carpets**

These countries are located between Caspian Sea and Bukhara and Aral Sea till borders of Iran including Afghanistan and Baluchistan, Turkman tribes were known in Turkistan and central Asia with their extreme skill in carpeting that were used by tent inhabitants for many purposes in their daily life that's why Turkman carpets were not limited to be used to cover the floor but they were used as bags for saddles and camels' necks, walls for their tents and entrance decoration. Their motifs are characterized by being purely geometrical and the figures differ

from one tribe to the other, most important collection is Tac tribe, the motifs are mainly octagons, and their colors are red, brown, white and dark blue, they are characterized by their large size. Afghanistan and Baluchistan carpets are no different than Caspian Sea carpets, but they are of lower status regarding neatness, drawings and colors, the Chinese influence is clear in the drawings of the eastern Turkistan carpets.

### **Second: study the most important elements and symbols used in design of carpets and kilims**

**Tarantula:** It indicates a mysterious meaning, and it is mostly found in carpets of Kazak, Capstan, Shirvan.

**Lamb:** It is found as being hanged in the prayer direction in Turkish rugs especially the ones who are made in Konya, Gordes, Ladik.

**Angled hook:** It looks like it is the trademark for all Caucasian carpets, generally it exists in all motifs of western Asia.

**Winged ball:** It is an Egyptian symbol of small circle that has two spread wings, it symbolizes power of Egyptian rulers also great wealth and blessings.

**Luck knot:** It is a Chinese symbol that exists mainly in Samarqand and Yarkant and Kashgar and Chinese products, it is also used in Caucuses.

**Star:** It appears plentifully in the Caucasian carpets while the vertical star appears in the Turkish carpets.

**Tree of life:** It appears at most of the Persian prayer carpets while in India it is a symbol of worthiness to whoever does a great work.

**Wild dragon:** It appears with 5 claws and wings with scales over his skin, in India it symbolizes death while in Japan it has only 3 legs and it appears in the Chinese carpets.

**Russian eagle:** It is a two headed huge eagle with two crowns, and it is used in old products of Kazak.

**Chinese clouds:** It is one of the famous Mongol symbols, sometimes appears in Caucasian and Kurdish textiles, it symbolizes Irasa Magor tower which people of Mongolia thought that the god lives there.

**Comb:** A symbol used by Muslims to indicate cleanness and it is used in prayer rugs near the lamb especially in Dagestan carpets.

**Circle:** It is used at most of the Chinese decorations as it symbolizes eternity while in India it indicates bad luck, and it has a major influence on their inherited beliefs.

**Pear:** It is also called cone, palm tree, luck knot, seahorse, or crown jewel, all those names has a specific configuration, some says it is a symbol of fertility that Hindu river was flooded with, some says it is the symbol of Indian crown jewels which has a pear shape, this symbol exists in many carpets especially the Persian and the Kurdistan, sometimes it fills the middle of the carpet, either placed in one direction or facing each other.

**Persian victory:** It is a lion who hold its sword in his right claw and the sun is rising behind it as they worshiped the sun, and the lion was added for their victories during many invasions, the sword is the symbol of strength and power, and it was used plentifully in their decorations.

**Swastika:** It is a Baltic thunder cross symbol derived from the word svastika meaning conductive to well-being, its history goes back to 4000 years B.C, it was known by ancient

Greek, China, Japan, and east of India, most peoples of the world know it as the happy, it is mostly found in Chinese, Caucasian, Turkish and Turkman carpets.

**Bat:** It is used in Chinese decoration as a symbol of happiness and it is seen in their textile, mostly it is placed as group of 5 bats in the middle of the carpet, it represents wealth, long life, health, good luck and eternal peace.

**Wild boar:** In India it symbolizes the god Vishnu as he holds a circle between his fangs, he protected earth from drowning in the great flood and elevated it, it exists plentifully in the Indian carpets.

**Bee:** The Chinese uses it so much in their inherited beliefs while in India it is a symbol for activeness and love of work, it exists in Indian and Chinese carpets.

**Holy knot:** It is used in Chinese and Japanese decorations, sometimes in corners of the Chinese carpets and with the floral motifs in Shiraz and Karman carpets, it is one of the beliefs of Buddha tripe.

**Sundial:** It is of Muslims' symbols and exists at some Turkish prayer rugs.

**Camel:** The scarab, the Chinese consider it as a symbol of resurrection and afterlife while in India it symbolizes royalty, in Egypt it had wings in the shape of fans made of peacock feathers.

**Bottle of booze:** It is used in decoration of the frames in Caucasian carpets but mostly appear in the shape of a fish.

**Chinese waves:** It symbolizes sea waves, mainly found in carpets of Samarqand, Kashgar, Yarkant and Baluchistan and all Chinese products.

**Crab:** It is used in the decoration of canars with various shapes in Caucasus products and Kazak region.

**Caucasian engraving:** It is used heavily in canars of Caucasian carpets, and it exists in all decorations of western Asia as it always appears as letter (د)

**Mouth teeth:** It exists plentifully in Caucasian carpets especially Kazak and Shirvan sometimes in the Turkish and Turkman and Caucasian carpets.

**Alternative transition:** It exists in all types of carpets especially the Caucasian.

**Shirvan engraving:** It is a geometrical decoration especially in the middle it is full of geometrical shapes and exists in Shirvan and caucuses.

**Old ship:** It is used as decoration for inhabitants of the Mediterranean Sea, black sea and Caspian Sea coasts.

**Letter c decorations:** It exists in the frames of Caucasian, Cabestan and Shirvan carpets sometimes in Turkish and Persian products.

**Gordes decoration:** Two shapes are the most important Gordes motifs, one symbolizes two flowers on top of each other, one is connected with a slim stem to a leaf of the other flower, the second shape is half flower connected to a tree leaf.

**Herat decoration:** It is known as the fish shape but also it is called Fergana decoration and it is used in frames of Herat, Khorasan, Farhan and Sinai carpets.

**Butterfly:** In China it is a symbol of vanity while in India it wasn't used in their old products while it is used now in their modern products and symbolizes flirtation, the symbol is mixed with bats in Chinese carpets.

**Inclined lines** in frames which are successive decoration units composed of diagonal lines of red and white and blue colors, exist heavily in frames of carpets made in Caucasus region, most of the time such lines are made of small motifs.

**Letter T decoration:** It exists in Caucasian carpets in particular Kazak, Dagestan, Shirvan, Samarqand and China.

**Letter Y decoration:** It is one of the motifs in Mongolia and exists heavily in the Chinese carpets.

**Letter S decoration:** It exists in frames of Caucasian carpets, Kurdistan, and Shirvan and some Turkish and Persian products.

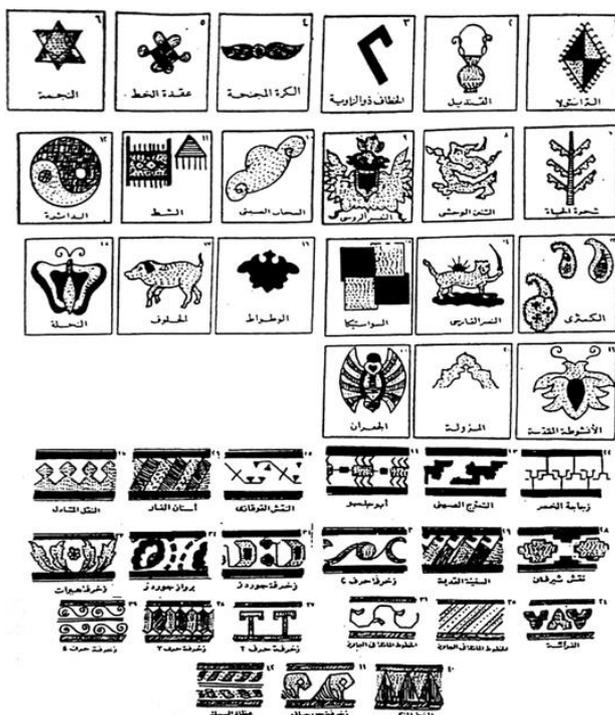
**Broken lines:** It exists in Caucasian carpets.

**Georgian decoration:** It resembles a flower connected to a thin stem and it exists in Caucasian carpets and Capstan.

**Fish bone:** It is used in Indian carpets and Herat, and it resembles structure of the fish.

In addition to architectural elements that were introduced to carpets decoration in the form of beads, columns, lambs with various shapes arched or pointed, also columns took the shape of candles for their radiation in addition to dolls especially in Turkish carpets which were inspired from mameluke architectural elements in Egypt.

Figure no. 5 demonstrates some models for used artistic elements in decoration of carpets and kilims.



**Third: carpets and kilims in Egypt**

Ancient Egyptian had known carpet and kilim manufacture since the 24<sup>th</sup> century B.C, it is written and engraved on murals of bani Hassan tombs. In the modern age you can see carpets and kilims hanging on windows and balconies during the cleaning day, also on the walls of many restaurants and stores in Egypt. Kilims are being spun with no dander, it has many functions in the Egyptian countryside, it is a bag, saddle, billow, blanket, cover for the floor or

even mattresses, also a tent to protect from the sun, and many other simple designs. Before machinery loom, kilim was the fastest and the cheapest types of rugs and it is classified into five groups based on the means of weaving and materials, they are the following:

**First: Tapestry, goblin:** natural scenes mostly hung on the walls.



**Second: kilim:** rugs made of woven wool of different styles, the most common ones in the Egyptian market are Asyut and Helwan.



**Third: handmade rugs and kilims:**

They are woven on horizontal looms and made of colorful wool.



**Fourth: carpet or kilim of beni Uday:**

It is woven of natural color wool with structures of geometrical designs.



**Fifth: rugs of scraps or textile kilim:**

They are woven of fabric remains and scraps and it could be used for many functions such as rugs for bathrooms or the beach.



**There are types of hanging textiles (hanging carpets):**

This kind is so special and has the most attraction among tourists, it has multiple means, styles and experiments for its manufacture and quality, for instance; Ramesses Wisa school style in Al-Haraneya village- house of drawn textiles in Helwan- Asyut-Kerdasa- The Oasis.

There are many artworks of carpets at Cairo museums and its scientific centers whether made in Egypt or imported from other countries due to the presence of ottoman in Egypt for a long time and their care about this industry, for example, collection of antiquarian carpets in Cairo contains over than 300 thousand carpets of prayer rugs, regular carpets and hanging carpets in

Egypt palaces and museums. Figures 25-34 clarify some of the collections exist in Cairo, whether if they are a private collection, Indian, Turkish, or Caucasian.

- Prayer rug from the 16<sup>th</sup> century- ottoman era.
- Indian cashmere carpet where you notice the use of flowers as a unit in the modern design.
- Carpet from Karaka with measurements 195\*138 cm<sup>2</sup>, 75000 knot/m<sup>2</sup>. In the design two different dark bundles appear on a floor covered with geometrical units with colors of white cotton in warp and weft of grey, with an edge of Azerbaijan style.
- Prayer rug from the 16<sup>th</sup> century- ottoman style.
- Prayer rug from Topkapi- Persia, the 17<sup>th</sup> century
- Prayer rug from Shirvan- east of Caucasus- the 19<sup>th</sup> century.

#### A private collection of high-quality carpets:

- Companion carpet 1.55\*2.28 m<sup>2</sup>- 87 knots/cm<sup>2</sup>
- Designer: Hassan Hekmat, executive: Abbas Carpassium.
- The beloved carpet 1.25\*1.85 m<sup>2</sup>- 87 knots/cm<sup>2</sup>
- Designer: Hassan Hekmat, executive: Abbas Carpassium.
- Paradise bird carpet 1.60\* 2.48 m<sup>2</sup>- 116 knots/cm<sup>2</sup>
- Designer: Hassan Hekmat, executive: Abbas Carpassium.
- Shooting star carpet 1.12 \* 1.70 m<sup>2</sup>- 92 knots/cm<sup>2</sup>.
- Designer: Hassan Hekmat, executive: Abbas Carpassium.



Figure 6, a collection of Cairo antiquary carpets.

**Al-Haranya expirement (Ramesses Wisa Wassef school):**

It has been built for more than 30 years; their residence is at the school of art education in Al-Haranya village to produce drawn textiles that reflect scenes of nature. The purpose of building the school is to link art, education, social life and skillful craft with making a living, all to provide an activity that earns its owner a way to express him/herself.

It was called first by the house of art at Al-Haranya village, after the owner death it was named after his name Ramesses Wisa Wassef.

The followed art style in the experiment: It started with a number of children in the village who were put under special care so they can harmonize together, then they started to practice the craft using vertical looms under supervision of experienced workers who had trained and worked with Ramesses Wisa and they trained the children on weaving.

The purpose of selecting countryside kids was to highlight their natural artistic intuition that was never subjected to civil modern life. The school style is summarized in:

- Give full liberty to children to bring all they have got by directly dealing with strings, colors and subjects they want to illustrate.
- Not to interfere with artistic aspects of the works and give them freedom to figure out how to treat things and shapes naturally to be able to show their abilities in a natural way.
- Not to tell or direct students unless they ask to.
- Not to criticize nor interfere but to encourage and compliment so each kid can confide in his/her abilities, so they build independent characters, kids handled many subjects in their works such as animals, birds, trees and flowers, also the surrounding habitat.

**Kirdasa experiment:**

It is a near village located in Giza governorate on Mariotia pond, it is a touristic village full of tourists' groups who visit to follow the creations of the village inhabitants in the field of textile such as hanging textiles, carpets, kilims and costume cloths, kilims are produced on manual looms and have the following folk scenes:

Bride zaffah (wedding procession): which is about camels, and the bride rides one of them surrounded by her family and the invited people and her furniture, with musicians who play flutes.

Cafe shop: it is a folk café with people holding their shisha and the waiter holds his tray with peoples' orders and a natural scene of the café.

The tree: a group of trees with different sizes distributed and coordinated around the piece expressing the beauty of nature and the countryside.

Mosques: the most famous mosques in Egypt especially Al-Sayeda Zainb, and Azhar, they are several mosques next to each other with different sizes and colors.

Animals: they represent the Egyptian countryside, and they are used by farmers, such as camels, donkeys and mules with some plants to represent agriculture.

Pyramids and ancient Egyptians: a design for the pyramids and sphinx with some scenes of the ancient Egyptians.

**Experiment of drawn textiles house in Helwan:**

The ministry of culture held that project in a trial for the revival of art heritage for drawn textiles in Egypt and build an Egyptian school that has its own applied methodologies and that was in 1967.

Dr./ Tharwat Okasha assigned Mr./ Murad Ghaleb the pioneer of drawn textiles in Egypt to study the project and as the execution started to prepare the place and looms, it was decided that participants who were hired should travel to train in Epson factories in France, for 6 months, **the work in the house started in 1970, the work is divided into 4 sections:**

**Department of design and drawing:** its members design illustrations and choose the ones which are liable to be executed and magnify them according to the required measurements.

**Department of training:** to train new working force for execution with different textiles.

**Department of activation:** it is the main department, and its members execute the chosen illustrations.

**Department of dyeing:** it dyes the strings required for execution that acquire thousands of shades.

The artworks of the house handled many subjects such as artworks for the greatest contemporary Egyptian artists such as Salah Taher, Gazebia Serry, Salah Abd al-Karim, dr./ Saleh Reda.

The followed applied methodology is the traditional means for drawn textiles which is the main methodology in the execution of hanging textiles, used materials are cotton for sewing and wool strings for the weft in addition to the application of metallic strings with the wool.

**Experiment of drawn textiles house in the oasis:**

The western desert is the frame that gather the oasis and it is considered among the driest deserts so urbanism in it concentrated around those oases, that's why they were converted into a center for the manufacture of carpets and kilims so they can be a tool of attraction for tourists and to help the growth of economic and social life. Textiles with un-continuous weft were produced which resulted in designs with contiguous coloring areas, each area is being spun with its own color and weft, that weft is being passed among strings of warp that locate in the area required for the design. This particular type of kilim is distinguished by the presence of vertical cracks among the contiguous areas with the vertical limitations and its back is identical to its face. Al-Dahoos Bedouins are working in this industry especially people of al-Farafra and Bashandi, also the governmental operator at al-Kharga, they execute geometrical motifs on looms without using tambourine in the process of hammering that's how looms turn into frontal and backward penknife to create the openings required for the passing of the weft, and the weaver uses a small comb for the joining of the wefts.

**Experiment of drawn carpets and textiles in Asyut:**

Asyut is a city in upper Egypt, the greatest and the most important one commercially, it gained its status a long time ago due to its location on intersection for many convoys roads.

Its name is derived from the Coptic word Sioot which means borders as it was actually the border between upper and northern Egypt, it was on the convoy road that linked the Nile to the external oasis then to Darfur in the west of Sudan and was famous for its agricultural crops, the

most important ones are quince, dates and wheat and their manufacture and trade, the most important industries are weaving of wool, cotton and flax, Asyut is famous with linen and silk textiles and carpets and black and white shawls ornamented with silver.

15 years ago the industry of carpets and kilims started to nourish again by the hands of an Egyptian group who cared about the industry for example the eastern weavers and carpet city, they are both giant corporates globally in exporting carpets and rugs all over the world and they have gained many acknowledgment and certificates in the field and for development of modern technology with what suits the Egyptian carpet whether made of silk, pure wool, wool and cotton or artificial silk, many designs of eastern carpets were transferred in addition to the Egyptian art heritage, and now we are working on those designs with what suits with the intellect of the modern age.

#### **Fourth: analysis of some modern design thoughts inspired from Islamic arts:**

Schools of Islamic arts have their rules and foundations that can be benefited from in development of the east arts as did the western artists and many artists of modern schools when they used vocabularies of Islamic art and developed them with a style that fits the current era and its intellect and philosophy which haven't been done by most of the artists in the modern age of the Islamic world.

Islamic art is considered one of the most important arts full of intellectual laws and aesthetical and philosophical theories that the artist could taste and reformulate with contemporary vision that has authenticity which makes it has a great value, we are trying to achieve that here in creation of some designs inspired from Islamic art intellect to harmonize with the design of carpet and kilim in the contemporary Islamic world.

Modern art is considered an entire integrated innovation process as the artist is influenced by used schools and intellectual currents that basically affected art and the entire society generally, from the reality of such historical, social and artistic experiences we have created some designs for modern units of carpets and kilims inspired from originality of Islamic arts and its elements and vocabularies in a contemporary artistic distribution with the assist of modern influences as clarified in the **first group**, as we notice the color inspires impressionism, elements assembled together in an unusual style in Islamic arts depending on individuality that shows the artist own-self, regarding harmony, and coincidence in the geometrical background with color gradation and use of botanic or geometrical elements with different color collection than the color of the floor, which allow us to feel the light effect of the colors in the domination of the color group in the middle on the design, that makes us see it as a focus where the design movement starts, which corresponds with the movement we see in designs of op- art or optical art. Figure (7)



Figure (7) motion art in the design of a carpet influenced by Islamic motif elements.

**The second collection:** as the artist benefits from Islamic art values with a classic image and the special addition was in color and design dynamism as what attract us to the design are its composition and color construction basically, then we start to notice decorative elements that compose the design with a supplementary image after the use of some absolute straight lines that are different from the origin of the elements and their building law and appear in a transparent way, as the vision interferes for the decorative elements with the straight lines. Such design represents the new creative thought that depends on design and color dynamism with preserving the Islamic influence and originality in a strong way. Figure (8)



Figure (8) dynamism of color and motion in design of contemporary Islamic carpets.

**The third collection:** in these designs artistic values of Arabic calligraphy were used, but the script wasn't cared for its appearance but the care is for the decorative elements as if they were moving in the design space, aesthetics of such writings were benefited from in a composition of a focus and background to give us an innovative formative value that reminds us with artworks of Picasso and Paul Klee, the artist could convert the line into a light color mass that gives a creative sense in an integrated work of hanging textiles with color harmony that reflects a new creative vision. Figure (9)



Figure (9) dynamism of Arabic calligraphy in design of carpets and hangings

**The fourth collection:** the artist has used Islamic decorative elements in a design where the softness of the botanic elements are in contrast with the sharpness of Islamic mafroukeh (Islamic pattern) that Mondrian has used in his artworks but the artist here used it as a main floor where the floral elements are moving over it, we can notice the creative touch in the color and the artist

vision of the impressionism are clear in the first work of this collection in figure (10), also the artist moved to another vision when he used Islamic chains and floral elements in a composition for a prayer rug, and the artist didn't use bright color values for the employment of this design in a prayer rug which requires to stay away from external distraction that might attract the one who is praying, this artwork has its own creative value of its matching color shades that despite its calmness but you can notice the clear alteration among elements and the skill of the artist is clear in the balance he created between the cold and hot color masses and the equality of color significance despite its variation, figure (11). In the third work we notice the use of the Islamic star as a basic unit in the top and the bottom of the design and floral decorative elements intersected with it in a semi-regular way except for the lower part that the elements appear with heavy colors to balance the unicolor blue horizontal line to confirm the value of the design balance in this carpet as a whole with figure (12), also figures (13-14-15) which are considered of the most important designs that the artist has created of Islamic elements in an innovative vision and they were executed in a scientific handmade methodology using the influential technological means.



Figures (10-11-12) designs of carpets of botanic decorative elements in a color contrast



Figures (13-14-15) designs of carpets of botanic decorative elements in a color contrast

#### **Fifth: applied technology for the execution of the previous designs using means of Egyptian weaving:**

The distinguished look of carpets and kilims is resulting from the used materials and the used technique, in general the Egyptian carpets are produced via 4 techniques:

- 1- Weft face
- 2- Warp face
- 3- Tapestry
- 4- Sumac

**Weft face:**

Spinning the weft is thicker than the wrap and when the weft strings are pushed towards each other they cover strings of the warp and become the face of the rug, this method is used in the scraps kilim which is made of fabric wastes collected as horizontal stripes.

**Warp face:**

It is the opposite of the weft face, and the warp covers the weft completely and forms the face of the kilim.

**Tapestry:**

It is a type of weft textile and is used for complicated designs where different colors are spun in front and in the back of some areas according to the design. It is rarely that the weft passes the wrap even once, when intersected stitches are used there are no resulting holes even when the colors change. This type of weaving is usual in Egypt to produce tapestry and goblin.

**Sumac weaving:**

It is about rolling the weft around the warp in the face of the carpet, we can notice the weft crosses in front of warp strings and from the back through the middle. This process happens across the width of the carpet, mostly the surface is smooth, and the endings of the spinning appear in the back of the carpet.

**Method of weaving un-extended wefts:** it is the most common method in Egypt as by search and study it turned out that this style is originally an Egyptian thought and means since the Pharonic age till now. That's what made us consider executing some of the research designs using this pure Egyptian method.

The decoration is happening through the use of colored materials that all are being spun un-extendedly in its width as the weaver starts to pass the colored weft string in the spot of the ornamented part inside the first opening that is occurred during the movement of the initial circuit, hence in the first opening when moving the second circuit in the specific area where it joins completely the previous weft string, and the weaving process continues this way till finished with the required part of the ornamentation but with noticing that it won't contradict with the movement of the warp strings in the other parts, and keep going by the same method with the rest of the colored materials.

Handmade kilim is considered one of the applied methodologies for un-extended weft and it is produced with designs that have neighboring colored areas, as each area is being spun by its own roll, hence at any neighboring areas wefts don't tangle with each other and that's how vertical slits are formed, there is a way to avoid those vertical slits where a group of one colored wefts are spun around the separating line in the same way as the previous method and after finishing the weaving of one color wefts group, the second group of another color is being spun around the same line that strings of the first weft were rolled around and it is called the separation line of the borders of the ornamentation, hence the other wefts, such method is called the chainsaw teeth method.

There is another way to hold the horizontal splits that is different from the 2 previous methods, instead of using one string of the wrap where the two colors of wefts are rolled around, all wefts can be held together but that require the weaving of a weft from the first color then a weft from the second color as such coherence can't be acquired if each group of one color weft was spun at one time, so an exchange between wefts of different colors happens at the point of reflection of the strings at the borders of the ornamentation, the process of connecting can be done after finishing the process of weaving by sewing the splits formed among the areas of the design after the weaving process.

In fact, most of old carpets and kilims have those vertical splits as a distinguished feature, which was noticed while executing some of our own designs, firstly those splits were considered as flaws and a proof for weak and unexperienced weaver but the truth is otherwise as those splits have aesthetic significance in creating ornaments on the resulting carpet or kilim that the current weavers in the 20<sup>th</sup> century are trying to achieve in the goblin weaving as the splits are left then sewed while spinning the piece with invisible stitch, such feature attracted many visitors to our gallery and encouraged the buying and spread of such artworks, to allow modernity to reach the authentic imitation of handmade weaving.

#### **Looms used in execution of the research design:**

Handlooms used in the execution were divided into 2 groups:

Horizontal looms which are considered the most ancient ones and were known through the monuments that were found at Badary city in Asyut that go back to 4000 years B.C. A mural was found belonging to the middle dynasty, the 12<sup>th</sup> family at the tomb of Khnumhotep in the graves of Beni Hassan, which enlightened the road to understanding of weaving in ancient Egypt, also the finding of 2 models for a weaving room in a tomb near Thebes, that belonged to the 11<sup>th</sup> family, one of them is exhibited at the Egyptian Museum by no. 6084 room 27, and the other one is exhibited at the Metropolitan Museum.

After the introduction about horizontal looms, the hole loom was identified which is used at some carpet works that belong to the research, in addition to the table loom.

**1-The hole loom:** it was called that because its pedals are placed in a hole down it, and the weaver is sitting on the floor during work, the breath angle is being created through stave and opening the breath angle through the feet pedals.

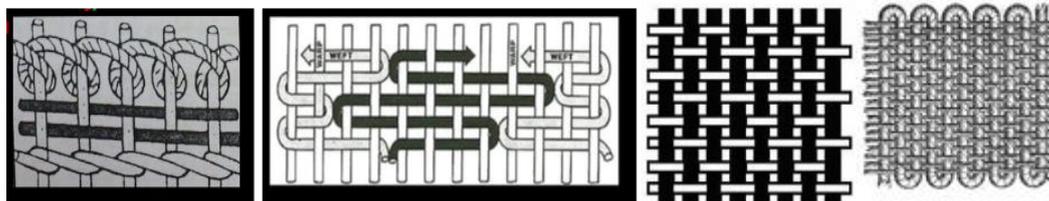
**2-The table loom:** it is a small loom and placed on a table and is being worked manually, the comb is elevated up then being pulled down or works by a group of levers moved by hands for the movement of the stave.

The second group is the vertical looms: which were used in the execution of some designs of the research.

**3-The vertical loom:** with a khabour (plug), the means for getting a breath angel is through a sword and half a stave, the weaver is opening the breath angel manually where the khabour is used to fix the bottom cylinder in the side return of the loom after achieving the required strength of the wrap. It is considered the best type of loom to make knotted carpets.

**4-The frame loom:** it is a vertical loom, the means for getting a breath angel is through a sword and half a stave, with a wooden or metal rod that has alternative cracks which act as two staves,

or by two wooden frames one is inside the other to change the breath angel, opening the breath angel is being done manually. This loom is used for small pieces or experimental models for large pieces, weaving on wraps can be done directly, figure (16) a clarification of looms and used stitches in weaving of various carpets.



Sumac weaving

tapestry

plain spinning

weaving of weft and warp face

Figure (16) clarifies some photos for handmade textiles.



Figure (17) photos that clarify types of looms, horizontal, vertical and floor looms.

## Sixth: Results:

- The research has realized a classification of some types of eastern carpets (Persian- Turkish – Caucasian –and Turkman) and specified their elements and colors and that is considered a historical narration.
- The research confirmed the most important elements and symbols used in the design of old carpets and kilims to be a basic reference for researchers and whoever interested in such artistic industry.
- The research confirmed that the Egyptian carpets have been known since the 24<sup>th</sup> century B.C, and the numbers of the preserved antiquities of carpets which are over than 300 thousand carpets in the Egyptian museum, as well as studying the recent experiments in (Al Haranya) and the followed methodology in each experiment.
- The research has introduced many design ideas benefited from the study in a contemporary artistic way.

Also, many designs were executed with simple technology, and they were displayed at exhibitions and Egyptian commercial stores, and they have received a great acceptance by the Egyptian costumers.

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