

**THE INVESTIGATION OF HAND WOVEN PRODUCTS AND
MOTIFS IN THE SULTANATE OF OMAN IN ORDER TO
REJUVENATE A LOCAL MARKET**

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Submitted for the
Degree of Doctor of Philosophy

**HERIOT- WATT UNIVERSITY
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November 2009

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ABSTRACT

Traditional Bedouin rugs are considered to be one of the most valuable items of cultural heritage throughout the centuries in Oman. The methods for weaving these products and the motifs they employ are full of symbolism and explanations. In the last few decades, the modernization and imported rugs has forced weavers to abandon their craft, as it is not economically viable when forced to compete with the imported rug industry. Additionally, local people seem unable to find rugs, which meet their needs from amongst the locally hand-woven products, and this creates a demand for imports. A solution to this problem is sought in this investigation.

The aim of this study is a revival of the original Omani handicrafts that are created by desert people, whose influence was uniquely exercised on the various artistic Islamic decorative motifs. In addition surveys of the local market's needs were undertaken to get a better understanding of this industry.

The research concludes that an invigoration of the industry is possible; given certain training conditions and marketing effects. An experiment for possible future work was undertaken using computerized 'Jacquard loom' production, with the aim of establishing soft furnishing textiles industry in Oman. These computerized looms, with their capability to produce different kinds of fabrics and patterns, can introduce traditional or Islamic motifs to soft furnishing fabrics into Oman which is what the local market requires.

ACKNOWLEDGMENT

My sincere gratitude goes to my supervisor Dr. Britta Kalkreuter, for her insightful advice and support she provided to pursue and complete this research. I would also like to thank Mrs Fiona Pankhurst for all the effort she extended to me to complete my study.

I would like to extend my sincere gratitude to Mrs Lesley Watters for helping me with using the Scott Weave Programme. Appreciation is also due to Mrs Ruth Walker for helping me when things did not go as planned.

I must also express gratitude to the technicians Mr Drew Kellet for all his help and valuable technical support to getting this work done, Mr Andrew McCullough and Mr John Allan which their contribution was pivotal to the completing of this work. I would also wish to thank the university library staff for their great assistance.

There are number of people who must be acknowledged and thanked for their assistance in conducting this research, the Bedouin weavers, the shepherds and all focus groups respondents in taking part in this research.

Last but not least, I would like to acknowledge my friends and family for their unconditional support to pursue my postgraduate studies.

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CHAPTER 1
General Introduction

1.1 Introduction

Weaving handicraft, which the Bedouins in the Sultanate of Oman are famous for has its roots in the third century B.C.E (The Ministry of National Heritage and Culture, 1980). It is a profession which has been passed down from generation to generation. The vocation spread and became a source of living for many Bedouin families. However, the discovery of oil and the process of modernization in 1970 forced lifestyle changes across the country (Richardson &Dorr, 2003). Since then, merchants imported cheaper and more attractive products from abroad forcing local weavers to abandon their traditional handicraft, as it was no longer economically viable.

Rugs have been considered as one of the essential woven products in the Bedouin Arab's life. This importance of rugs in the Arabian Peninsula was increased when Arab people embraced Islam. Muslims were required to pray five times a day on a clean surface. This in turn signifies the value of the rugs, in Islamic lands, to decorate every religious building and home as well. Throughout history, the hand-woven rugs were given as diplomatic gifts but at the same time they were utilized for political purposes (Ashor, 1996; Rezequ, 2006). Therefore, rugs became an integral part of Islamic culture and hence traditional rugs have had a significant impact on society. Their effect on society cannot be ignored over the centuries. It is therefore not surprising that the Sultan Qaboos, the head of state, has recognised the Bedouin weavers' importance, as he states in one of his speeches that "we would like to point with great interest to the fact that the Omani citizen should engage in traditional crafts which were the backbone of our economy in the past. These crafts play an important role in the development of the Sultanate economy...we believe that societies will only develop if they respect the professions and crafts of the founding fathers and grandfathers (Public Authority for Craft Industries, 2007).

However, current market realities show that the local people in Oman are losing interest in traditional hand-woven rugs. The study investigates to what extend this is due to a variety of design, resource and market-related factors, the kinds of patterns which are available, the materials that Omani woven rugs are made from and tools of marketing. The first part of this study researches why imported mass-produced rugs seem to respond better to contemporary consumer demands and analyses what is needed for

Bedouin weavers to compete with what is now available in the market. On the background of historical and motif-related research, the second part of the study uses practice-based research to generate alternative designs, colours and materials. The response to these by both producers and consumers, Bedouin weavers and Focus Groups, finally allows recommendations to be drawn up about measures that need to be taken to invigorate the Bedouin weaving craft in a sustainable way.

1.2 The Research Problem

The craft of weaving in the Sultanate of Oman is restricted to limited areas where Bedouins and mountain shepherds live. The designs of traditional woven rugs contain simple stripes or repetitive patterns with limited colours and made of harsh wool. Petrodollars and having a wise and progressive Sultan have contributed rapid changes to the gulf region and to Oman in particular. However, in spite of the developments in many aspects of Omani life, the craft of weaving lagged far behind. New patterns, colours and materials were not introduced. Weavers were not competitive and hence foreign imports, such as Turkish, Iranian and Chinese rugs, were able to successfully dominate the market. Not only are imports cheaper but there is a huge array of different motifs, colours and soft fibres. Not being competitive resulted in a loss of income for Omani weavers. In addition to that many local weavers abandoned the handicraft. Few had the thirst to carry on the tradition. Weavers had to find other lucrative ways of earning a living. Today, the whole industry is under threat.

1.3 Aims of the Research

The aims of this research are to revive the original Omani handicraft; establish a market for locally woven products with the aim to innovate ornamental rugs. These ornamental products contain motifs inspired by various Omani and Islamic patterns and can be displayed in Omani homes. The patterns employed are not only found in traditional weaving but they can also be seen in other crafts such as Islamic decorative designs established in traditional and modern buildings, calligraphy, pottery, jewellery and ornaments. Different colours and fibres could also be used in order to enhance their value and marketability of the new products.

1.4 Objectives of the Research

1. Investigate the historical background of Islamic eras and Omani hand woven textiles industry in order to identify weaving techniques, textile products and traditional woven motifs.
2. Study the local people's interests and needs in home furnishing in terms of colours and patterns in order to understand the local home requirements.
3. Create new design innovations for rugs based on traditional Islamic motifs and exploit local weaving tradition.
4. Develop the market and potential for these new designs in order to impact positively in the Omani market.

1.5 Methodology of the Research

The methods used in this research were qualitative techniques, descriptive and quasi experimental methodology to collect the primary as well as the secondary data. These techniques were associated with the use of community surveys 'fieldwork', interviews, focus groups, recording information from local weavers, photos, videos, observations and descriptions.

The primary data in this research was obtained in four ways:

- By investigating the traditional hand woven rugs in local market;
- By creating new rug design innovations based on traditional and Islamic motifs;
- Through the production of hand woven products suitable for home decoration, using different motifs, fibres and colours and woven by local weavers themselves.
- Through focus groups in order to gain insight, ascertain consumer attitudes, obtain their feedbacks and aspirations concerning the innovative products to ensure the achievement of the research aims.

1.5.1 Focus Group

The focus group was used as one of the qualitative methods of collecting data, and it was a major contribution to this research. It allowed the researcher to select more powerful manipulations of consumers' needs such as fibres, colours and motifs

(independent variables) and more sensitive measures for the acceptance and the satisfaction of the new products in the local market (response variable). For this reason, focus groups were used for the local market survey, and after the completion of the experimental work, to provide effective feedback.

The focus group was selected as a sample population which was divided into two strata defined by social status and gender as in the [Table 1:1] below:

	Female	Male
Gender	80%	20%
Age	25- 45	30-50
Social strata	middle and upper-middle class	middle and upper-middle class
Education	university education	university education

Table 1:1 the focus group

1.5.2 The Number and the Size of Groups

There were five groups used in this research. These groups were designed to provide adequate feedback and explore different avenues of discussion. Consumer views and opinions were collected as well. The size of each group was a moderate size and consisted of six participants. Indeed, a small number of participants in groups requested a greater contribution of each participant and a larger total volume of comments from each, because of that, the number of participants are determined by six in each group. The researcher was a group moderator who controlled and captured observations through audio taping and field notes to create a record of the discussion of each group. The researcher ensured that each session was limited to one and one half hour sessions.

Thirty participants were selected to represent the general community population of 977,000 in Muscat which is ‘the Capital Area’ (Ministry of National Economy, 2009). The focus groups were conducted with selected samples of two different categories of participants according to the social strata and gender which were considered in order to get more accurate results. Separate groups were formed for each category [see Table 1:2] so the participant would feel comfortable and be inclined to talk more freely and honestly. This was important for the purpose of eliciting more reliable feedback.

Group's number	Gender	Group Size	Social Strata	%
Focus Group 1	female	6 participants	Middle class	40%
Focus Group 2	female	6 participants	Middle class	
Focus Group 3	female	6 participants	upper-middle class	40%
Focus Group 4	female	6 participants	upper-middle class	
Focus Group 5	male	6 participants	Middle and upper-middle class	20%

Table 1:2 The number and the size of the focus groups

1.6 Research Questions

How does the historical development impact the hand-woven industry in Oman?

How does Islamic art influence Bedouin motifs?

How does the strategic location of Oman and the ancient trade routes influence the traditional weaving techniques and equipment?

Are Bedouin weavers skilled enough to weave using new patterns and different fibres?

Are Bedouin weavers receptive to re-fashioning their traditional products?

Do customers want traditional rugs to be modernized?

Are local people prepared to buy new products woven locally?

What are the best methods for marketing these products?

1.7 Thesis Outline

Chapter 1 gives an introduction to the thesis and describes the research problems, aims, objectives and the methodology of the study as well as an outline of the thesis.

Chapter 2 documents the literature review to explore the history of the craft of weaving, the hand-woven textile history in the Islamic world and its evolution throughout the Islamic lands. An investigation of the origin of woven rugs was also

included in this chapter to gain knowledge of some of the characteristics of traditional rugs.

Chapter 3 provides information concerning the location of Oman, the history of ancient trade routes in the pre- historical era and the impact of embracing Islam in the flourishing the maritime trade. This chapter also describes the Bedouin Nomads' way of life in order to understand their culture and presents knowledge regarding their traditional handicrafts by investigating the fibres utilized in traditional woven rugs, the origin of the craft of spinning fibres, the dyeing process and illustrates the different types of looms in Oman. It also describes the weaving techniques in Oman and the handicraft woven products.

Chapter 4 moves on to study the types of Islamic decorative designs, which were utilized in religious buildings and almost all surfaces in the Islamic world. It also describes how these designs formed the Arab people's taste in order to gain a good knowledge about the local people's desires. This chapter also includes the religious symbolic meaning of colours according to the Islamic thoughts and philosophy.

Chapter 5 defines the symbolism in order to illustrate and understand the symbolic imagery and meaning of the traditional woven motifs.

Chapter 6 analyzes the results of the field study and discussions with various focus groups in order to investigate the local market and draw conclusions of people's preference to imported rugs over local ones. It is also demonstrates the recent situation of the local weavers and the Authority of the hand craft industry's future plans concerning local weavers.

Chapter 7 describes the innovative experimental rug designs and the methodology of the practical works. It analyzes the focus groups' feedback concerning the innovative designs to provide invaluable information about consumers' needs, to evaluate the

experimental products and examine their acceptance in the local market. This chapter also discusses the results with the aim of selecting the appropriate methods to revive the traditional rugs' market.

Chapter 8 draws final conclusions along with suggested recommendations that arose from the investigation, for future research.

All images except where indicated otherwise are the author's own.

CHAPTER 2
Literature Review

2.1 Introduction

There is no literature about innovation in rug weaving in Oman. Looking at existing literature in the history of ancient Islamic eras' textiles will help to enrich the knowledge we have about the Bedouin rugs. This chapter reviews the relevant literature by defining the weaving process and documents the early history of hand-weaving and the development of this handicraft throughout the centuries. In addition, it describes the impact of the advent of Islam in improving the hand woven textile design industry through different eras in the Islamic lands and the significant role of rugs and textiles in Islamic societies in Arab countries. It provides knowledge about the origin of weaving industry and the history of weaving in Oman as well.

2.2 Weaving Definition

Weaving is a craft of forming a fabric by interlacing two sets of threads or yarns called the warp and the weft at right angles to each other in the loom and turning them into cloth. This cloth can be plain in one colour or patterned (Wilson, 1979. p. 35; Gauldie, 1995. P.3; Barber, 1991. P. 126).

2.3 The History of Weaving Craft

Weaving is an ancient textile craft with a universal structure. It developed after the discovery of basket weaving, mat and net making, almost when early Neolithic people settled into permanent houses and started to domesticate animals and had a good knowledge about farming the lands around in earlier than 6000 BCE (Wilson, 1979. P.35). They discovered the art of weaving when they first interlaced rushes, wattles or big-leaved plants like palm or banana to make shelters for themselves and their possessions (Gauldie, 1995. p.4). The oldest evidence is a human body discovered high in the Alps which is thought to date from a period of 5000 years ago. The corpse carried a basket and wore a cape woven from grasses (Wilson, 1979. p.35; Gauldie, 1995. p.4).

Since textiles hardly ever survive a millennium, unless they have had the advantage of unusual conditions, it is difficult to have knowledge about the world's first woven textile and to follow the origins of the weaving craft. In view of this, no one knows when or where the weaving process actually began. Dating the beginnings of the craft

rests more on assumptions than hard facts because to date none of the historians and archaeologists have been able to propose an exact period of time when the first precious human woven fabric was made. Nevertheless, many anthropologists postulate that weaving originated in the Mesopotamian area earlier than 5000 B.C.E. and spread from this centre to other parts of Asia and Europe (Nasser, 1993. p.50). Others believe that weaving processes were independently evolved in various parts of the world for the reason that some weaving tools, whorls and spindles have been found in different areas and the invention of the spindle and the whorl assisted in developing the weaving process and advancing the human development towards civilization (Birrell, 1959. p.31).

On the other hand, two pieces of evidence that date to the Upper Palaeolithic 'Gravettian culture' [Table 2:1] confirmed that at least some natural fibres in use had been twisted together. The earliest evidence, dates back to 20,000 B.C.E. in Palaeolithic Venus, is a small woman sculpture found at Lespugue in southern France wearing a skirt made of long twisted strings [Fig. 2:1] (Barber, 1991. p.40). The latter evidence was found in piece of clay and calcite in Lascaux caves in southern France dated to middle of Upper Palaeolithic 'Old Stone Age' no later than 15,000 B.C.E (Barber, 1994. P.44). In addition, two evidences of impression of fabrics, in two preserved clays found in Jarmo¹, confirm that textiles have been known in early 7th millennium (7000 B.C.E). The first clay shows a plain weave with single warp and weft. The other clay shows plain weave with double warp and weft which is called basket weave [Fig. 2:2] (Adovasio, 1977. p. 225). The second earliest evidence dated to 6500 B.C.E was found in the cave of Nahal Hemar (Hebrew name for Asphalt River) near the biblical city of the Dead Sea in Palestine. In addition, pieces of fabrics dated to the beginning of the 6th millennium were preserved under unusual circumstances in Çatal Hüyük on the Anatolian Plateau [Fig. 2:3]. Both Fragments of Nahal Hemar and Çatal Hüyük were woven using weft twining technique (Burnham, 1965. P. 86; Barber 1991. p. 25).

¹ Jarmo is an early agricultural village on the plain of Chamchamal in Northern Iraq (Adovasio, 1977).

Eras	Years
Upper Palaeolithic	20000 - 9000 B.C.E
Mesolithic	9000 - 6000 B.C.E
Neolithic	6000 – 3000 B.C.E

Table 2:1 Chronology of eras in the Middle East (Barber 1991. p. 1)



Figure 2:1 Palaeolithic Venus of Lespugue wearing a skirt made of long twisted strings.
(Jennett, 2008)



Figure 2:2 Impression of textile show basket weave (Adovasio, 1977).

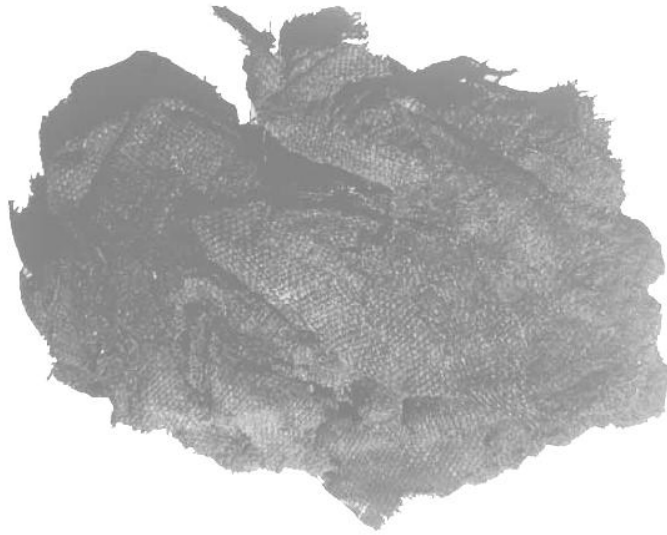


Figure 2:3 Textile from Çatal Hüyük, dating to 6000 B.C.E (Jenkins, 2003)

The ancient Egyptians were capable of weaving coarse linen fabrics in early times as well; one survived fragment from the Neolithic era was also found in Faiyum in Egypt which dates to about 5000 B.C.E. The fragment is woven at about 12 threads by 9 threads per cm in plain weave (Burnham, 1965; Barber, 1994; Barber, 1991. p. 155). Later on the ancient Egyptian people became talented in weaving very fine linens. Samples of these textiles have been found in the tombs of the Pharaohs, and images on wall paintings that illustrate various weaving activities in the tomb of Beni-Hassan around 2500 B.C.E. The murals show weavers using simple tall narrow looms as well as horizontal looms on which they made their fabrics (Birrell, 1959 p. 33; Gauldie, 1995 p. 15). Although many anthropologists believe that weaving originated in Mesopotamia, but the type of weather in this area did not preserve the fabrics. It is for this reason some fabrics discovered at Mesopotamia such as the striped cloth at Susa which dated back to the 4th millennium B.C.E. and another woollen plain weave fabric dated to 3000 B.C.E. was found in the area (Barber, 1991.p. 165).

These ancient civilizations did not possess looms of any greater complexity than those still in use by Omani weavers. The early evidence was found to be a design of a simple horizontal loom depicted on a cylinder seal in Susa dated back to the 4th millennium B.C.E. of which the origin is uncertain (Barber, 1991. p.166). The horizontal loom was a box-like framework loom, the threads stretched between a warp beam at the back and

a breast beam at the front. This loom has remained unchanged in principle; and thus far on that very simple hand-operated device the most complicated skills were developed and the beautiful rugs were woven.

2.4 The History of Textile in Islamic World

After the birth of Islam in the 7th century C.E., textiles played a significant role in Islamic society (Saeed, 1999 p. 16). Clothing became a necessary part of life all over the Islamic lands in Arabian Peninsula because Islam requested human beings to cover their bodies with a plain or white cloths, additionally household furnishing such as rugs, wall decorations, cushion covers and nomad's portable housing represented in tents all used textiles.

In the early Islamic period, Muslims focused on delivering the message of Islam all over the Arabian Peninsula paying little attention to their arts and crafts. As a result, the art of textile design remained the same, and continued to follow the Sasanian and Byzantine art traditional patterns decorated with animals such as lions, griffons, winged horses and various type of birds as well as human figuring and hunting scenes with strong colours. Generally, the textile pattern designed with two motifs in each circular surround or medallion with heads turned away from each other or standing on either side of the Sasanian 'Tree of Life'. In addition to adopting their motifs, the art of weaving was extremely influenced and made in Sasanian and Byzantine styles and techniques as well. These fabrics with animal and human designs were usually used for wall-hangings and curtains more than for clothing [Fig. 2:4 & 2:5]. Within ten years of the death of the Prophet Mohammed in 632 C.E. Islam reached countries beyond the Arabian Peninsula such as Persia and Egypt, hence an agreement was concluded between Jews and Christians in those countries and the Prophet's successors in Makah, which specified the tribute payable in return for protection and assistance. Taxes were used as payment and expensive draperies made in these countries were delivered as imbursement (Saeed, 1999. p. 17). Egypt sent its tribute in the form of robes, tunic, cloaks, turban cloth and shoes while Yemen in southern Arabia sent its well-known striped fabric called '*Asb*' made of silk, linen or cotton and patterned in ikat technique. This fabric was used as a coat cover for draping the Ka'bah as well (Saeed, 1999. p. 18; Baker, 1995. p. 41).

In the next hundred years Muslims brought the Near East, Central Asia, Sicily and Spain under Islamic control, consequently a unique style was developed by Muslims and flourished in the Umayyad period (661-749 C.E.). The Umayyad caliphate citadel was in Damascus, and it soon became the capital of the Islamic Empire that stretched from the Atlantic Ocean to the Indus River (Saeed, 1999. p. 20; Jayyusi, 1992. p.9). Gradually, Muslim artists relinquished the use of the Byzantine style and adopted the Hellenistic style which was well known and used by the Syrians. This style was more suitable to the Muslims to simulate nature and depict the vegetal motifs since many Islamic scholars believed that the religion prohibited the artists to represent living beings in their works. Thus, through a process of adaptation and creation, a new form of artistic expression appeared that came to be identified as 'Islamic' in the West.



(A)



(B)

Figure 2:4 (A) The use of animal figures in Sasanian silk weft faced twill 6th -7th century. (V&A Museum cited in Baker, 1995, p. 42)

(B) Sasanian silk twill 6th -7th century. (Volbach, 1969)



(A)



(B)

Figure 2:5 The Byzantine impact of using hunting scene in Syrian textiles (A) Men hunting wild animal, Byzantine 8th century (Volbach, 1969)

(B) Syrian silk 7th century, the influence of the Coptic style (Volbach, 1969)

Hence the textile industry in countries under the Islamic umbrella wove textiles using flax threads for the warps while using silk or wool for the wefts and produced patterned silk fabric in their own unique style often with embroideries of gold threads. From Egypt, Iran and Syria the fabrics were exported widely to the other Islamic countries as well as in Europe by Arab merchants and Arabic words such cotton, mohair, seersucker and taffeta became commonly used in Europe. These textiles have become familiar not just in their native lands but in Europe as well (Nasser, 1993. p. 43).

When the Umayyad caliphate in Damascus was overthrown by the Abbasids in 750 C.E, the last surviving member of the Umayyad family, Abd-Alrahman I (756-788 C.E.) escaped to Spain and established himself as independent Amir (prince) and thus initiated the Umayyad emirate (Jayyusi, 1992. p. 26). He made Córdoba his capital and combined al-Andalus under his rule. Abd-Alrahman I was a great supporter of art, as were many of his successors and under their patronage there grew to fruition a very distinctive and original style which is known as the Hispano-Mauresque. His greatest monument was the mosque of Córdoba [Fig.2:6], begun in 785 C.E. and expanded at various periods until the 15th century when it became a Christian church (Jayyusi, 1992. p. 27; Rice, 1993. p. 59).



Figure 2:6 The inner dome of Mosque of Cordoba in Spain decorated with geometric and foliage patterns as well as some verses from Qur'an written in Kufic script. Available at: http://en.wikipedia.org/wiki/Great_Mosque_of_C%C3%B3rdoba [Accessed June 2009]

The manufacture of fine textiles was also very much favoured in Spain and seems to have begun immediately after the Muslims' conquest of Spain. al-Andalus was the most important textile centre. Al-Idrisi notes that there were as many as eight hundred looms there. The Umayyad employed many Roman and Byzantine forms to create their own designs, to distinguish themselves from their Abbasid rivals, but they shared with the Abbasids the use of Kufic inscriptions and stylized floral motifs (Rice, 1993. p. 60). One of the earliest of their products that survived is the 'Veil of Hisham', dated from the 10th century as it is identified by an inscription written in fine kufic letters naming Caliph Hisham II and woven with six colours of silk and gold threads [Fig. 2:7]. The 'Veil of Hisham' was very similar to veils produced in Egypt and Syria at the same time, thus it was very difficult to distinguish among the pieces of fabric woven in that period when no inscriptions or historical records are available. The Umayyad style remained influential in Spain and Morocco (Rice, 1993. p. 61).

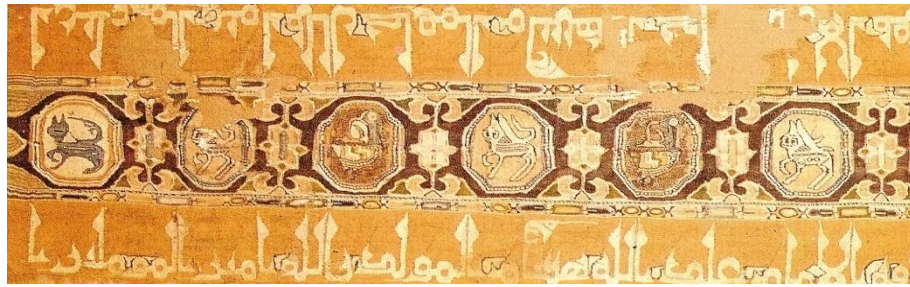


Figure 2:7 plain weave Linen tapestry decorated with gold and silk threads called the ‘Veil of Hisham’ dated to (976-1009). Madrid, (Real Academia de la Historia, Madrid cited in Baker, 1995, P.62)

In the East, the Abbasids established their dynasty (750-1258 C.E.) and transferred the capital from Damascus to Baghdad (Saquer, 2003. p. 35). The latter was founded by the Abbasid caliph al-Mansur in 762 C.E. (Saquer, 2003. p. 36). With this relocation of the capital, the emphasis shifted towards the eastern art traditions of the Turks of central Asia, the local Hellenistic and Sasanian traditions of Iraq and Persia; thus under their patronage a new style in the history of Islamic art begun and at the same time moved away from its former pre-Islamic roots. Moreover, new techniques were introduced and more abstract styles were adopted which had a long-lasting influence on the Islamic art in later centuries (Saquer, 2003. p. 41). In 836 C.E. the Abbasid capital was shifted temporarily to Samarra, a new city built on the east bank of Baghdad, which also served as the official residence of the caliph. The first three centuries of Abbasid rule came to be known as the golden age in which Baghdad and Samarra functioned as the cultural and commercial centres of the Islamic world (Yalman, 2001. p. 42). During this period, new style and techniques were developed in art and architecture that spread throughout the Muslim world. These included new ways of covering surfaces, repetition of abstract geometric or pseudo-vegetal forms of letters and plaster wall decoration, which came to be known in the West as ‘arabesque’ (Yalman, 2001. p. 43).

The textile industry developed and flourished during the Abbasid period as well. Production of textiles was a major industry in that time and extremely costly in comparison with other common goods. The Abbasids established a royal textile factory besides other textile factories which exported ornamental textiles from Baghdad to palaces and churches in other countries in the west (Rezequ, 2006. p.13). Some textiles such as the fabric called *Attabi*, which would eventually become the English term ‘tabby’ which means ‘plain weave’ were known for its place of manufacture. Tabby

received its name from the district of Al-Attabi in Baghdad where it was produced. Because textiles were counted as valuable goods, some countries such as Iran gave the caliph costly textiles as a yearly tribute instead of paying with money (Rice, 1993. p. 69).

The Abbasid used unbleached cotton or silk cotton mixtures to weave fine weft-faced plain weave and either embroidered their textiles in chain-stitch, painted them with inscriptions or used a patterned stamp with gold colour to ornament the textiles. The embroidery parts were stitched separately as bands then sewn on the fabric [Fig.2:8]. In addition to rich festooned textile production, caliphs gave garments made of expensive textiles as gifts. A caliph often presented a robe of honour, called khal'a, to a man that he wanted to esteem. Caliph al-Mansur is recognized with establishing the protocol requiring court bureaucrats and administrators to wear honorific black robes, often made with costly materials such as silk ornamented in Kufic script, for ceremonial affairs and events; thus black became the official colour of the Abbasid people, who were also acknowledged in China and Byzantium (Rezequ, 2006. p.36). On the other hand commoners wore cloths made out of cheaper materials, such as wool and some used fabrics of lesser quality (Ashor, 1996. p.20). As a result, cloth also indicated the status of the individual in the society during the Abbasid period.



Figure 2:8 Abbasid black woollen fragment dated to 9th century C.E. decorated with white and green camels separated by geometric designs and Kufic inscription. (Museum of Islamic Art cited in The Alexandria Library, Egypt). Available at: <http://www.eternalegypt.org> [Accessed 8 September 2009]

The development of the textile industry in Persia during the early centuries of Islam was differentiated from that in Mesopotamia or even Syria and Egypt. The main reason was that the region of Persia was not an Arab domain and subject to influence which has played great importance among the East countries. The political circumstances of Persia, was another reason why Persian textile industry differed from that of other locations in the vicinity, it was divided into separate kingdoms and was ruled by a series of independent dynasties since the early beginning of the Islamic era (Rice,1993. p. 63).

During the tenth century, a large area including Algeria, Tunisia, Sicily, Egypt and Syria came under the rule of the Fatimid dynasty (909–1171C.E.) (Yalman, 2001. p. 49); the Fatimid founded the city of Cairo and established it as their new capital in 973C.E. (Wilson, 1979. p. 45). While Egypt was benefiting from the enormous prosperity due to its intermediary role in the lucrative trade between the Mediterranean and India, the Fatimid capital, Cairo, soon rivalled the Abbasid capital of Baghdad (Yalman, 2001. p. 50).

The Fatimid rulers had great interest in the textile industry; it was used for political purposes to give as gifts from the royal court to the rulers and elite in neighbouring countries as well as in Egypt itself. In addition, it had a large contribution in Egypt's foreign trade. Because of that the textile industry in the Fatimid period was highly developed and it reached a high degree of perfection in techniques and decorations. The textile industry was established in the delta and Upper Egypt by creating *tiraz*. The word *tiraz* is borrowed from the Persian and originally meant embroidery, and then it came to mean the workshop where embroidery was done, and finally a weaving workshop (Wilson, 1979. p. 49). It was established as a textile factory run by the government administrator. The government established two types of *tiraz*: the first type was the '*khassa tiraz*' which means the exclusive weaving workshop, to produce the royal class winter and summer cloths for the caliph and the country's bureaucrats as well (Rezequ, 2006. p.47). Garments produced in '*khassa tiraz*' were embroidered in Kufic script, with caliph's and bureaucrat's names. Most of the majestic fabrics were woven by using wool or flax for the warp and silk for the weft threads [Fig.2:9]. Moreover the *khassa tiraz* was where annually the coat cover for the Ka'bah was woven in black silk threads and embroidered using some verses from the Holy Koran besides

some floral and geometric designs in gold and silver threads while green silk threads were used in weaving the inner coat for the Ka'bah [Fig.2:10] (Ashor, 1996. p.31).

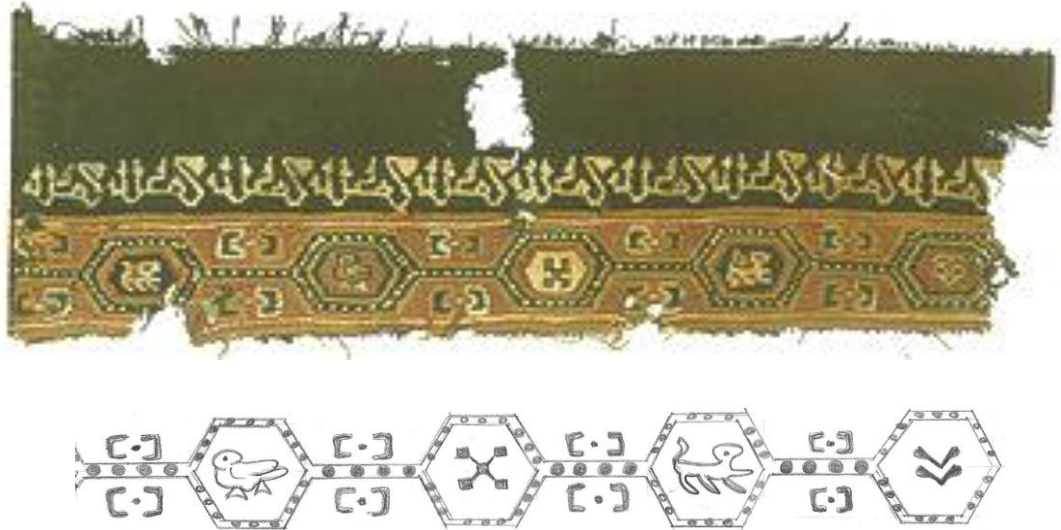


Figure 2:9 A Fatimid wool fragment, Egypt dated to 10th century C.E. the band containing hexagonal shapes stylized with white duck and rabbit figures. Above: a foliated of Kufic script (Museum of Islamic Art cited in The Alexandria Library, Egypt). Available at: <http://www.eternalegypt.org> [Accessed 8 September 2009]



Figure 2:10 The recent coat cover of the Ka'bah. (Al-Ansari, 2006)

The Royal Fatimid textiles were usually woven in white and decorated with wide horizontal bands which contain words in each side of the band and the name of the caliph written in Kufic script (Rezequ, 2006. p.49). The ends of some letters in the script were extended into vegetal motifs or palm branches, some inscriptions of small

animals or the traditional repetitive geometric and abstract motifs embroidered with gold and colourful silk threads. At the end of the Fatimid era the textile was woven using just silk threads in both the warp and the weft to produce very delicate fabrics (Rezequ, 2006. p.50).

The second type of the workshop was the public weaving workshop known as '*amma tiraz*'. These workshops produced fabrics for the public. Both types were supervised by a *tiraz master* who was responsible for the weavers, the designers and the quality of the fabrics.

During the Fatimid dynasty in Egypt between (1040–1157 C.E.) a nomadic Turkic dynasty from Central Asian called Seljuk became the new rulers of the eastern Islamic lands (Yalman, 2001. p. 105). The Seljuks were established first in Bokhara then in Merv in 1037 C.E., then in central and western Persia, and finally in 1055C.E. they seized Baghdad establishing themselves as the new protectors of Sunni Islam. Within a very short period they created a huge empire, controlling the whole of Western Asia which encompassed of Iran, Iraq, and much of Anatolia (Rice, 1993. p. 66). Under the Seljuk supremacy, Iran enjoyed a period of material and cultural prosperity and ingenuity in architecture and the arts. This period is considered by many as the most glorious period than those that preceded it and it greatly influenced later artistic developments (Rice, 1993. p. 67).

The Seljuk developed some new weaving techniques as well as the patterns. Different weaving techniques were used between the background and the designs in the textiles to give different textures (Wilson, 1979. p. 15). This was achieved by using a plain weave compound construction derived from Egypt; the patterns were accomplished by a vertical ribbed ground and a looser binding in the design [Fig. 2:11]. Another innovation was the single cloth warp twill, brocaded with a supplementary weft. This technique was the first Persian discontinuous brocading which developed later to produce more complex compound weaves [Fig. 2:12]. Some fabrics woven in a double

cloth technique that survived, dated between 12th and 13th century, come from the Seljuk period in Persia (Wilson, 1979. p. 16).

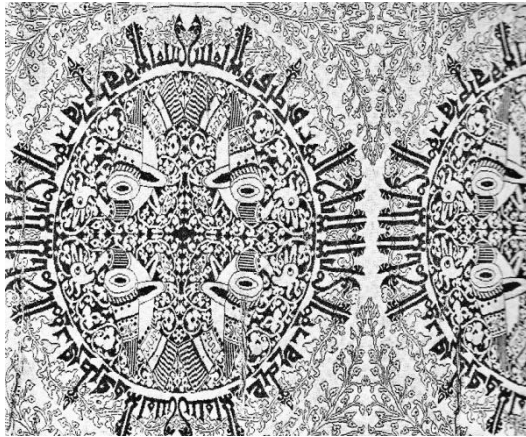


Figure 2:11 Plain compound cloth dated to late 12th-13th century, the Kufic script was ornamented the oval symmetrical design (Weibel, 1972)

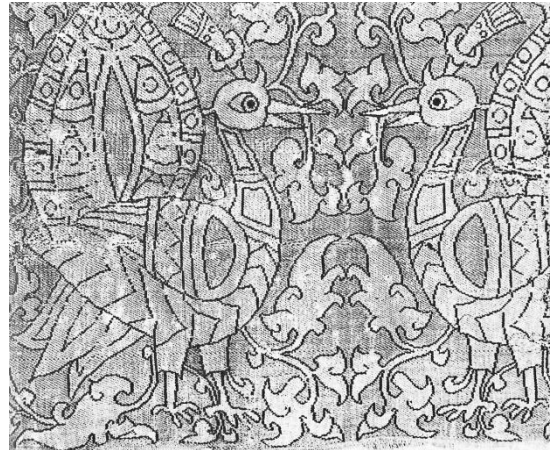


Figure 2:12 Compound single twill cloth dated to 12th -13th century (Weibel, 1972)

The textiles were characterized by strong and bold designs and the Arabic Kufic inscription written in the ‘animated’ script in which the letters were transformed into animal figures [Fig. 2:13]. The bands and ogives replaced the rounds as framing figures of pairs of animals or birds with floral patterns which combine into a continuous elements that flow in all directions to produce a pattern called foliation ‘*Altawreque*’ in addition to the repeating motifs which were extensively used in Islamic textiles. These designs were created until the 13th Century without very marked changes of style. The geometric patterns developed by Seljuk of Central Asia were used extensively in other art forms from carpentry to mosaics on the walls of the mosques in most Islamic countries (Wilson, 1979. p. 6318; Rice, 1993. p. 67).

Ayyubid ruled Egypt between the years (1171-1260 C.E.) after the fall of the Fatimid dynasty. When Salah al-Din Yusuf Ayyub (better known in the west as ‘Saladin’) the great minister of the last Fatimid Caliph seized power, and established the Ayyubid sultanate, he gained rule over a large area extending from Yemen in the south to Mesopotamia, what is now southern Turkey in the North, taking in Egypt, Syria and reconquering Palestine (Ashor, 1996. p. 111).



Figure2:13 Arabic Kufic inscription written in animal shape. Available at: <http://www.diwanalarab.com>
[Accessed 30 September 2009]

In the first period of their era, the Ayyubid technique in producing textiles followed the same line as the Fatimid style with more details and perfections. The textiles were richly covered with geometric decorations and bands of highly developed foliated Arabic Kufic and Naskh inscriptions style which was popular at that time. These ornaments were added as discontinuous brocades with a supplementary weft to look like a chain known as Holbein. Zigzag and curved lines were used and orange colour was popular for stitching upon a green background. Not long afterwards, animal images such as pairs of birds, eagles on bands which were distinct from palm trees were introduced to ornament their textiles, the style of the Ayyubid, undoubtedly, had contained Seljuk's impressions (Rezequ, 2006. p. 152). On the other hand, carpet productions that flourished in the Fatimid era remained the same during the Ayyubid period.

When the Abbasid and Fatimid dynasties fell under the rule of the Ayyubid the tiraz industry was affected as the weavers became unrestricted and free to use any decorations and materials as they chose unlike during the Fatimid and Abbasid periods when strict rules were imposed in the choice of materials as well as the designs (Maher, 2005. p. 95). Then, weavers had to compile bands containing Arabic inscriptions to be horizontal and all motifs positioned parallel to the Arabic inscriptions.

The Ayyubid sultanate relied too much on slave soldiers called Mamluks; the Mamluks gained strength as a result of the weakness of the Ayyubid rule in Egypt. ‘Mamluk’ literally means ‘slave’ in Arabic (Rezequ, 2006. p. 154). The Mamluks were mainly Turks in origin and considered to be ‘true lords’ with social status higher than that of freeborn Egyptians (Nicolle & McBride, 1993. p. 44).

The last effective Ayyubid Sultan tried to reunify the fragmenting Ayyubid state and its armies by acquiring larger numbers of Mamluks who were recruited at a young age for the purposes of protecting the Sultan’s position. However as they trained and educated themselves they grew stronger with military power in their hands and in 1250 overthrow the last Ayyubid Sultan. The Mamluks ruled Egypt, Syria and Palestine from 1250 to 1517 and extended their power and create a large empire from south-eastern Anatolia to the Hejaz as well as parts of the Sudan and Libya (Nicolle & McBride, 1993. p. 52). They controlled trade routes, between Europe and the East, of silks, textiles and spices that helped revive the economy and they accumulated enormous wealth until the discovery of the Cape of Good Hope by the Portuguese who gained control of the Indian Ocean and barred the Mamluks from trading in what was their largest source of revenue (Nicolle & McBride, 1993; Maher, 2005. p. 100).

In the early time of the Mamluks’ era the weavers followed the artistic traditions, and soon the textile industry flourished and many of the textiles were most skilfully woven and small scale patterns using human and animals figures were employed instead of the large scale motifs which were brocaded by using Holbein stitch while the embroideries gradually replaced the loom woven designs. The designs became more elaborate. The complex geometric patterns appeared and large bold Kufic inscriptions were used to decorate the textile as well as other objects [Fig. 2:14 & 2:15]. Magnificent pieces which reflected the ability of the craftsmanship were produced at that time. Mamluks are considered among the greatest patrons of the art and architecture in the history of Muslims and their textiles and carpets were highly valued in international trade as well [Fig. 2:16].



Figure 2:14 An example from the Mamluks, it has six sided star-shaped medallions, each containing a two-headed eagle spreading his wings. (Museum of Islamic Art cited in The Alexandria Library, Egypt). Available at: <http://www.eternalegypt.org> [Accessed 8 September 2009]



Figure 2:15 A Mamluk textile fragment dated to 14th century woven in white, grey, and brown printed linen decorated with a bold Naskh inscription band on a background of foliage. The letters have animal-like endings, such as lions, hares, birds, and griffins. (Museum of Islamic Art cited in The Alexandria Library, Egypt). Available at: <http://www.eternalegypt.org> [Accessed 8 September 2009]



Figure 2:16 This Mamluks' fragment made of silk and dated to 14th century, it is well-known as damask. It is decorated in a Chinese style. The main motif is a wide leaf shaped medallions. Each medallion includes a lotus flower surrounded by Naskh calligraphy. (Museum of Islamic Art cited in The Alexandria Library, Egypt). Available at: <http://www.eternegypt.org> [Accessed 8 September 2009]

The Ottoman Empire rose as a result of the disintegration of the Seljuk sultanate in Anatolia and the instability caused by Mongol rule. The Ottomans defeated the Mamluk Empire in 1517 and the Ottoman's area of influence extended from Central Europe to the Indian Ocean (Rezequ, 2006. p. 158; Saeed, 1999. p. 89). Furthermore, they overpowered all the Mamluk lands which included Syria, Egypt, and the Holy Cities of Islam such as Makah. Hence the Ottomans came to rule over what became the most powerful state in the Islamic world and gave them the status of world power. This led to the increased recruitment of Iranian and Arab artists and intellectuals at the Ottoman court. The Ottomans promoted themselves as the defenders of Islam, and as orthodox Sunny Muslims they avoided the use of human figures and opted for a variety of ornamental designs based on plants and flowers such as tulips, roses, hyacinths and carnations.

Many different peoples with diverse cultures lived under the Ottoman Empire, as a result, a unique and distinctive Ottoman style developed in every artistic field, and textiles became particularly significant, containing highly influential and shared characteristic features originating from diverse regions such as Iran, India and China.

Under the Ottomans various types of fabrics were produced such as silk and silk velvets as well as some brocaded cloths called *Serenk* and *Zerbaft*, which both embroidered by

using gold threads only. Denny (1982) states that “the designs used by the silk weavers adhered to a basic standard repertoire which were occasionally supplemented with patterns produced by professional designers and the Ottoman weavers were capable of executing orders according to European taste in an effort to encourage exports. But although they adapted some of their patterns, Ottoman weavers appear to have stayed with their basic techniques as stipulated by law”.

The earliest Ottoman textile patterns were simple striped designs, but the classical Ottoman style motifs were group of spots or balls found in all velvets. Occasionally they were combined with stripes to represent leopard spots and tiger stripes as seen on live animals or on the skins that served as clothing or rugs. Animal and human figures were not common in Ottoman art, the spots and stripes became purely decorative patterns in that era and by placing a smaller ball inside each ball a crescent shape, considered as a symbol of Ottoman Empire, was created [Fig. 2:17]. These balls were used in a group of three spots as well to form a shape of triangles with pairs of wavy lines or clouds apparently representing pearls on the waves of the sea; symbolizing good luck and power [Fig. 2:18]. These patterns remained for many centuries as one of the favourite Ottoman designs used across Asia [Table 2:2].

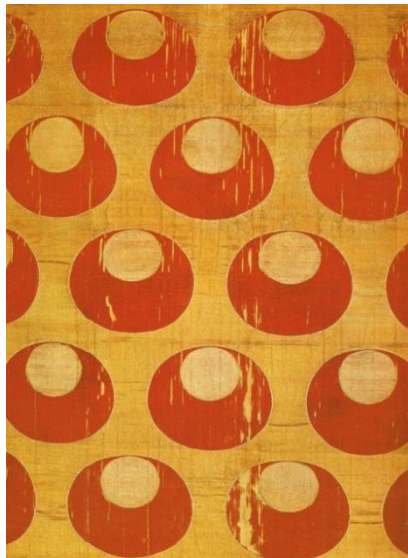


Figure 2:17 Diagonally offset rows of crescents, dated to the beginning of 16th century (yanni, 1982)



Figure 2:18 The design of pairs of wavy lines and three spots , dated to the 15th century (yanni, 1982)

Dynasty	Period	Patterns, motifs and techniques used
Early Islamic Period	7 th century C.E	Followed the Sassanian and Byzantine tradition
Umayyad Period	661-749 C.E.	Adopted the Hellenistic style which simulate nature and depict the vegetal motifs
Abbasids Period	750-1258 C.E.	Introduced the art traditions of Turks, Iraq and Persia. New techniques were introduced and adopted more abstracted style with the use of Kufic script
Fatimid Period	909- 1171 C.E.	The textile decorated with wide horizontal bands contain words in each side, the ends of some letters were extended into vegetal motifs or palm branches. Using silk threads to produced delicate fabrics.
Seljuk Period	1040- 1157 C.E.	Developed new weaving techniques by using two different weaving structures in a fabric to distinguish the design above the background. Transformed the letters into animal figures. Used single cloth warp twill, brocaded with a supplementary weft. Used bold designs.
Ayyubid Period	1171-1260 C.E.	The textiles covered with geometric patterns and bands of foliated Arabic Kufic and Naskh inscriptions.
Mamluks Period	1250-1517 C.E	Small scale patterns were used in the shape of human and animal figures. Holbein stitch were continued to use. Embroideries replaced the woven designs.
Ottoman Period	1517-1917 C.E.	Used simple strips to decorate the textiles. Used group of spots or balls with wavy lines to design the fabrics. Utilized the Naskh script.

Table 2:2 The patterns, motifs and techniques used in different dynasty in Islamic lands

At the beginning of the 16th century a royal court style known as ‘saz’ was developed under Şahkulu who was considered as the chief court painter. This style employed curved and large serrated leaves which twist and run all over the fabric in a random way

[Fig. 2:19]. By the middle of the 16th century under the supervision of the head court artist called Kara Mimi, who was well known as a naturalist, stylized and developed floral designs consisting of tulips, roses, hyacinths, fruit trees in blossom and cypresses. These designs were more symmetrical, repetitive and infinitely-extensible as patterns and became the distinctive theme of Ottomans art [Fig.2:20] (Yanni, 1982. p. 26).



Figure 2:19 Saz leaf design dated to 16th century (Yanni, 1982)

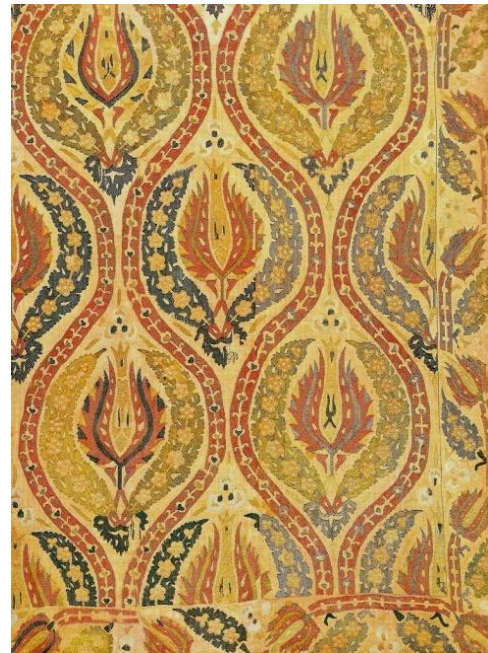


Figure 2:20 Tulips flower designed with an embracing leaves decorated with five petalled blossoms (Yanni, 1982)

2.5 The Origin of Weaving Rugs

Ornamented flat rugs were without doubt originated in ancient times in the dry desert regions inhabited by the nomads in Assyria, Babylon, Iran, Egypt and Anatolia long before the advent of Islam as a pressing demand to cover the rough, rigid and hot ground in summer times or cold in the winter times, these flat rugs are not knotted carpets but flat woven fabrics as the knotted carpet did not appear in Islamic countries until the emergence of the Seljuk in the 11th century (Blunt, 1976. p. 12; Rezequ, 2006.p. 5; Saeed, 1999. p. 13; Birrell, 1959. p. 21; Turkhan, 1968. p. 6). Dilley (1900. p.13) states that “coarse rugs with a flat weave were the earliest type of oriental rugs; they were used in the East as floor coverings and were made by the early Egyptians, to decorate the walls of tombs and to spread them on the ground for the sacred bull to lie on during the Assyrians, and Babylonians times”. Generally, the coarse rug is much

lighter than rugs with pile which were made in Persia or Turkey and are considered the oldest surviving form of artistic expression, but since it was woven to serve the Nomad's daily needs and made of perishable material intended for hard use on the ground, none of them have survived. Another reason of their disappearance in Turkey as Blunt (1976) states "it is said that the Turks, mystified by the high prices paid by Europeans for worn-out carpets, concluded that they possessed the secret of turning them into gold, and so destroyed many in a vain attempt to discover how this was done", thus, it is very difficult to estimate the exact time or place of their existence.

The earliest evidence for woven rugs was found in a natural deep freeze at Pazyryk in the Altai Mountains of southern Siberia near the north-eastern border of Mongolia, which was discovered in 1949 during excavation of burial sites (Blunt, 1976. p. 34). It is almost in perfect condition and is dated back to the late 5th century and the beginning of the 4th century B.C.E. (Blunt, 1976. p. 35; Hayward Gallery, 1976. p. 12). Pazyryk carpet has a woollen pile with about 200 knots per square inch, its central field with a deep red colour and has two wide borders, one depicting deer and the other a horseman. Until the discovery of Pazyryk carpet, scholars relied on literary accounts about the existence of certain rugs in history that did not specify the technique by which the rugs were woven. However, the discovery of Pazyryk proves that the pile weaving is an ancient craft and has a 25th Century background [Fig. 2:21] (Blunt, 1976. p. 35; Hayward Gallery, 1976. p. 12; Barber, 1991. p. 25).

Rugs became of significant importance after the advent of Islam when they were used as floor coverings in mosques, hence they became a fundamental piece of furniture in Muslims' houses, and as a cover coat for the Ka'bah and as well each Muslim must carry a prayer rug with him wherever he goes. The carpets and rugs were highly accepted and appreciated as tributes and diplomatic gifts in the Islamic world. Harris (1977) states that "This craft is essentially an expression of Islamic culture, though its history reaches much further back in time; Typical of Islamic arts are a taste for brilliant colours, dense ornamentation and intricate repeating patterns; all these are found on tiles, on pottery, on metalwork and on carpets and rugs"



Figure 2:21 Pazyryk rug

Available at: <http://www.alarnold.com/historybig.html> [Accessed 22 September 2009]

Knotted rugs were introduced into western Asia as mentioned earlier by the Seljuk who established themselves there; these Turkish tribes migrated to Persia and gained more strength and power until they finally ruled the country and conquered Anatolia after a decisive battle with Byzantines and Iraq as well. The Turkish Seljuk's culture reached its highest peak in the middle of the 13th century, influenced by both the Byzantines as well as the Eastern art (Rice, 1993. p. 53; Blunt, 1976. p. 22); producing carpets and rugs constituted the most important branch of Seljuk textile industry compared with any other art works, bears witness to the nomadic bases of their culture, for it was undoubtedly in nomadic society more than anywhere else that the carpet and rugs had a truly significant role to play. Seljuk carpets are characterized by geometric and floriated motifs in repeated rows and are designed with Kufic inscription on the border based on stylized animals; the most popular colours used were brown, ochre, green, red, blue and purple. Weaving tribal rugs continued to flourish in Iran and the countries that shared borders with it; and there where tribal rugs spread throughout the Islamic lands (Rice, 1993. p. 54; Blunt, 1976. p. 23).

One of the best sources of information for the appearance of early rugs is their representation in contemporary European paintings that are dated no earlier than year 1400. Some rugs have survived and are found in old churches such as the ones in

Sweden and Italy, both are considered as the oldest Turkish rugs; they are designed with octagon-inspired by the circle patterns of medieval silks-containing the motif of the combat of dragon and phoenix, introduced from China by the Mongols and date to the 15th century (Hayward Gallery, 1976. p. 11; Blunt, 1976. p. 24).

The 17th century Egypt, under the Ottoman Empire, was very famous for its carpet called '*Cairene*', this word was commonly used to describe a special sort of carpet established as early as the 8th or 9th century (Rice, 1993. p. 36). The '*Cairenes*' were distinguished by geometric designs inspired by marble pavements and they demonstrate the known proficiency of Egyptian weavers. The superb Mamluk carpets of Egypt and the related pieces which continued to be produced under the Ottomans have geometrical patterns of octagons and stars, related to the interlace patterns of medieval textiles as well as some naturalistic motifs.

Contrary to the foregoing types, which were extensively exported to Europe, prayer rugs were primarily produced for the Islamic market only. That could be the main reason why the rug industry flourished and spread after the advent of Islam especially, as a result of the great demand from the worshippers to pray on a clean surface in the Muslims faith. Some beautiful examples of prayer rugs from the 16th and early 17th centuries were probably produced for the Ottoman court and were similar to the contemporary style of ceramic tiles from Istanbul; these designs were continued on prayer rugs later (Turkhan, 1968. p. 13).

2.6 The History of Weaving in Oman

Hand weaving along with hand spinning, is one of the traditional handicrafts in Oman. The weaving craft is known as the *sado* craft in Oman, which literally means the warp. The Bedouin weavers use simple wooden ground looms similar to those used in ancient times. The pit loom weavers, which are the shepherds, have been well known to weave plain white cotton men's clothes fabric for domestic use and export to neighbouring countries as well as distant states such as East Africa and India long before the advent of Islam. In addition, the Bedouins have been able to spin sheep wool, goat and camel hair

as ‘tents’, rugs, blankets, cloaks, camel harnesses, saddle covers and saddle decorations by using simple ground loom (Public Authority for craft Industries, 2007).

It is difficult to trace the development of weaving craft in Oman because of the perishable nature of the woven pieces, especially in desert conditions where hot weather in summer time and insects such as moths exist. However, writings by ancient travellers have described the Omani clothes which confirm their existence. Yakut Al-Hamawi, the famous historian and geographer, notes in his Countries Encyclopaedia ‘*Mujam Al- Buldan*’, (1224 C.E.) that “it is hard to find a house in Oman devoid of a loom device” and he stated further that “Prophet Muhammad was shrouded in 632 C.E. by two garments made in Sohar, Oman”. From this observation we can assume that weaving in Oman has a long history of excellence and most of the Omani people had been working in this craft a long time ago. Baker (1995) emphasized that “weaving and producing textiles was well established in the Arabian Peninsula before the advent of Islam because of an abundance of natural fibres such as wool, camel and goat hair. Wool was associated extensively with mystic Muslims to represent the simplicity, honesty and piety, thus it was generally used by Sufi’s theologians.

Weaving rugs has been one of the main occupations of the Bedouins and shepherds in Oman. Since the nature of these people is to move around in search of pastures on mountains, down the valleys and in deserts, carrying with them their property, they do not weave in big sizes. Rugs are woven in very simple, attachable and transportable looms with narrow width with small geometric motifs which are passed from generation to generation mainly by oral tradition. Designs used by the nomadic people often symbolize fertility, health, desire and symbols protecting nomadic people from the evil eye. Colours, extracted from nature are limited in number such as red, yellow and green only.

Little is written about the weaving history in the Arabian Peninsula and there is no record about the origin of weaving especially in Oman, even the Bedouin themselves, they do not know how and when they started weaving, but they believe that weaving is a very old task. They also believe in a legend, which is still passed from generation to

generation, in which a night fairy visits them every night to weave about four meters (while the Bedouin women were watching and waiting for her every night). Finally they ask the night fairy to teach them weaving, but when she taught the women and they got good knowledge in weaving rugs she disappeared and never returned.

2.7 Summary

It is difficult to trace the origin of the weaving craft due to the nature of fabrics which has hardly survived. As a result, none of the archaeologists have been able to specify when or where the first woven fabric was made. Weaving tools, textile fragments and the wall paintings of ancient civilizations found in various parts of the world were the only evidence which assisted to assume the origin of this craft.

It is also difficult to determine the origin of Bedouin weaving and motifs in the Arabian Peninsula as Arab nomads move from one area to another following the traditional way of life. The official boundaries between the countries never hampered the Bedouin's movement throughout the desert of the Arabian Peninsula to search for water and pasture. This immigration from areas and the free movement of tribes across the deserts were thrown into cultural mixes between countries in earlier times. The great proof of the cultural mix is the similarity of the woven rugs among the Bedouins in different countries in the Arabian Peninsula, in terms of the woven techniques and the colours they used, but they are slightly different in motifs and that is because each Bedouin community has its particular methods of treating appropriate design in order to localize and differentiate themselves from others, so these designs reused and passed down from generation to another as a tradition, to distinguish themselves from other tribes as well as represent their community and the country which they belong to.

Using wool fibre in particular, which was widely used for rugs, is even more perishable than cotton fibre. Therefore, no rug fragment survived to give us a good knowledge about the Bedouin's rugs in earlier times. Recently, each product woven by the local weavers in Oman is unique and has its own appealing characteristics; there are no two rugs or any hand woven products that look like each other in terms of the hue of dyed

fibres, the perfection of woven motifs, and the cloth set of the woven products 'weaving quality'.

Because of their value, fabrics in Arab countries were often cut down and reused over and over again until they literally wore out. Consequently few textiles have survived from the early Islamic period. Many of the fragments that have survived from the early Islamic times were found in Egypt primarily in graves due to the dark and dry conditions which helped to preserve them, as Egypt had been a very important centre of the textile industry since early times (Rice, 1993. p. 65). These fragments were made from cotton, linen, silk and wool with brilliant colours and rich designs that showed excellent and complicated textile designs. Some of these designs are decorative, figural and some consist of inscriptions only and they are considered to be aesthetically superior because of their balanced designs.

Most of the motifs used by Muslim weavers were derived from Byzantine and Sasanian arts. These motifs with bands containing pairs of birds, ducks, eagles and peacocks. These animals woven in confronted position or back to back separated with the Sasanian Tree of Life in the middle of them and each pair enclosed by a decorative medallion. However geometric designs were preferred and in the earlier works these were usually more flowing and depended on stylized floral forms or arabesques. The beaded border usually on the top and bottom has a common style of decoration in early Islamic textiles which was also inspired by Sasanian design. One of the most common types of Islamic textile was to inscribe with the name and titles of the ruler, as well as the date and the manufacturer. The inheritance of the Islamic artistic tradition especially the Ottoman influences is still being used in textiles, upholsteries, furniture, carpets as well as in architecture particularly in mosques and is appreciated in all the Arabic Islamic countries.

Kufic script and later Naskh script was introduced and developed to replace the other religious symbols, which were commonly used in their textiles before the advent of Islam, to decorate the woven textiles in Islamic eras to give them an Islamic impression. On the other hand, Arabic scripts were used as a glorification for the caliphs when they

commenced that some words such as 'honour for ever' or 'happiness for ever' be added on the textiles especially in Ayyubid times. Undoubtedly the Foliation 'Altawreque' design besides the abstractive repetitive motifs were used extensively by Muslim weavers or artists in general.

CHAPTER 3
The Traditional Fibres and Looms

3.1 Introduction

Having established the latest research on the historic roots of Islamic lands weaving craft in chapter two, this chapter aims to investigate the traditional Omani Bedouins and shepherds' handicraft and their woven products; it provides information about the place of study 'Oman' in terms of its strategic location and the impacts of the ancient trade with neighbouring civilizations that assisted in forming their culture. It describes the lifestyle of these weavers 'Bedouins and shepherds' to recognize their traditional thoughts and beliefs. Observations were made during field works to illustrate the process, tools and products of the weaving handicraft in this chapter.

3.2 The Location

The Sultanate of Oman is an Arabic country located in southwest Asia, on the southeast coast of the Arabian Peninsula with an area of 309,500 square km, encompassing a diverse range of topography, including mountain ranges, arid desert and fertile plains (Al-An'zi, 1991.p.44). It shares borders with the United Arab Emirates to the northwest, Saudi Arabia to the west and Yemen to the southwest [Fig. 3:1] (The Ministry of Information, 2006.p.28). The coast stretches for over 3,165 km and is formed by the Arabian Gulf in the north, the Gulf of Oman in the northeast and the Arabian Sea on to the south and east (Al-An'zi, 1991.p.46; The Ministry of Information, 2006.p.30). Madha and Musandam are considered enclaves and separated by the United Arab Emirates. Oman occupies a strategic location on the Strait of Hormuz at the entrance to the Persian Gulf, directly opposite Iran (The Ministry of Information, 2008.p.12).

The strategic location of Oman is astride the trade routes which linked the Far East with the west. These routes were described as a spider web by most of ancient travellers which confirm that Oman has long been a major seafaring country.



Figure 3:1 The location of The Sultanate of Oman. Available at:

<http://www.wordtravels.com/Travelguide/Countries/Oman/Map> [Accessed 8 September 2009]

3.3 Oman in the Pre-Historical Era

An archaeological excavation and wall depiction in Oman show that the earliest culture existing dates back to the period between 50,000 - 30,000 years ago (The Omani museum, 2005). Some evidence was also found which proves the existence of a flourishing civilization such as some potteries and tools made of stones found in ancient tombs, which represent human activities at that time. While the first ancient village established in Oman dated to the end of the 4th millennium B.C.E. Moreover some ancient *irrigation* canals were built in those areas; known as *falaj* they are evidence for a human settlement. Indications of life in Oman have also been seen in archaeological remains proving that Oman enjoyed widespread contact with people from other lands (The Omani museum, 2005).

In the 3rd Millennium B.C.E. Omani villages depended mainly on agricultural systems irrigated by rains and floods (Alnadhori, 1980 p.35). Oman has been the main source of copper since early times when it was mined in several locations; indeed, ancient smelting sites have been identified. As long ago as 200 B.C.E. ships from Magan, the old name for Oman, traded copper from Oman's mountains, building materials and fine

marble with Mesopotamia India and other places for grains, leathers, herds and the cotton and wool textiles [Fig. 3:2] (Alnadhori, 1980. p.38; The Ministry of Information, 1979.p.11). The Acadian inscription records Sargon was dealing with Dilmun ‘Bahrain’, Magan ‘Oman’ and Meluhha “the Indus civilization” as a major source of copper, other Sumerian inscriptions referred to Magan as a source of copper as well (The Ministry of Information, 2008. p.20; McIntosh, 2005. p.23).

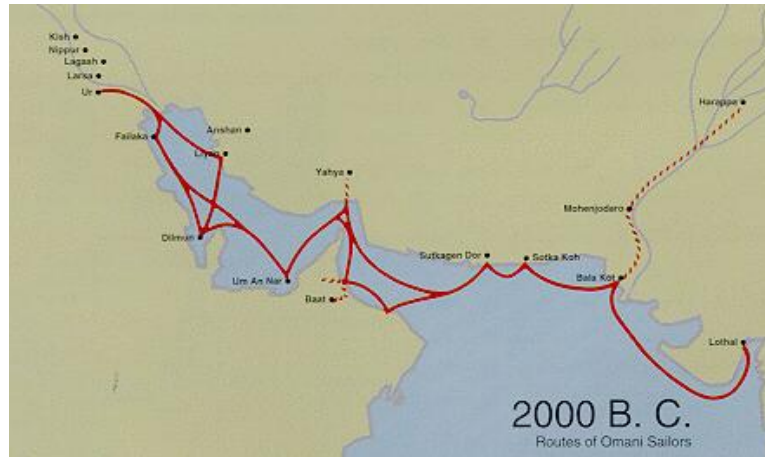


Figure 3:2 The ancient trade rout. Available at: <http://omanpage.tripod.com>

[Accessed 12 September 2009]

Frankincense was considered the most important export from Oman since ancient times (Aljamal, 1992 .p.48). It was highly valued by many ancient civilizations, and was very important to the social and religious life of ancient people, particularly in Egypt, China and Rome which used it both as an aromatic and a medicine (Aljamal, 1992.p.49; The Ministry of Information, 1979.p.56). Frankincense comes from a wild tree which grows only in the south of Oman ‘Dhofar’ and Somalia, but the frankincense that was produced in Dhofar has been considered the best in the world. Trade with China in the Far East and with Egypt and Rome in the west before the advent of Islam has played an important part in flourishing commercial activities between these countries and Oman [Fig. 3:3] (Saleh, 1981.p.31).

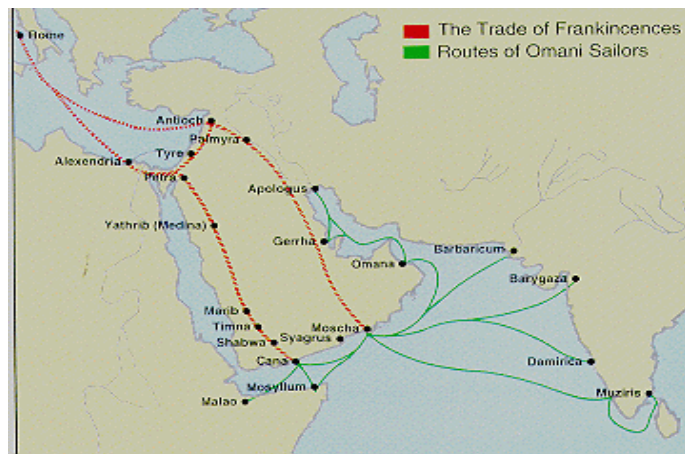


Figure 3:3 The trade road of the Frankincense. Available at:
<http://omanpage.tripod.com> [Accessed 8 September 2009]

3.4 Oman in the Islamic Era

The people in Oman embraced Islam short after the advent of Islam in 630 C.E. Embracing Islam was the major reason for defeating the un-Muslim Persians from Oman, leading to flourish maritime trade by transforming Sohar, one of the cities in Oman, to be the greatest sea port in the Islamic world at that time. Consequently, trade was stretched as far as China importing silk as well as cotton, linen, wool and carpets from India and Persia. The Omani trader, Abu Ubayda bin AlQasim, was the first Arab to make the perilous 7,000 km. journey to Guangzhou ‘Canton’ in the beginning of the eighth century carrying with him gifts, including carpets and textiles, to the Chinese emperor (The Ministry of Information, 1990.p.64).

Oman was conquered by several foreign powers; Sohar was seized by the Sasanian Empire, which established itself in Iran and stretched to Iraq in 225 C.E., they controlled the trade route and changed it to cross the Gulf rather than the Red sea as previously; between the years 967 C.E. and 1053 C.E, Oman became part of the Great Seljuk empire (Fain, 1995.p.29). In the early 16th century, after the Portuguese under Vasco de Gama discovered the sea route around the Cape of Good Hope to India, they seized Muscat for a century and a half in order to dominate trade which had been an Arab Monopoly. The Portuguese were finally defeated by Sultan bin Saif Al-Ya’ryby in 1650 C.E. (Fain, 1995.p.30; The Ministry of Information, 1990.p.34; Holy, 1976.p.76; Mailes, 1992.p.24). The Ottomans tried to control Muscat between the years (1550-

1551) and (1581-1588) until the Omani Imamate recaptured Muscat from the Ottomans (Aboela'la, 1988.p.35).

3.5 The Omani Empire in East Africa

In 1804-1856 Oman had a regional power with wealth on both sides of the Gulf and in East Africa. The Sultan Sayyid Said bin Sultan, the Sultan of Oman at that time, concentrated on developing his country's economy and commerce. He made Zanzibar, which is an island in Tanzania in East Africa, his second capital and concluded agreements with the European powers, as well as establishing a commercial relationship with the United States of America by sending a special envoy, who arrived in New York on April 1840, charged with delivering letters and gifts, making Oman the first Arab state to establish diplomatic relations with that country (Zakaria, 1976.p.41). Macron (1979) states that “One of the most dramatic visits was that of the special envoy of the Sultan Sayyid Said of Muscat and Zanzibar in 1840. Arriving on April 30th, after an eighty-seven day voyage, the Al-Sultana docked at New York with her crew of fifty-six Arab sailors. The emissary, Ahmed Bin Na'Aman developed a keen interest in the import-export trade [Fig3:4]. The Al-Sultana carried ivory, Persian silk rugs, spices, coffee and dates, as well as lavish gifts for President Martin Van Buren”. This confirmed that Oman has a long history in importing and exporting trade which helped them to exchange knowledge, skills and experiences with the countries around. Moreover, building good relationship with other countries whether in the east or west side of the world, the periods of foreign colonialism as well as Oman’s experiences in different eras have dramatically affected and formed the Omani lifestyle, their thoughts, culture, tastes and arts, as a natural result each has enriched the Omani heritage and traditions. The excellent trade relationship with countries around has its impacts in today’s local market as well. The imported and contemporary products with their patterns, attractive colours and new materials have been swamped the local market in Oman.



Figure 3:4 A portrait of Bin Na'Aman, painted by Edward Mooney in 1840, putting on an elegant coat brocaded in gold and silk turban. Available at: <http://omanpage.tripod.com>[Accessed 19 September 2009]

3.6 Muscat

This is considered, by the historians, one of the oldest cities in Oman; the history of Muscat 'the Capital City of Oman' goes back to the first century C.E. when it was described by the Greek geographer Ptolemy as a 'concealed harbour'. The importance of this city grew by the 9th century C.E. when the ships were sailing from the Arabian Peninsula to India and called at Muscat to take on their final provisions of water and food for the long journey. During the 14th and 15th centuries A.D. the importance of the location of Muscat's port has increased significantly, it is a strategically placed cape between the Far East and the Near East (Zakaria, 1976.p.74; The Ministry of Information, 2008.p.37).

The famous Arab sailor Ahmed bin Majid, who sailed from Muscat, left a description of his trade in (1490) that "Muscat is a port, which cannot be found in the whole world, where there are businesses and goods that cannot be found elsewhere. It is the port of Oman where the ships load up with fruit, horses, fine cloth, vegetable oils and grain; it is a main target for all ships. Muscat's port considers as a cape between routes, it has fresh water, the people are hospitable and sociable and love strangers" (The Ministry of Information, 2008.p.42).

3.7 The Bedouin and shepherd life in Oman

Bedouins are nomadic people who inhabit the desert belt extending from the Atlantic coast of the Sahara by way of the Western Desert, Sinai, and Negev to the Arabian Desert. The word Bedouin is derived from the Arabic word '*Badawi*' which means "desert dweller". Almost all Bedouins are Muslims and speak Arabic. Before 1970 Bedouins' life were mainly moving from one place to another searching for water as they do not abide by geographical boundaries and live as coherent communities. Wherever there was water and pasture they will move to that place in groups by camels, their major mean of transport. Generally they move purposefully, according to the season, in extended family units headed by a sheikh, a position handed down from father to eldest son, who determine the time of movement in order to find suitable pasture for their animals (Asher, 1996.p.21). In winter time the Bedouin move to places where there are trees in order to protect them and their animals from the seasonal storms by using windbreaks, which are woven particularly to hang around the trees so as to reduce or redirect the wind as well as to maintain the stability of the dunes' sands; but in summer time they move to places where there is water and shadow available. This life was strenuous in many respects, but rich in the sense of belonging to a family, to a tribe and to the earth itself.

Bedouins modify their lifestyle to acclimatize to the severe desert climate. They have an extensive knowledge in meteorology; hence they can predict changes in weather which allows them a chance to protect themselves against and survive the seasonal desert windy storms that come from the Arab sea. In addition, desert dwellers have good knowledge in astronomy which helps them to know the direction of the way while they were travelling in the desert, the calendar which is related to the moon, the time of the date and the location of water which is related to the sun's movement, in addition to other information which help them in their daily life. For the normal person, the desert is vast expanses of landscape which not cluttered with too many objects then dune that looks almost sameness, but for the Bedouin, as Eastep (1983) states that "it is a place of variety and wonder, the Bedouin has names for the different kinds of sand, and for each type of meagre grass as well as they note the smallest change in the shape of the dune, or the stones in the *wadi* 'valley'. They have tracking ability through a footprint, hence they are using this ability to find their lost or stolen camels, as they can determine

through this ability the age of the camel, when it passed, how much it was carrying and some of its physical condition as well as the human's footprint".

Presently Bedouin do not rove in Oman; they are completely settled in 1970 and have built their houses in the desert, some made of palm leaves while others from bricks, particularly after the Omani government has provided necessary and important services for settling, such as healthy water for drinking, schools and hospitals (Al-araimi, 2003.p.31). In spite of that, roving is a Bedouin's tradition, most Bedouin possess palm farms in the plains and they move to their farms during the months of June, July and August to harvest dates while some may remain in desert to take care of their animals while using four wheels drive vehicles for their yearly movement. However, camels are the main livestock raised by Bedouins among because of the strong relationship between them as well as for their good quality milk, beside they used as a main source of their income and for use in traditional camel races in any country within the Arabian Peninsula; Omani camels are considered superior in terms of their characteristic, fast moving, which gives them high value to an extent that one camel could be sold for (90,000 Omani Rials ~ £144,000). In spite of this seductive price, the Bedouin hardly accept to sell their camels for stranger, unless the buyer offers very high price, it is not a matter of money but to be in no doubt that the buyer is serious and will take good care of such an expensive camel (Eastep, 1983.p.28).

Generally, women in the Bedouin society are famous for their hand woven products. Largely, they spend their time, shearing the animals, spinning the wool, dying and finally weaving their furniture. They are accomplished weavers using very simple transportable ground looms they can weave all their needs, preserving traditional weaving styles, motifs, colours and fibres. They have developed a unique culture that each person in Oman respects it. On the other hand, Bedouin men are mainly responsible for ushering their livestock to graze, participating in the monthly camel races and sometimes spinning wool.

Shepherds are settled people who live up the mountains in moderate climates compared to the lower levels of altitude and the hot desert weather that Bedouins live in. They farm around or on plains and herd their sheep to nearby lands that could not be farmed

to graze. The weaving and spinning tasks are exclusively male responsibility among shepherds; they generally weave rugs in black and red stripes which are used for sleeping as well as floor covering.

3.8 Fibres

In Oman, the majority of spinning fibre is taken directly from nature, from the animal or vegetable kingdoms, most of the animal fibres used by Bedouins and shepherds came from sheep, goats and camels. These animals thrive in the dry hilly environment of the country as well as up in the mountains and each of these animal fibres have its own particular aesthetic and importance for the Omani weavers. The weavers have been using this raw material to provide for many of their basic needs such as tents, rugs to use inside their tents, covers for themselves as well as their animals, domestic utensils and trappings for camels and donkeys, which were the means of transport.

3.8.1 Sheep's' Wool

Wool is a modified hair fibre composed of the protein keratin; the fibre is extremely elastic, can absorb a high percentage of moisture and is a good insulator. The fibre of the sheep has outer coats of coarse fibre and inner coats of soft finer fibres. Wool is widely used by nomadic weavers and of all the fibres, it is the easiest to spin, since it has all the qualities necessary to make them cling together; the grease and crimp which causes them to mesh into each other, besides this Omani wool has a long staple length of 12 to 16 centimetres which make it easier to spin (Dixon, 1979.p.46; Jones, 1987.p.54).

Since all the sheep in the Peninsula were dark brown or black in colour, in earlier times, the weavers purchased white wool from the traders to dye. Over time, and with the great demand for white fleece, the white sheep was introduced from India, Iran, Iraq, Turkey and Syria to Peninsula (Jones, 1987.p.55). Sooner it became domesticated with the wild sheep of Oman and had developed the hue of brown coloured fibre as well as the white fibre. Comparing the wool fibres within Oman, a variation is occurring between one and the same animal species, depending on pasturage and climatic condition, which are influencing the fibre's formation. In view of this, a cold climate

and high altitudes have a favourable influence on the quality of wool; thus, the animal species with the finest hair belong to the shepherd's who live in the mountains and the coarsest hair to the Bedouin's sheep who live in the desert, the driest part of Oman.

3.8.2 Goat's Hair

This is in plentiful supply from local herds; the length of the hair is seven to ten centimetres. It is usually black, although a few are slightly grey, brown and beige. Unlike wool, goat hair is structured differently, it is harsh and inelastic, hence it is more difficult to spin and rough on the hands. Goat hair produces a prickly strong yarn and swells when wet therefore this characteristic make it ideal for use in the weaving of tents, or the roof of the tent only to keep the rain water and the heat of the sun away [Fig.3:5] (Richardson & Dorr, 2003.p.323).



Figure 3:5 Different types and colours of the local herds

3.8.3 Camel Hair

Camel hair is occasionally used by Bedouin weavers; it comes from single- humped dromedary camels. These animal fibres are naturally dark brown, buff, or white and a gradation of subtle natural shades can be made by combining the colours while teasing them, when they are sheared in spring, or collecting shed fibres. Their fibres are finer than sheep wool, therefore most of the Bedouins mix them with sheep wool to enhance strength and make it easy to spinning [Fig.3:6].



Figure 3:6 Different colours of camel's fibres available in Oman

3.8.4 Cotton

Quite a large number of vegetable fibres can be used for textile work, but in Oman, only cotton was widely cultivated in previous times, and the weavers were able to supply all their needs from cotton (Jones, 1989,p.64). Cotton cultivation originated in India, where cotton has been the main spinning material for thousands of years; the material reached Mediterranean countries with the Arabs who exported both cotton fabric and the raw material from India (Geijer, 1979,p.42). Eventually the cultivation of cotton plants spread from India to other countries and soon became a very important fibre. Baker (1995) states that “Cotton of some variety was being cultivated in the fourth century B.C.E. in the Gulf Area and with the spread of Islam cultivation began in Sicily and Iberia”. It can be concluded that Oman, as a country in the Gulf area, has a long history in cultivating cotton fibres which dates back to the 4th century B.C.E.

Jones (1989) pointed out that “two varieties of cotton were growing in Oman before the 1960s, white cotton and a brown uncommon type of cotton locally called *Khodrunge*. However, the production of cotton has gradually reduced in the last few decades, as a result of high production costs contrasted with low economic value to the country, combined with modern industrial competition from threads imported from neighbouring countries such as India and China.”

3.9 Spinning

Spinning is the process by which fibres are drawn out from a bundle of wool, and twisted together into one strand to produce a continuous thread (Weibel, 1972). This can be accomplished by using a basic traditional device.

3.9.1 Prehistoric Spinning

Very early in human history, at least ten thousand years ago, women were able to identify the materials that were strong and long enough to spin and discovered that by applying strain to the threads as they were spun, a longer, stronger thread could be achieved (Wilson, 1979).

Prehistoric people twisted creepers or grasses together to make ropes for tethering animals and tying bundles (Gauldie, 1995.p.4). From this beginning they gradually learned to produce a finer thread suitable for making clothes. They experimented with different types of fibre, animal hairs combed from domestic beasts, tail hair from hunted animals, rushes from the rivers, long grasses from the plains, even nettles. They used whatever was available to them. They found that by combing and teasing they could produce a soft fibrous mass from which threads could be drawn out and spun (Gauldie, 1995.p.6).

Ancient Egyptians processed flax into linen and most certainly used the earliest form of spinning device, which was simply made of straight wooden stick. There are two kind of spinning device have been used in the world since ancient times, the distaff (from an old word dis, meaning 'fuzz fibre', plus staff, a 'fuzz-stick') (Barber, 1994.p.46), a stick about twelve to thirty-six inches long, to which the bundle was tied, it could be tucked under the arm, leaving both hands free for twisting the threads. The second device is the spindle, which is usually used in Oman, a stick of six to ten inches in length which the thread was wound around, with a notch or hook at the top end and a flat disc known as a whorl positioned at the top or bottom of the stick [Fig. 3: 7].

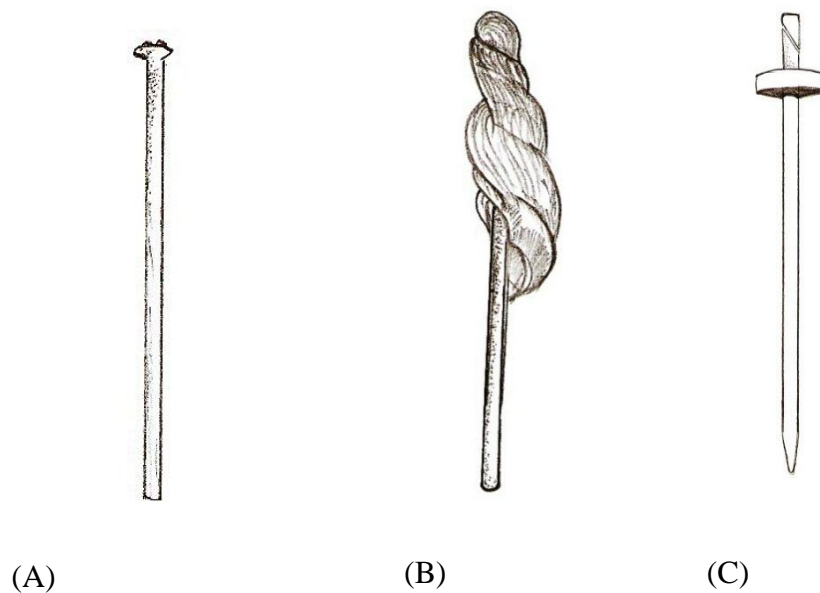


Figure 3:7 (A) The distaff which used in Mesopotamia in the 3rd millennium. (B) The distaff with corded fibres. (C) The spindle with whorl on the top and a thread groove (Barber, 1994; (Gauldie, 1995; Wilson, 1979)

The spindle has been used for many thousands of years; whorls have been discovered on archaeological sites dating from 3000 B.C.E.; revealing that in Neolithic times the ‘New Stone Age’ people had discovered that adding a whorl reduced the spindle’s wobble (Barber, 1994.p.45; Dalby & Christmas, 1984.62). It can be positioned at the either end of the stick, however it is more commonly at the top end amongst the Bedouin in Oman and it is generally made with stone, wood, metal or clay attached to it for weight. This helps to rotate the spindle in the direction opposite to the twisting and keeps the thread wound around the stick to keep it from tangling and slipping off while still more is being spun (Weibel, 1972.p.32).

3.9.2 Spinning in Oman

3.9.2.1 Preparing the Fibres for Spinning

Very little was done to prepare the wool or other animal fibres prior to spinning. They were washed, if water was available, while the fibre was still on the animal, to remove all the fat and dirt, then the animals were left to dry for one day before shearing. However, if water is un-available, they would just clean the animals with sand to make them ready for shearing. In point of fact, Shears were un-known until the Iron Age, about 1000 B.C.E., before that time the fibres were plucked with a comb like device or

hacked off with a stone knife (Wilson, 1979.p.58). Nowadays, the Bedouin and shepherds still use a knife for shearing goat hair; the knife travels on a downward movement with the animal standing up, while with sheep the shearing of wool is done using household scissors and the fleece is cut with a hand movement travelling upwards and it is then removed in handfuls. Both, goat and sheep shearing begins in the first days of summer, for the Bedouin women, who live in the desert, shearing in May while the shepherd men, who live in the mountains begin shearing in June (Jones, 1989.p.55).

The second step in the preparation process to get the fibres ready for spinning is getting rid of the dust or foliage, since dirt can present few problems while spinning and it could slow the dyeing process as dirt absorbs the colour; dirt it is removed by pulling the fibres apart sideways with fingers or is sometimes beaten to knock out the dirt [Fig. 3: 8]. Subsequently, the fibres are drawn out to putting them in a parallel direction and they are rolled up against the thigh into a thick band of wool, this is then stretched out with a little twist to form a roving [Fig. 3:9]. Similar methods of preparing the row fibres were used in Greece in about 560 B.C.E. (Dixon, 1979.p.67); a vase from that time shows a spinner engaged in rolling fibres with his thigh protected by an unglazed tile, shaped to fit around his thigh and knee, this was called an *epinetron* (Dixon, 1979.p.67). The roving would then be used with the spinning device to obtain the yarn.



(A)



(B)

Figure3:8 (A &B) Show the process of pulling the fibres apart sideways to drop the dirt. Photographed in Jabal Shams, 2008



(A)

(B)

Figure 3:9 (A) The process of drawing out the fibre (B) rolled up the fibre into a thick band.
Photographed in Jabal Shams,2008

3.9.2.2 *Spinning the Fibres*

To make threads out of animal fibres, they are twisted together long ways a few at a times, and to make them even stronger the Bedouin twist a number of them together. To do this they use the simple prehistoric device, the spindle, which is known locally as a *Meghzal*.

The spindle used by Bedouin weavers is the one with the whorl at the top. It is a thin stick between seven and eighteen inches long and at the top of the whorl there is a hook to hold the yarn while it is being spun [Fig 3:10]. A rove of teased hair is held in the left hand, with the end is looped around the forefinger and is spun using the fingers on the right hand, so two hands are necessary for spinning, the spinner gradually draws out the fibre with the right hand while the spindle stretches it with its weight, then s/he rotates the spindle giving it a sharp twirl along the weaver's right thigh in a clockwise direction about two or three times to let the fibre become tightly spun, the spinner must be in a particular sitting position during the spinning process. It has been observed that almost all the weavers in Oman twirl the spindle with their right hand, so that the spindle and yarn twist in a clockwise direction [Fig. 3:11 & 3:12] and technically this is called Z spun yarn. If they twirl with the left hand they will produce a twist in the opposite direction, this is called an S spun yarn. Richardson and Dorr (2003, p. 325) state that "Bedouin weavers in Oman say that the direction of spinning is a matter of personal preference". As a result there is no specific method of twirling yarn in Oman.

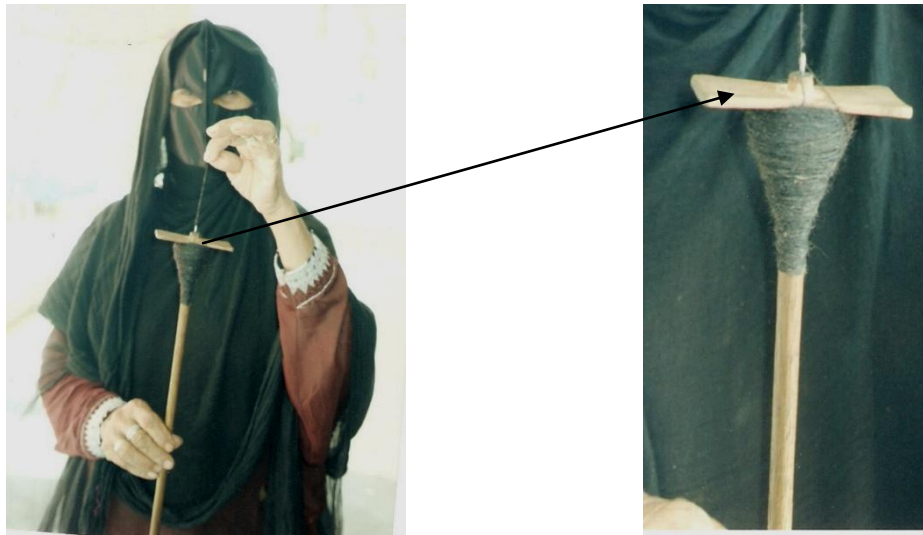


Figure 3:10 The Bedouin's spindle with the whorl on the top and a hook. Photographed in Sinaw, 2008

Once the fibre has been spun they un-loop it from the top, to wind it up on the shaft below the whorl. They go over this procedure until the shaft is full and then they wind the single spun yarn into a ball. Some Bedouins in the Al-Wahiba Sands desert in Oman spin the yarn by dropping the spindle after giving it a quick flick to start spinning while it hangs in mid air whirling on its thread. When the thread gets so long that the spindle reaches the ground, the thread is wound up on the spindle shaft.



(A)



(B)

Figure 3: 11 (A) drew out the fibre with the right hand and the spindle stretched the fibre by its weight (B) rotate the spindle by giving it a sharp twirl along the right thigh. Photographed in Al-Sowaiq, 2008



(A)



(B)

Figure 3:12 (A) Twirling the spindle in a clockwise direction
(B) wound up the spun threads around the shaft. Photographed in Al-Sowaiq, 2008

Most of the weavers in Oman are accustomed to using a thicker yarn to weave their products, hence they ply a pair of single yarn balls together by using another spindle with a slightly longer and thicker shaft and a bigger whorl on the top [Fig. 3:13]. Dixon (1970) confirmed that “for spinning fine yarn, you need a light spindle with a light weight or disc attached to it, and for a thick yarn, you can afford to use one which is heavier”. The yarn is plied then by using the same method for spinning the fibre and the plied threads are then wound into a ball to be made ready for warping up or dyeing [Fig. 3:14]. The weft yarns are spun thicker and looser than the warp threads and are used in two ply yarn. Occasionally shepherd weavers use two single un-plied threads for each warp strand.

The shepherd’s spindle differs from the Bedouin’s in that the weighted whorl is positioned at the lower end of the shaft; a groove is often cut in the top of the shaft from which to suspend the yarn [Fig. 3:15]. They usually spin the goat hair or wool thicker than the Bedouins spin their yarn. With a spindle the spinners could spin while walking about, tending to livestock, even while sitting and chatting with others during the day.



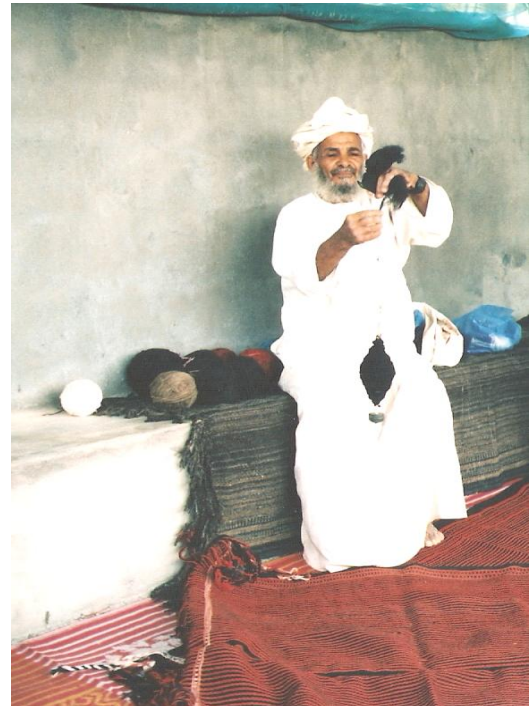
Figure 3: 13 On the left is the fibre spindle, on the right hand is thread plied spindle with bigger whorl and thicker shaft. Photographed in Al-Sowaiq, 2008



Figure 3: 14 The process of plying the threads by using two balls of single spun yarn. Photographed in Al-Sowaiq, 2008



(A)



(B)

Figure 3: 15 (A) A shepherd's spindle with the whorl in the lower end of the shaft and a groove on the top to suspend the yarn (B) dropping the spindle after giving it a quick flick to start spinning while hanging in the air, when the thread gets long and the spindle reaches the ground the thread wound up on the spindle shaft. Photographed in Jabal Shams, 2008

3.10 Dyeing

This is a chemical process which imparts colours to a loose fibre or yarn and is executed by immersion in a dye bath in combination with various treatments especially adapted to different colouring agents as well as to the kind of fibrous material which is to be dyed (Geijer, 1979.p.66).

3.10.1 Prehistoric Dyeing

For the majority of the thousands of years in which dying has been used by humans to colour fibres, or for other uses, dye has primarily been sourced naturally from animals or plants. This discovery of the dyeing process probably had an important impact on early sheep breeding and this would have created a demand for whiter wools, but the exact date when dyes were introduced is uncertain. However the dyeing of woven cloth, as well as the use of mordant, was certainly in place in ancient Egyptian cultures of the Middle Kingdom, as some dyed fabric has been found in Egyptian tombs; additionally tradition holds that mummy wrappings were dyed with saffron, in addition, indigo was grown there as well (Adrosko, 1971.p.48; Robertson, 1973.p.88).

Most of references date back to the first use of dye for colouring textiles in 400 B.C.E. or earlier when earth pigments and carbon black were employed by the Chinese for producing designs on textiles either for painting with brushes or for printing with wooden blocks. During those early days pigments were also utilized in much the same way in Egypt. At the beginning of 15th century B.C.E., the Phoenicians were famous for their dye industry which was well-known for its Tyrian purple dye that was obtained from the Murex species of shellfish. The Romans was famous for using this Tyrian purple dye as well and they got it from the Phoenicians. It was worn in later centuries only as a royal colour, this because many thousands of the Murex shellfish were required to make one ounce of dye [Fig. 3:16] (Patton, 1973.p.75; Adrosko, 1971.p.49).

The world's first technical revolution probably took place in Mesopotamia some 6000 years ago; it had been called forth by the manufacture of chemical products, consisting

partly of dyestuffs, as is known from the cuneiform texts of the Sumerians. The ancient Mesopotamians dyed their leather and wool in white, black, red, brown, yellow, green, and purple, but the colour nomenclature was unclear at that time (Myers and Long, 1975.p.141).

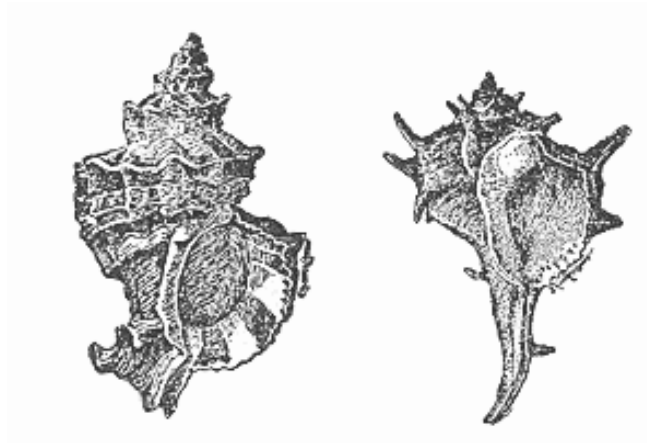


Figure 3: 16 The Murex. (Scott, 2006)

Plant dyes are excellent for their long endurance and soft, lustrous colouring. Even when very old they retain great beauty and charm. It takes much longer to dye with plant dyes, but the result is excellent for really good craft work. On the whole, plant dyes usually give softer shades, although many clear, brilliant colours can be obtained. It is often possible to produce an exact colour again and again. Yet, quite often, two people using the same recipe will not produce the same colour, even though they have used the same mordant, dye, yarn and the same amount of time. Soil, climatic condition, water, and the time of the year, will all lead to a variation in colour. The crafts person is able to produce an exclusive colour, and this adds greatly to the interest of plant-dyeing (Justema, 1976.p.15).

3.10.2 Preparing the Yarn for Dyeing in Oman

Omani weavers' use the dye for the white or light coloured sheep wool only, whereas camel and goat hair is used un-dyed. Wool fibre is much easier to dye, because it is softer and more elastic; almost all the Omani weavers' dye the fibres of wool in yarn, the shepherds often wind the spun yarn ball onto a skein-winder, which they call a *Miqudad* [Fig. 3:17]. While, on the contrary, the Bedouin usually make skeins against

their knees by sitting with their legs crossed and winding the spun yarn into a figure of eight skein, the skein is then tied using a single tie.

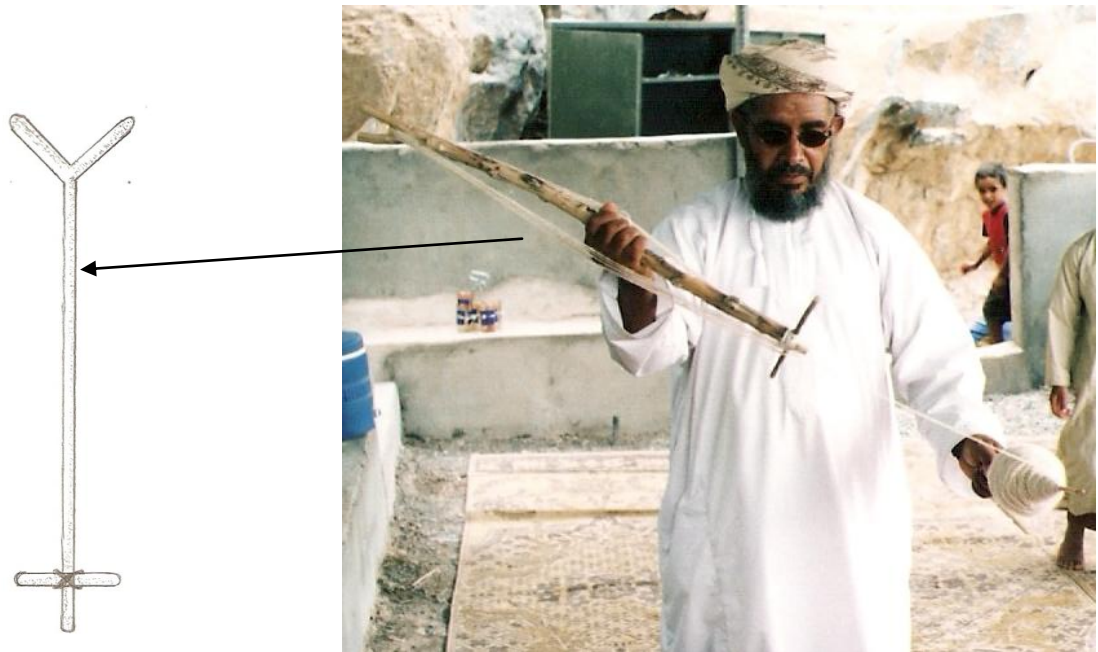


Figure 3: 17 Winding the white spun yarn into a skein-winder to prepare the yarn for dyeing process. Photographed in Jabal Shams, 2008

Formerly, the majority of Omani weavers obtained their dyestuff from surrounding natural plants. Recently, imported chemical dye from India or China has become available in the local market, so most of the weavers have started working with the new easy and ready to use dye. Moreover, it does not need a mordant and the weavers can dye skeins of wool within a day. On the other hand, this chemical dyestuff is limited in the local market in terms of colour and amount, as most of them are in red, green and yellow, since red is used widely more than any other colour among the weavers, it is not available all the time in the local market, in addition, the weavers need to pay more for synthetic dye, so it is more expensive than the natural Madder dye. Therefore, most of the weavers still use the natural madder dye, and some of them mix it with the synthetic red dye which is known by the same name.

The common plant species which were traditionally used as a source of dyeing in Oman are given below:

- Madder '*Rubia Tinctorum*'

Madder is a red dye that is obtained from a plant which grows in countries from Central Asia to Iberia, it is a herb that has open clusters of small yellow flowers which appear only in the second or third year and have a thick red fleshy root, the dye resides in the root of the plant between the outer skin and the woody heart and since it is difficult to separate them to obtain the dye, the whole root is used [Fig.3: 18]. Firstly, it has to be dried and ground to a powder, the yellow powder that results from grinding the dried root yields the greatest pigmentation if it is fermented, and for this purpose, in Oman it is fermented in the open air. From prehistoric times until the middle of the nineteenth century madder was a dye of supreme commercial importance all over Asia and Western Europe, it was taken to Spain by the Arabs and spread through to Menorca and Italy; it is frequently mentioned by the Greek writers, who employed its root as a medicine. Since it grows wild throughout Asia; it could have been found almost anywhere, indeed about 35 species of the family Rubiaceae are indigenous to many parts of Asia and Europe. *Rubia Tinctorum*, the variety from the Near East, was the most common. Robertson (1973) states that, "the madder dye was an important item of commerce for many centuries, before the discovery of the synthetic alizarin, which was produced in 1868".



Figure 3:18 The Madder roots

In Oman madder is a popular dyestuff, it is known locally as *fowah*, but when madder dyeing began is unknown, however, it was undoubtedly in use very early. The earliest evidence of dyeing with madder comes from early Egyptians tombs and the Indus civilization, where pieces of some cotton fabrics dyed with vegetable dyes such as madder and indigo were found at Mohenjo-daro in India and dated from 2300 B.C.

From there it was transmitted through trade to other regions in the East, from which the process derived its name (Wilson, 1979.p.74; Bhardwaj and Jain, 2009.p.70).

-Pulicaria Glutinosa

This is a yellow dye, known locally as a *mohtadi*; it is obtained from the twigs or roots of several species of Pulicaria Glutinosa's plant, which is available in the surrounding area. *Mohtadi* dye is always mixed with another species of plant called 'acridocarpus orientalis', which is known locally as *ghaf* and these two species are collected from the wild as required (Richardson & Dorr, 2003, p. 190).

-Calligonum Comosum

This is a wild plant in Oman and is usually used by shepherd weavers to obtain a yellow pigment, known locally as an *al-arta* (Richardson & Dorr, 2003, p. 190).

-Acridocarpus Orientalis

This is a wild plant which is known locally as *ghaf* and it is used to obtain a yellow colour, frequently mixed with other natural yellow pigment to dye the yarn (see above 3.12.2.2) (Jones, 1978.p.83).

-Curcuma Longa

This is a yellow dye also known as 'turmeric'; it is extracted from the ground root of the turmeric plant, which grows in India, Java, China and Madagascar. It can give the yarn a bright yellow colour, with no need for mordant, it is a very strong, brilliant dye, but it is fugitive dye, as it does not last well over the years. Because of this it is used mostly in combination with other yellow dyes.

-Pomegranate Fruit

The outer skin of this fruit is used to obtain an orange colour; skins are boiled in water then used as the source for an orange dye.

-Murex Shellfish ‘Tyrian Purple’

Tyrian purple was used before 1500 B.C.E. by the Phoenicians who built a dye industry in Sidon and its offshoot colony Tyre. They established dye works at sites where murex shellfish had been discovered (Goodwin, 1982). The dye is extracted when the outer shells of the spines have been broken off and a drop or two of colourless fluid comes out from the mucous gland. When exposed to air this fluid turns from yellow to green, then to blue, purple and red. Jones (1978) states that “murex shellfish was used in Musirah Island and the mainland coast, the north region of Oman, until the 1950s as a source of maroon colour, to dye woollen yarns”.

3.10.3 The Dyeing Process in Oman

The preparation of the fibres with a mordant of some kind is of decisive importance in getting the fibres to absorb the dyestuff. As a general rule the animal fibre will absorb the natural dyeing agent quite easily (Geijar, 1979.p.43). Consequently mordants were often required to alter the hue and intensity of natural dyes, as well as to improve the colour fastness, therefore, alum has been extensively used in Oman to fix and develop the dye in woollen yarns and its addition has given a special tone to the fibres. For that reason, as observed through a field work, pure alum is crushed and mixed with water, after which the woollen yarns are added and left in water for one day. The woollen yarn is then removed and dried. The dyestuff, in particular ‘the madder’, which is used in a fine powder form, is usually put into cold water then brought slowly up to the boil, and then allowed to simmer slowly for about half an hour and then it is left until the next day. A dried lime is opened up and added to the dye water which is then boiled for about one or two hours. Great care must be taken at this stage in the dye process to make sure that the dyestuff is dissolved properly and that there are no lumps before the wool is put in, otherwise there will be uneven dyeing. The wool yarn is then added and boiled for a few minutes only, as prolonged boiling dulls and darkens the colour. While over boiling could turn the bright red colour of the madder dye to brown. The skeins of wool are lifted in and out gently and turned over once or twice using sticks while the dye is still on the fire, to make sure that the dye has penetrated into every part of the wool. However, too much stirring and moving will make the wool felt or become matted together. Subsequently the dye-pan is removed from the fire and the wool yarn left to cool in the bath before it is removed. The wool will continue taking up colour after it is removed from the dye-bath and the yarn will be hung up over a stick to

dry. Dyeing is repeated two or three times until the desired shade is reached; each time it is repeated more dyestuff and more lime are added to the dye-bath [Fig. 3:19].



Figure3:19 Two balls of wool show the shade of dyeing with the red madder dye. Photographed in Jabal Shams, 2008

The completely natural yellow dyestuff does not require a very high temperature as it can be spoilt when boiled for long time; as a result, the dye-bath is boiled for about ten minutes only, and then removed from the fire to add the yarn. The yarn is left in the dye until it gets cold when it is removed, rinsed in clear water until no colour come away and is then hung up to dry in the shade.

Fine yarn and loosely spun wool take up much more colour than tightly spun wool, therefore, many weavers in Oman ply the two plied yarn loosely before dyeing it, to spin again after the dyeing process is complete.

3.11 The Looms

There are three types of looms in Oman for weaving textile products:

3.11.1 The Ground Loom

This device is known as the horizontal ground loom as well. The origin of this loom is specifically un-known as no parts from this type of loom have survived as evidence from before the late Neolithic period. Most of the references we have rely on the ancient Egyptian depiction of a ground loom found on a dish in the grave of a woman at Badari,

which dates to the early 4th millennium B.C.E., or the late Neolithic era, for the first evidence of use of a ground loom (Richardson & Dorr, 2003; Jones, 1989). However, there has been some debate as to whether either or neither of the two objects which are depicted on the dish is in fact a loom (Barber, 1991.p.81). The reason for which debate is that if the drawing represents a ground loom, then this leads to a difficulty interpreting the other scene, as it identifies it as a part of a hunting scene [Fig. 3:20] (Barber, 1991.p.81). Hence, with this disagreement, we cannot depend on that depiction as a first evidence of using a ground loom in ancient Egypt.

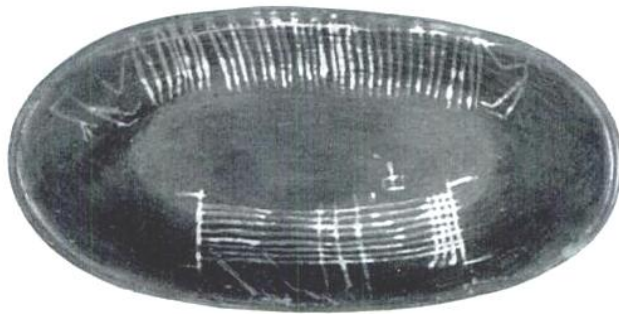


Figure 3: 20 An ancient Egyptian dish dated to the early 4th millennium B.C.E (Hall, 1986)

Therefore, the origins of the ground loom are imputed to the earliest certain representation which was found in Susa the ‘Mesopotamian area’, in the 4th millennium B.C.E, as a depiction on an early cylinder seal of weavers using a ground loom and warping [Fig. 3:21]. Meanwhile, definite depictions of use of the ground loom in ancient Egypt were dated later and found in the tomb of Khnumhotep, at Beni Hassan and date to the Middle Kingdom (around 2000 B.C.E. - 1500 B.C.E.) Further evidence from the same period in ancient Egypt, shows the best demonstration of how a ground loom worked and is given by an Egyptian funerary model of female weavers in a weaving shop, using two ground looms pegged onto the ground, found in the tomb of Mekhet-Re dated to the 11th Dynasty in the Middle Kingdom (around 2000B.C.E.) [Fig.3:22] (Barber, 1991. p.84; Barber, 1994. p.80; Geijer, 1979. p.27). Barber (1994. p.81) states that “this device migrated mainly south and southeast: through Mesopotamia and the Levant, down into Egypt, and eventually all the way to India”. From India it spread out to other countries especially the Near East, where it is still widely in use amongst the shepherds and Bedouins of the Arabian Peninsula especially in Oman where the same weaving techniques and similar tools are used.

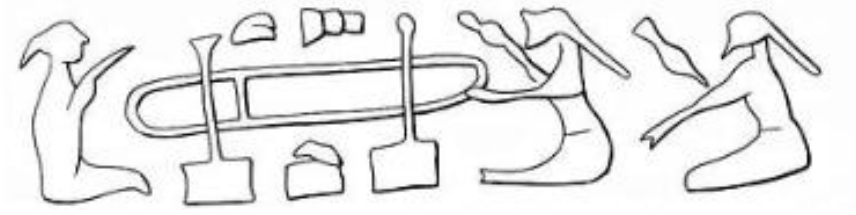


Figure 3: 21 A horizontal loom depicted on cylinder seal found in Susa. (Crawford, 2004)



Figure 3:22 Model of a weaver's workshop from the tomb of Mekhet- Re (2000B.C.E.) (Jenkins, 2003)

3.11.1.1 The Structure of the Ground Loom

Generally, all the parts of the ground loom were made of wood, but recently some other material has been introduced for making the basic structure of the loom, such as metal piping which is used extensively by the Bedouin weavers [Fig. 3:23]. The size of the loom is variable and depends on the length and the width of the article to be woven, but in general it consists of the following parts: each of which is an essential tool for getting the weaving work done:



Figure 3:23 The use of metal piping as a basic structure for the ground loom.
Photographed in Sowaiq, 2008

-Beams

There are two beams called the breast beam, positioned at the front of the loom, and the warp beam, at the back of the loom. The beams are supported and secured in each corner by four low posts made of wooden sticks which are fixed firmly into the ground and are lashed to the beams as the warping proceeds. The warp threads are stretched horizontally between these two beams; the yarn is looped around the beams with the thread ball passed under each beam and returned over the top of the beam to form the warp threads [Fig. 3:24].

-The Shed Bar

This always comes in a rectangular shape, as it is most efficient if the shed bar is wide and flat, the threads are warped alternatively above the shed bar then along and looped around passing under the beam and turned over the top of the beam to go through the heddle and then back under the shed bar to form a figure of eight, thus they can be turned on edge to force the upper threads upwards and form a countershed, and when the shed bar lies flat it forms the shed [Fig. 3:24 & 3:25].

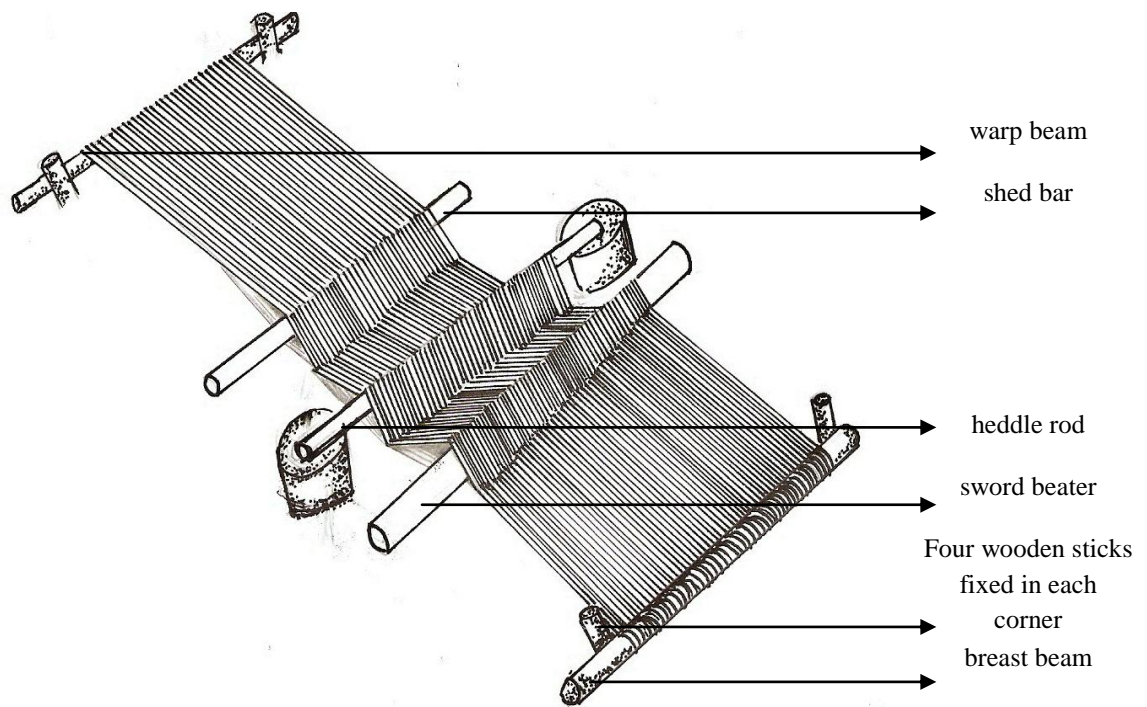


Figure 3:24 The structure of the ground loom



Figure 3: 25 The shed bar. Photographed in Jabal Shams, 2008

-The Heddle Rod

Neolithic people discovered the use of heddles somewhere in northern Iraq or Turkey (Barber, 1994). From there the idea of using the heddles spread out to other countries which made weaving an efficient process.

It consists of a stick of wood with a required length that lies above the warp threads in cross section and sticks out beyond the warp at each side of the warp; therefore each end of the heddle rod is supported with a heavy large rock or chunk of wood. The rod holds the heddles which are attached to it by means of a continuous woollen leash; these heddles consist of a group of vertical looped threads hanging from the rod. Jones (1989) states that “most of the shepherds make their heddles on completion of the warp process, while other shepherds making the heddles and warp at the same time, by passing a continuous thread from a small ball of yarn from left to right under the first warp end and back to the heddle rod then looped over the heddle rod underneath the yarn securing the heddles”.

These heddles only hold those alternate warp threads which pass above the top of the breast beam and go under the shed bar, these warp threads are always held uppermost to form the shed [Fig. 3:24 & 3:26 (A&B)].



(A)

Figure 3:26 (A) The heddle rod. Photographed in Jabal Shams, 2008



(B)

Figure 3:26 (B) show that heddle bar hold the threads that goes under the shed bar. Photographed in Jabal Shams, 2008

-A Sword Beater

This is used for beating down the weft threads each time, after the weft thread is passed, to tighten the weave. Generally, it must be a flat wooden and smooth bar to work efficiently, to slide inside the warp without snagging or opening the shed unduly [Fig.3:27].



Figure 3:27 The sword beater. Photographed in Jabal Shams, 2008

3.11.1.2 The Weaving Process

The ground loom is used by the Bedouin and the shepherd of Oman to weave all the products they need by using the simple plain weave and natural animal fibres for both the warp and the weft threads. Since ground loom products are warp faced up, the designs are shown on the top of the product with the warp threads which are set closely together with much greater in number, between 19 to 24 ends per inch for the Bedouin's rugs, while the shepherds use between 11 to 13 ends per inch. The number of thick weft picks is normally around six to nine picks per inch for both the shepherds and the Bedouins. As a result only the warp thread ends are visible on the top of the woven product, whilst the weft threads are totally invisible.

The warping process starts with stretching the warp threads between the two beams with tension; the warping could be done by two people sitting in front of each beam at both ends of the loom, they throw the ball of spun yarn to each other after looping it around the beam to form the warp. The first warp thread is started from the breast beam; it is looped and knotted then sent to the other person who is facing the warp beam. The thread will then travel through the heddle rod along under the shed bar, which is inserted between alternate warp threads as the warping proceeds by the person at the breast beam or the other person if the article is short in length. The ball of warp yarn looped when it is received, around the warp beam by passing it under the beam and turned around over the top of the beam then sent back over the shed bar to the first person.

The first person repeats the same process, looping the warp thread by passing it under the beam and turning it around over the top of the beam and travelling back passing through the heddle loop and underneath the shed bar to the other person who loops the thread by using the same technique in a figure of eight. This process will be repeated by placing each warp thread tightly alongside the previous one on the beam, until reaching the last thread which should be passed over the shed bar and fastened onto the breast beam. The number of warp threads will determine the width of the final product [Fig. 3: 28].



Figure 3:28 The warping process. Photographed in Jabal Shams, 2008

The colour of the warp threads differs according to the desired final appearance and design, for example, if the design of the product consists of two different colours of stripes, so the warp threads will change the colour alternately pursuant to the design and the width of each stripe. While warping for a geometric pattern requires preparation of balls of paired threads in contrast colours twisted together, this pair of threads is stretched between the beams in place of a single yarn and travels through a single heddle in the loom as well as being warped more closely than the striped part of the rug. These two colours of yarn are necessary as one of them provides the pattern colour and the other one provides the background colour [Fig.3:29].



Figure 3:29 Preparing several balls of paired threads before the warping process is commence

The weaving process starts with winding a stick shuttle with two ply black colour weft yarn, which is spun looser and twice as thick as the warp yarn, to prepare the weft for passing it through the shed and countershed alternately. The weaver passes the stick shuttle through the shed which is automatically created by the heddles when pulling the alternate warp threads up. A sword beater is used after the stick shuttle is passed to beat against the weft to place the weft in place and tighten the weave. The countershed is produced by pulling the shed bar by hand from both ends to the heddles, then standing it on its edge, the weavers then use their hands to pull the threads above the shed bar upwards, whilst pushing the threads attached to the heddle downwards. The stick shuttle is passed through the countershed and beaten again with the sword to beat the weft down, so as to obtain the shed form again, the shed bar lies flat and pulls the heddle warp upward while pushing the shed bar warps downward to form the shed. This process is repeated in order to continue making the whole article [Fig. 3:30].

The weavers hold the design part of the rug up by inserting a gazelle horn and using the pick-up technique from these parts to weave a pattern. This technique is known among the weavers as a *ragma* design which literally means digital, because the weaver counts the threads and chooses which colour will be used from each pair of threads and then picks this colour up using their fingers to show on the surface of the rug, while the other thread from the pair is left and floated onto the reverse side of the rug until the motif dictates that it will be used on the top of the rug [fig.3:31]. This process is repeated in each row along the rug in order to create the patterns.



Figure 3:30 The weaver sit on the woven part to continue the weaving process, on her right is the stick shuttle and using the sword to beat the weft threads. Photographed in Sowaiq, 2008



Figure 3:31 Floating the unused threads on the back of the rug

when the weaving has progressed so far that the heddle rod is too close to make a good opening in the warp threads for the weft shuttle to be inserted through, then the entire set-up, support blocks, heddle rod and all is taken down farther along the unwoven warp threads, and setup again. The weaver moves forward as well and sits on the woven part to continue the weaving process, so knocking the loom parts out and moving them is

repeated when the time comes, as the work and the weaver move towards the warp beam.

3.11.1.3 Ground Loom Products

The following are the ground loom products:

-The Bedouin Tent

This is usually woven from plain un-dyed black or brown goat hair or sheep's wool, the goat hair is usually used to construct the roof and warps around the three sides to create the walls in the summer time, the fourth side is usually left open during the day and closed during the night. The pieces are woven up to nine meters in length and one meter in width and joined together to form a wider roof and walls (Jones, 1989.p.102). The sheep's wool is used to form the walls during the winter time to protect them against the cold weather while the roof is always woven from goat hair. Occasionally the woven pieces of the walls are ornamented with white stripes to enhance the final effect [Fig. 3:32].



Figure 3:32 the Bedouin tent. Available at: <http://www.albadawi.com>[Accessed June 2007]

The internal part of the tent is divided by woven bands to form the interior walls for rooms which basically alienate the women's area from the men's area, or to form a place for the guests [Fig. 3:33].

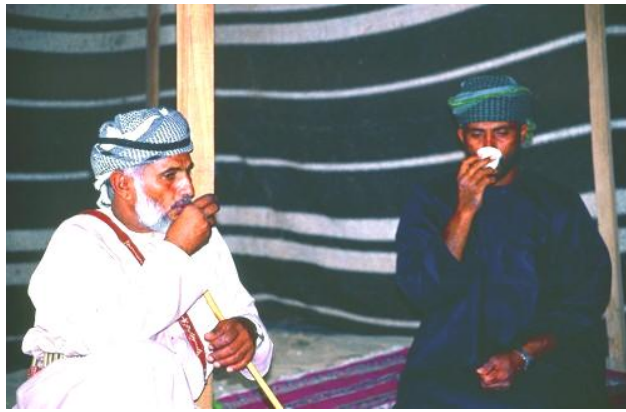


Figure 3:33 The guests section in Bedouin's tent. Available at: <http://www.alsuhol.com> [Accessed 18 September 2009]

-Rugs 'Sahha'

It has many different names, but the most well known by the people in Oman is 'Sahha'. It is used for a floor covering, cushion covers and as a blanket to be used during the cold weather. Bedouin rugs are woven in symmetry as the right half of the rug is a reflection of the left half and consists of number of stripes on both sides, while the main wide stripe is located in the middle of the rug which contains some traditional motifs that are repeated along the rug. This traditional band of motifs is woven symmetrically as well, against a background of 7cm in width that is ornamented on both sides with short horizontal lines in alternate colours [Fig. 3:34]. Both ends of the rugs are normally bordered with a black band of 3cm to 5cm in width to hide the thick black weft yarns at the edges. The rug has some vertical stripes of about 12mm in width as well as a band half way up each side which is decorated with zigzag lines or triangles and bordered with short horizontal lines [Fig. 3:35].



Figure 3:34 The motifs in the centre of the Bedouin rug woven symmetrically



Figure 3:35 The traditional Bedouin rug

On the other hand, shepherds use the normal techniques of plain weaving in their rugs which contain only stripes and some short horizontal rows which are achieved by warping in alternate colours of thread. The size of the rugs varies according to their function, normally the shepherds weave their rugs between 36cm to 63cm in width and between 80cm to 250cm in length, if a wider rug is desired they join two rugs by stitching them along the ends [Fig. 3:36; 3:37 & 3:38].

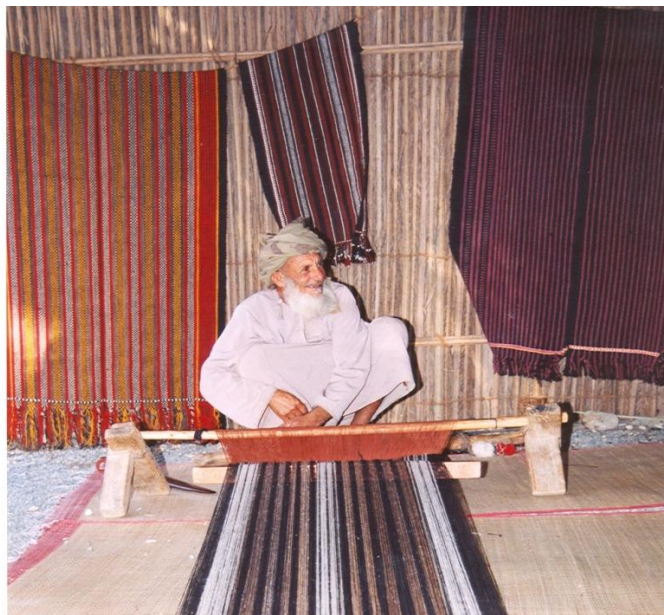


Figure 3:36 The shepherd's weavers using simple ground loom and ornament their rugs with stripes of available colours (The Authority of hand craft industry,2007)



Figure 3:37 Two shepherd's traditional rugs joined together in the centre to achieve a wider rug.
Photographed in Jabal Shams, 2008



Figure 3:38 The yellow dyed yarns utilized to ornament the shepherd's rugs

Formerly, the Bedouin and shepherd weavers in Oman wove their rugs in the natural colours of the fibres that contained black, white and the hue of brown colours, these rugs with natural fibre colours are called *wereega* among the weavers and refer to the word natural in Arabic. After the introduction of madder dye, the weavers have used it extensively in every single rug they weave, consequently it has become a tradition which represents the traditional nomads rugs while the use of green and yellow dye is restricted by the relatively small supply of these dyes [Fig. 3:39 & 3:40].



Figure 3:39 The former Bedouin rug woven with natural fibre colours *wereega*



Figure 3:40 Two former shepherd's rugs joined together in the centre to form wider rug and woven with natural fibre colours. Photographed in Jabal Shams,2008

-Travelling Bags

These are wide bags usually woven in red, black and white and ornamented with geometric patterns. There are two types of travelling bags:

- a. ***Camel Saddle Bag***: This is used by Bedouins to put on camels for carrying necessities while travelling from place to place or just to sit on as a saddle. It is woven at a width of 82cm and a length of 136cm, so by folding the two ends about 32cm towards the middle and stitching the four sides

to create two pockets when it used on the camel it forms a double-sided bag. The camel bag is usually decorated with five bands of geometric motifs by using the pick-up technique ‘*ragma design*’ with a width of 3cm stripes in between them [Fig. 3:41].

- b. ***Women’s luggage Bag:*** This is a very wide bag which is used by Bedouin women and hung inside the tent so that they can carry their clothes, jewellery, children’s clothes and other possessions. Normally weaves in a width of 100cm, in two parts of 50cm seamed in the centre to form the desired width and 90cm length when folded and stitched at both sides to form a single pocket. They decorate their bags in a similar design to the camel bag [Fig. 3:42].



Figure 3:41 Camel saddle bag



Figure 3:42 Women's luggage bag (Richardson & Dorr, 2003)

-Camel Girth Straps

These are tied around the camel's chest and decorated with patterns adopted from the desert environment. Usually woven with colourful cotton but recently with silk and metallic yarns, it has a width of 5cm or more [Fig. 3:43].



Figure 3:43 Using different cotton thread colours to weave camel girth straps

-Camel Neckband

This is secured around the camel's neck and known locally as *Khetam* to control and guide the camel when riding or leading. It is ornamented with *ragma* designs and has a

ring at one end and a stuffed ball at the other that is inserted through the ring around the camel's neck [Fig. 3:44].



Figure 3:44 Camel's neckband

3.11.2 Pit Loom

The pit loom was first known in Syria before 256 C.E (Geijer, 1979,p.65; Jones, 1989,p.79). It is combined with a pit dug in the ground for the treadles, and appeared within an area ranging from India in the east to North Africa in the west of Oman, and were apparently used for various materials. Basically, an investigation led the researcher to discover that the Omani pit loom could best be described as a combination of two looms:

1. The Japanese Ainus loom, in which the warp threads are stretched horizontally on the ground between the cloth beam and a wooden pole fixed in the ground (Broudy, 1979.p.118), in addition the use of heddles and a warp spacer 'reed' to align the warp threads parallel, while using a wooden beater for beating the weft threads.

2. The treadle looms similar to the old Chinese silk loom, incorporating the idea of using the feet to change the sheds, as was developed in China, around 2000 B.C.E (Broudy, 1979,p.119).

In Oman the pit loom is used exclusively by men to weave textiles which are made of cotton and silk. Wool and goat hair were traditionally used in a pit loom to weave cloaks and blankets, while heavy rugs were never made on this kind of loom. Almost all pit loom products are very expensive, therefore local people preferred to buy cheaper fabrics which are imported from other countries such as India and China (Jones, 1989,p.101). As a result most of the pit weavers abandoned this craft and only a few are left in Sur ‘the east region of Oman’; they are still using the pit loom to weave the traditional costume fabrics of Sur and women’s silk shawls, besides men’s turban and shawl. Harrison (1943) states that “only a handful of pit weavers remain in Oman and most of the local woven cloth customers are Omani Arabs visitors who live in Zanzibar and still prefer to buy the hand woven fabric when they came to visit their old home, but almost no one else does.”

3.11.2.1 The Structure of the pit loom

Most of weaving devices are based on the same principle. The pit loom consists of two strands made of palm trunks which are notched on the upper edge and set diagonally into the ground supported by uprights in each side of the loom, these stand directly supporting two bars sitting transversally and parallel to the cloth beam. The first bar is the beaten support bar which holds the reed; while the second bar is the harness support bar which the heddle rods are suspended from, and each heddle rod is supported between the two shaft sticks [Fig.3:45].



Figure 3:45 The pit loom structure. Photographed in Sur, 2008

Exactly underneath this there is usually a pit for the treadles and the weaver's feet, each treadle is tied with each shaft, so they work alternately to form the shed and countershed. The weaver thus sits on level ground with his legs down in the pit to operate the shafts, this leaves the hands free to throw the shuttle.

There is only one beam used with the pit loom in Oman which is known as a cloth beam. It is set on supports driven into the ground, just above the weaver's thighs, the warp threads are stretched out from the cloth beam through reed to the heddles a distance away beyond the loom (approximately more than ten meters). The remaining warp is bunched together then rolled up, to be used later, and tied to a wooden pole, which is fixed to the ground to form an isosceles triangle shape [fig.3:46].



Figure 3:46 The ends threads stretched out for ten meters and tied to a wooden pole

3.11.2.2 Pit Loom Products

The following are the pit loom products:

-Royal Turban

The Royal turban was specially woven for the males of the Royal Family in Oman (Richardson & Dorr, 2003.p.285). It is made of a cotton woven in a combination of striped colours such as blue, red, magenta and yellow, with flame orange and yellow tassels [Fig. 3: 47].

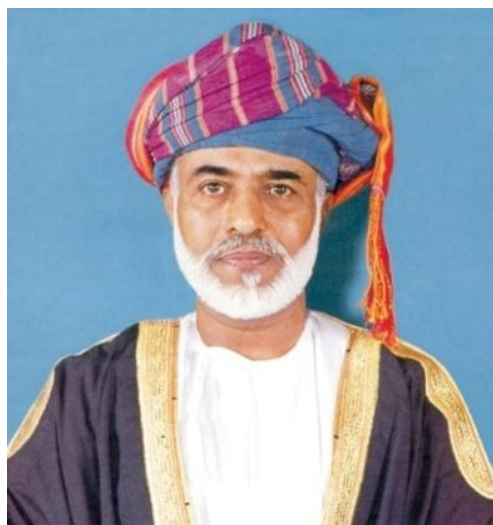


Figure 3:47 His Majesty Sultan Qaboos, putting on the royal turban. Official photograph

-Traditional Man's Turban

This is an essential piece of men's national uniform. It is made of imported materials such as fine cashmere wool or cotton threads. It is usually woven with a range of different colours to about one square metre which folds diagonally to form a triangle shape and is then used as a head wrap [Fig. 3:48].



Figure 3:48 The ordinary men's turban

-Man's loincloth

This is considered to be the most important product for pit-loom weavers. It is extensively used by the men in Oman to wrap around the waist as a vital part of the traditional costume, usually made of white cotton with a coloured border and typically measuring 200x100cm [Fig. 3:49].



Figure 3:49 Man's loincloth

-Suba`yaa

This is used as a cloak by the women in Sur, the east region of Oman and is usually woven in plain blue cotton threads, sometimes with tiny black checks [Fig. 3:50]. Recently, some weavers have introduced some colours such as green or orange with a black check [Fig. 3:51]. It is often bordered with yellow, orange and vivid magenta cotton threads. Occasionally, it is used by men and as a blanket or sleeping cloth as well. It typically measures 250x110cm.



Figure 3:50 The women's cloak woven in plain blue or with black check



Figure 3:51 Different colours used to weave Suba`yaa (Public Authority for craft industries, 2007)

3.11.3 Hodhaya Loom

This is well known, especially among the weavers in Oman and literally means the narrow strip loom. It is basically used to weave laces with a fringe to trim the traditional costumes edges, shawls and other pit loom woven products.

To establish the origin of this loom, it is essential to examine and illustrate in detail the structure and the function of the Al-Hodhaya loom to better understand its root. Consequently, the investigation led us to the availability of this loom in West Africa where it is well-known as ‘The Narrow Band Treadle Loom’, thus the researcher will name this loom as it is known universally for the following reasons:

1. The great resemblance between the two looms in terms of structure and type as well as the use of treadles to form the shed and countershed.
2. Both looms are used to weave strips which are used particularly in Oman to ornament the traditional costumes and shawls. In addition the strips are stitched to the edges of pit loom products.

This loom is characterized more than anything else by the narrow width of the cloths that are woven on it. It is found principally in West Africa where it is used for weaving strips made of cotton threads. Generally, each strip is measures between two and six inches in wide. Nowadays the weavers employ silk and metallic threads in with the different range of coloured cotton threads. The origin of this loom has not been recognized thus far; Broudy (1993. P.119) states that “this loom may have represented from more developed looms introduced into Africa, possibly by the Portuguese in the 16th century while other believe that this loom came into Africa in the 11th century with Islamic culture and crossed into west Africa from the Maghreb via one of the trans-Saharan trade routes”. In contrast, Lamb (1975.p.157) states that “some authorities believe that it must have been of native origin. Others believe that this loom have originated in the Nile Valley or some other region in the east, and spread out to the other countries along with the cultivation of cotton”; so the factual origin for this loom has yet to be confirmed.

However, studying the ancient trade of Arab traders provides evidence for the distribution of the skills of weaving on the narrow-strip loom which owes a lot to the ancient traders who travelled across the countries from the east to the west exporting, importing and dealing with a huge variety of goods, both locally produced and imported from across the desert. Most of these ancient traders were Arab Muslims and the majority of weavers in those areas are also Muslims. Obviously, the demand for

appropriate and prestigious merchandise certainly helped and encourages the spread of weaving skills across the Islamic countries.

3.11.3.1 The Structure of the Narrow Band Treadle loom

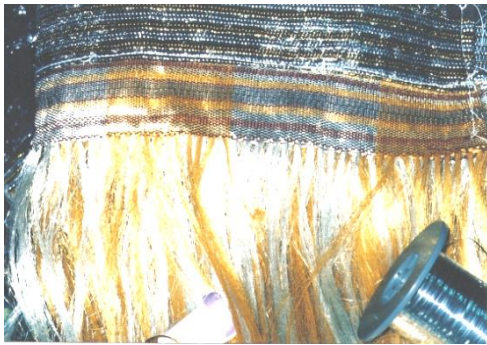
There are two types of narrow band treadle loom which have been used in Oman and are typically similar to the West African loom; both are used to weave bands with tassels or to trim the women's shawl.

-The Double –Heddle Narrow Strip Loom

This loom is usually fixed indoors and the weaver can stretch the warp from wall to wall in his house. They usually use cotton threads in different colours and metallic threads in silver or gold colours. The loom consists of pair of heddles suspended from a wall to wall bar above the weaver, and operated by foot pedals. The weaver sits on the floor with a pedal under each knee and changes the shed by alternately raising and lowering each knee. A temporary string is stretched parallel to the main warp ends to create and hold the edge of the fringe, so the weaver inserts the weft through the warp ends, across the space to the temporary string, around and back through the warp ends then beats it [Fig.3:52]. The woven strip is stitched to the traditional shawl to decorate the edges [Fig. 3:53A]. On the other hand the strip can be woven directly to the unbraided woven shawl rather than stitched on it, by using the warp ends of a woman's shawl as the weft threads of the strip [Fig. 3:53B].



Figure 3:52 The double –heddle narrow-strip loom. Photographed in Rustaq. 2007



(A)



(B)

Figure 3:53(A) stitching the decorated strip to the edges of traditional shawl

(B) The strip woven directly to the woven shawl

-The tripod–frame loom

This has been used by the Mende people in Sierra Leone and the Susu in Guinea, and a similar loom has been used in Java and other parts of Indonesia as well (Broudy 1993.p.121), this loom consists of a small heddle harness which is suspended from a tripod that can be shifted along the warp as weaving progresses [Fig.3:54 & 3:55].



Figure 3:54 Using tripod–frame loom to trim the loincloth (Public Authority for craft industries, 2007)



Figure 3:55 Operating the tripod-frame loom by pedals under each knee (By Ahmed Al-Shukaili, available at: [www. Roo7oman.com](http://www.Roo7oman.com) [accessed June2009])

3.12 Summary

Bedouins have modified their lifestyle. They have settled, built permanent houses, got their household needs from the neighbouring town market and they have replaced camels with four wheels drive vehicles for transportation. Ease of transportation and availability of convenient market places all forced Bedouin people to abandon the use of hand woven products especially tents and blanket.

As a result of these changes in Bedouins lifestyle structure, the Bedouin's tradition represented in woven pieces has suffered a decline as well. Therefore, the nomads restricted their woven products in rugs and some small products such as ornamental bands, key chains and women bags that are sold in the local market. The weavers have been using the natural raw material to provide their basic needs, they use the ancient simple devices without further development to spin and weave their products. Rugs are considered one of the most important products they weave. The patterned rug is the work of Bedouin weavers, whose harsh life in the desert made them dye the fibres with dye stuff, found in the nature around and ornament their products with simple motifs to produce their woven products. Shepherd weavers who live up on the mountains with

unexpected wealth of expression in the environment around lend them to weave their products with simple stripes. Both, the Bedouin and the shepherd are using ground loom to produce their needs which are usually made of goat's hair or sheep's wool.

The weavers in the east region of Oman normally use pit loom to weave fabrics and shawls made of cotton. The un-braided pit loom woven products usually sent to the narrow band treadle loom weavers to ornament the edges of shawls and loincloths as well as adding some fringes to them to be more suitable to wear. The narrow band treadle loom weavers also produce ornamented woven strips. These strips can be stitched to the traditional shawls to decorate the edges.

CHAPTER 4

The Influences of the Islamic Decorative Designs

4.1 Introduction

This chapter explains the distinct types of Islamic decorative designs which were inspired by the Islamic instructions' faith and philosophy. These designs were utilized in decorating architectures as well as different surfaces surrounding the Arab in all Islamic lands which in turn highly influenced and formed the Arab people taste. It also illustrates the sacred meaning of some colours which are extensively preferred in Islamic designs and by Arabs as well.

4.2 Islamic Designs

Islamic instructions in the Qur'an have social as well as spiritual implications. Muslim artists have to abide by these principles, especially the complete ban on representational art. There was a discussion on this very issue in chapter two of this thesis. In relation to the opposition to representational art, Wendel (2002) states that "The basis of this opposition is that Islam tries to prevent believers from straying from monotheism in its strictest sense. Therefore, Islamic artists looked for other forms of expressing themselves besides realism or naturalism. In Islam, abstract ornamentation and, in particular, calligraphy reached an incomparable peak. In calligraphy, one can see a reflection of the artist's love for the revealed text." Therefore, Muslim artists took a different direction from Byzantine and Sasanian artists and established their own designs and techniques known as geometric patterns, floral designs and calligraphy, which were passed down and diffused through various crafts. The essence of Islamic art is that it is not supposed to imitate or represent the nature of human beings. Artists can never compete with what God has made. However, nothing is considered to be wrong if artists depict humans in the abstract. On the other hand, there are no objections to an artist depicting objects in his natural environment.

Islamic art was developed over the centuries and was influenced by different Islamic rulers. Most Arab Islamic countries were ruled by different empires and each dynasty founded a new capital in different parts of the empire, where their royal courts attracted skilled local craftsmen (Nasser, 1993.p.76). They had their own pre-existing artistic traditions as well as those who worked in the old capital (Rezequ, 2006.p.84). These craftsmen, under new nascent patronage, and interchanging experiences, produced unique and gradually more developed artistic products which characterized each

dynasty. There is no doubt that a succession of empires influenced Islamic art in various ways. The different empires influenced all types of arts. The towns and cities prospered through trade and imported goods which exerted a strong influence on the styles and the patterns of the local art. These impacts created similarities that are found in most of Islamic decorated arts in Islamic lands (Wilson, 1988,p.14). The three distinct types will be discussed below:

4.2.1 Geometrical Patterns

Due to the strict religious sanctions, Muslims are forbidden to create representational art. This has meant that Muslim artists had to rely heavily on abstract patterns. Geometry has provided craftsmen with a fertile source of designs. These geometric patterns are not exclusively employed in Islamic art. They have been used by the Romans, Chinese and Celts (Abas & Salman, 1995.p.3). Perhaps the major difference is geometric designs have been used to a much greater extent throughout Islamic cultures by Muslim artists (Wilson, 1988.p.15; Abas & Salman, 1995.p.2). Aziz (2004.p.484) states that “The geometric patterns clearly demonstrate the fascination of Islamic artists with the visual principles of repetition, symmetry and continuous generation of patterns. Clearly, the art of geometry is related to the study of mathematics and other sciences, which were keenly pursued by scientists and philosophers of Islam.” Muslims were the greatest mathematicians, astronomers, and scientists of the period and their contributions influenced artists and played an essential part in creating this unique style of patterns and in particular the coherent system of lines in designs (Stewart, 1968). Since geometric patterns are based on symmetry² only, a minimal geometrical knowledge is required to create a particular pattern [Fig. 4: 1].

² “An object is symmetric if there are translations, rotations, reflections, or glide reflections which when applied to the object leave the appearance of the object unchanged” (Abas & Salman, 1995.p.57).

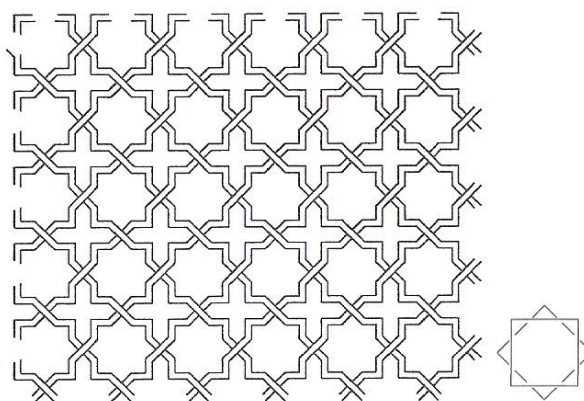


Figure 4:1 The basic characteristic shape of Islamic pattern contains 8-pointed star shape which can generate a great bulk of Islamic patterns (Abas & Salman, 1995)

This new style with their optical effects of balancing the positive and negative areas became highly important in the Islamic arts; its geometric shapes had symbolic and philosophical significance to the Muslims artists (Aziz, 2004.p.484). Geometric designs extended to cover the entire surfaces and usually utilized in combination of floral and calligraphic designs. The infinite patterns and shapes used by Muslim artists to represent the unchanging laws of God. The geometric designs are made up of simple geometric figures such as squares, rectangles, lines, circles and triangles to form a pattern; these were then used to construct complex patterns based upon rules and certain procedures. These designs could be reduced and enlarged by repeating these procedures (Wilson, 1988.p.15). These simple figures were generally set into symmetrical formations to produce intricate designs of octagons, hexagons, star-like polygons and other geometric shapes interlaced according to a set pattern and usually imbued with sacred meaning (Abas & Salman, 1995.p.32). These seemingly endless patterns appealed to Muslims. They believed that all life originates from God and returned to it.

Geometric motifs were used extensively in the Islamic world to decorate religious buildings as well as for designing decorative surfaces such as tiles, wood, book covers, papers, glasses, carpets, textiles, plasters, walls, ceilings, floors, doors, windows, pots and lamps. As Islam spread to new areas, artists combined their penchant for geometry with the existing traditional designs in these new areas which helped to create distinctive Islamic motifs (Yassen, 2006.p.50). This art symbolizes the natural Islamic vision of the universe and some of the greatest examples of these geometric patterns can be seen in examples of Islamic architecture such as the Dome of the Rock and

Alhambra Palaces. A wide range of basic Islamic motifs, drawn from geometry, calligraphy and floral influences make up an endless variety of forms [Fig.4:2 & 4:3]. Artists used different bright colours with these geometric patterns such as deep blue or turquoise, red, black, and white with gleaming gold and glitter effect. Though beautiful and harmonious, these include hues not found in nature (Yassen, 2006.p.102; (Aziz, 2004.p.196).

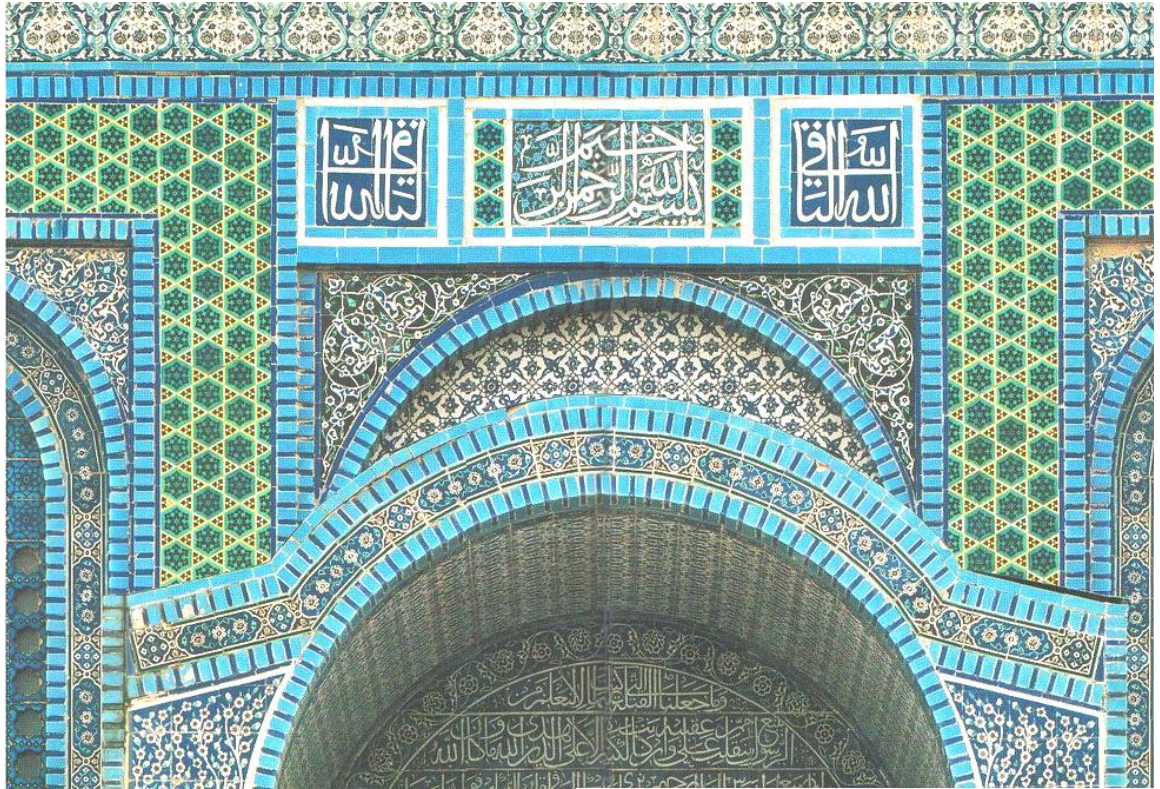


Figure 4:2 The use of continuous geometric designs interlaced with overlapped floral and calligraphic designs in the Dome of the Rock. Available at: <http://www.ikhwan.net> [Accessed 8 September 2009]

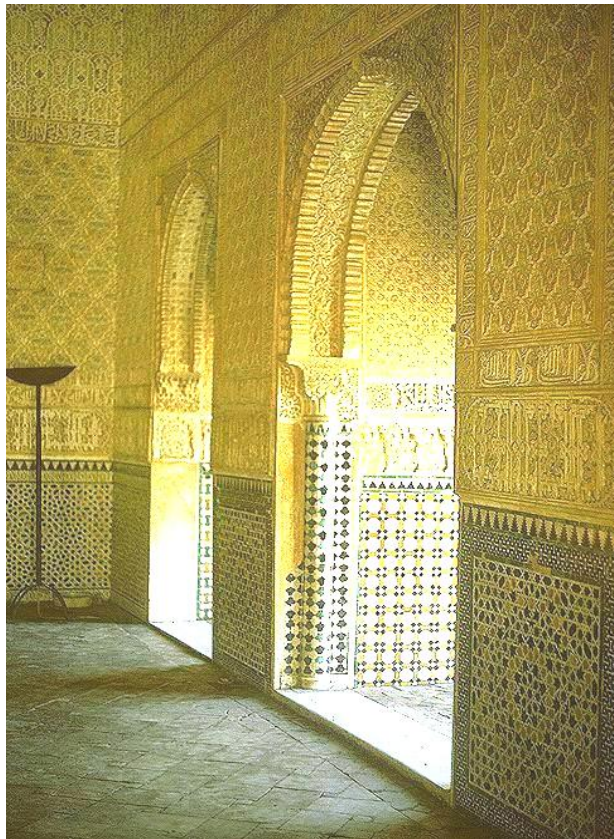


Figure 4:3 the geometric designs in Alhambra Palaces which generated by the action of symmetry and the use of optical effects. Available at: <http://www.mutir.com> [Accessed 8 September 2009]

The most outstanding characteristic of Islamic geometrical patterns is the prominence of symmetrical stars. Muslim artists utilized star shapes with six, eight, ten, twelve and sixteen rays in their designs [Fig.4:4]. This great attraction for star shapes in Islamic art reflects the importance of stars in Arab Muslims daily life. Arab Nomads had a great need to be guided by stars during their movement from one place to another. The Holy Quran abounds with verses which conjure up powerful imageries of stars (Yassen, 2006.p.123) . Arabs were the first astronomers who named the stars, and they continue to be known by their Arabic names.



Figure 4:4 The star shapes decorate most of the Islamic building ‘the Dom of the Rock’. Available at: <http://www.ikhwan.net> [Accessed 8 September 2009]

4.2.2 Calligraphy

Calligraphy has been one the most important media of artistic expression in Islamic culture. It is a vital part of the mystery which is attached to the religion. So, it is in a real sense a sacred art. The importance of calligraphy lies in the fact that it is the writing system for recording and handing down the teachings of the Qur’an to succeeding generations. It is used to transmit a text and a message from the Holy Qur’an in decorative and ornamental form throughout the Islamic world. It gives Islamic architecture some of its most important characteristic features [Fig 4:5]. Abas & Salman (1995.p.5) state that “Just as no other civilization has valued pattern and symmetry as deeply as the Islamic civilization, so it is true that no other has revered the sacredness of the word to such an extent. Calligraphy is the jewel in the crown of the Islamic art.”

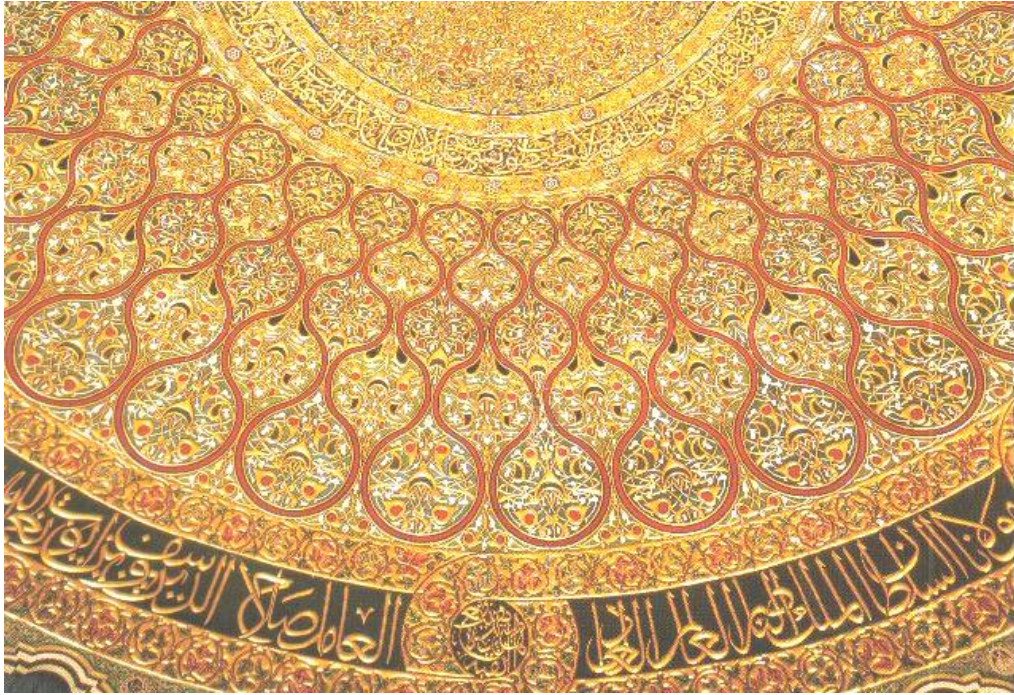


Figure 4:5 Ornamenting the dome with calligraphic designs in the Dome of the Rock. Available at: <http://www.ikhwan.net> [Accessed 8 September 2009]

Islamic calligraphy makes use of the Kufic script. Artists “employ simple rectangles and squares to create calligraphic designs in a stylized form” (Abas & Salman, 1995, p.3). The Kufic script which takes its name from the Mesopotamian town of Kofah is one of the earliest Islamic learning centres, which was later developed and refined to provide a better visual sacrament (Yassen, 2006, p.22) [Fig. 4: 6]. It is engraved and used in textiles as well as other materials and objects. It has been used by non-Arabic speaking people such as Persians, Turks and Indians.

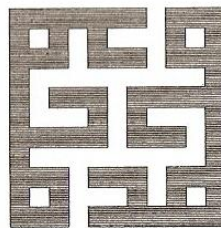


Figure 4: 6 Square and rectangular kufic script (Abas & Salman, 1995)

Calligraphy inscriptions are usually combined and set against a background of geometric and floral patterns which surround the letters. Also, they provide additional symbolic meaning.

4.2.3 Floral Patterns

Floral patterns can be seen in arabesque designs which are formed by an abstraction of the earlier leaf-scroll motifs (Abas & Salman, 1995.p.3). This vegetal ornament is characterized by a continuous abstractive stem which splits repeatedly to produce a series of curving counterpoised vegetal patterns flowing in all directions. The sense of periodicity and the rhythm is very noticeable in these patterns [Fig. 4:7].



Figure 4: 7The use of arabesque patterns in Alhambra Palaces. Available at: <http://en.wikipedia.org/wiki/Arabesque> [Accessed 7 April 2008]

These patterns are used in combination with other major types of Islamic designs such as geometric motifs and those derived from calligraphy to decorate a vast number of buildings, different objects, and textiles throughout the Islamic world.

Muslim artists adopted the floral pattern from existing traditions of Byzantine and Sasanian and adapted them to suit the aesthetic interests and tastes of their Muslim patrons. They were used in the 9th century in most of the buildings of Samarra during the Abbasid era and spread to Islamic countries in the 13th century. This development demonstrates a highly abstract and fully developed Islamic style (Al-Alfi, 1985.p.23).

4.3 The Colours of Islamic Art

Muslim artists have excelled in using a complex range of colours and shades. They have used green, blue and gold in particular. The colours red, yellow, white, black and brown have been used but to a limited extent (Yassen, 2006.p.62). Blue symbolizes the feeling of infinity as it is the colour of the endless seen of the sky and the sea. Gold represents grandeur. It has been used exclusively to decorate royal court fabrics (Yassen, 2006.p.64). Moreover, new colours were created for Islamic decoration. Artists exhibited great skills when it came to mixing and producing colours. The dynamic colours served to provoke the imagination.

Many Muslim philosophers have said that these colours have a religious importance and have thus been used extensively in Islamic art. Green is a very important symbol in Islam as it represents paradise (Qanso, 1995.p.85). It is usually associated with angels and the garden of paradise. The Holy Qur'an (verse 18:31), states that the inhabitants of paradise will wear green garments of fine silk, and lie on green silk cushions. The Islamic world views green as a very special colour. Green was used as the banner of Prophet Mohammed. Green makes one think of being calm, relaxed and the beginning of a new life. Abbasid painted the domes of their palaces in green. Damascus, which is where there palaces were located, were referred to as the green town (Chebel, 1997).

White represents purity, brightness, loyalty and cleanliness. The Holy Qur'an describes the water in heaven as being white (Qanso, 1995.p.95). Moreover, prophet Mohammed said that "white is the most favourable colour which God has created, so wear white clothes while you are alive and use them as a shroud" (Yassen, 2006.p.89). Hence, this colour has been adopted as the colour for men's traditional clothes in the Arabian Peninsula, which typically consists of a white garment with a white turban. The burial shroud for Muslims is white as well.

Most Islamic scholars believe that black symbolizes justice, dominion and honour, as it was adopted by Prophet Mohammed and by the Abbasid dynasty as a banner during times of war. Some Muslim communities consider black as a powerful protection against evil and it is also used as the colour of mourning. However, Abbasid rulers

dressed themselves in a black turban and a black robe. To them, black was symbolic of power.

4.4 The Impacts of Islamic Decorative Arts in Forming Arab Aesthetic Tastes

Islam arose from a desert environment of nomadic Arabs who lived a primitive, simple desert life. Gradually, Islamic art began to flourish at the end of the 7th century. This was at a time after the death of Prophet Mohammed. Muslims renovated the Prophet's mosque in Al-Medina and decorated the columns and the ceiling with classical inscriptions. In the 8th century, Islamic designs took a strong hold under the Umayyad dynasty. Arab desert towns were transformed into cultured towns. Many buildings and mosques were constructed (Rezequ, 2006.p.76). It was a time that Arabs found themselves surrounded by colourfully decorated buildings that reflected their own new view of life. People adapted these styles to use in their homes. Hence, they considered decorations more important than furnishings. Most Arab homes had little furniture in them because of the impact of the desert's life which was simple and uncluttered. These people walked on floors which were ornamented with mosaics. There were pillows scattered throughout home and they were covered with traditional fabrics. They sat on beautifully coloured woven rugs when they ate their meals. Abas & Salman (1995.p.4) state that "Carpets from the Islamic world continue to be the most sought after today and one is not surprised to see the prominence and the refinement of interlacing in the patterns of Islam."

Ceilings, walls, and book cases had Qur'anic inscriptions on them with beautiful geometric and floral colourful motifs. Furthermore, the monochromatic nature of colours in deserts and in mountainous areas may have encouraged Arabs to use colours which were missing in the environment around them. The figures [4:8; 4:9; 4:10 & 4:11] provide examples of the nature of Arab homes and the imported products which swamped the local marketplace.

Bedouin products were appreciated by local people who used them in decorating their houses and they are purchased by the tourists and countries around as a remembrance of

their visit and decorative objects as well. However, with the evolution of home furnishing, local people became uninterested in and un-attracted to the Bedouin products as a result of the availability of imported soft fabrics in contemporary colours in the market at the time that Bedouin products remained stable on those respects.



Figure 4:8 The nature of the Arab people homes decorated with Turkish rug and imported cushion covers



Figure 4:9 using the imported cushion covers and rug that imitate Bedouin products because of the absence of the traditional in the local marketplace. Photographed in 2007



Figure 4:10 Another home using the imported cushion covers that only available in the marketplace



Figure 4:11 Decorating the room with material imported from East Asia

4.5 Summary

The influence of Islam on arts can be found primarily in calligraphy, arabesque designs and architecture. Also, geometric designs were used quite extensively. Muslim craftsmen produced stunning designs based on simple geometric principles and traditional motifs which were used to decorate many surfaces. The idea of interlacing simple rectilinear lines to form the patterns impressed Arabs. Nomads of Persia, Turks and Mongols were equally impressed with the designs so they begin to use them in their homes in carpet weaving. Islamic designs, motifs and colours which were used became common place and served to influence people's tastes. Modern life style and contemporary products have changed the style of people's daily lives, however, people still long for the nomadic way of life. This is clearly reflected in people's homes. In a great many Muslim homes, Islamic decorative motifs can be seen along with traditional 'Bedouin' style furnishing, especially in homes of the Arabian Peninsula.

CHAPTER 5

The Symbolism of Bedouin's Geometric Motifs

5.1 Introduction

the Bedouin woven motifs assists in the study of their symbolism. This chapter describes and documents traditional patterns and their sources as observed and recorded from the local weavers with the aim to understand the metaphysic symbolism they carried.

5.2 Signs and Symbols

Signs are ancient beliefs which have existed since prehistoric times and can be seen in cave paintings where the first human beings lived and provide the first evidence of sign use. Additionally, signs were used by Sumerians, Babylonians, Assyrians, Phoenicians, Canaanites, and other ancient civilizations of western Asia. The ancient Egyptians used Hieroglyphs and these signs became symbols which referred to specific words or represented things so they acquired a deeper meaning which took the place of abstract ideas. These are commonly found on vernacular objects such as decorative vessels, amulets, wall murals, crafts, carpets, textiles, and furniture. Ancient signs and symbols have also been appreciated by modern and contemporary artists. In Oman symbols are still used by certain groups of people such as the Bedouin who use them in their woven products, to symbolize their dreams, imaginary worlds, beliefs, mysteries and the surrounding environment.

5.3 The Symbolism

People use symbols to express different meanings, ideas, feelings, emotions and excitement. Symbols may possibly be represented in objects, letters, numbers, colours or abstract patterns; their defining characteristic is that they stand for something other than their intrinsic property (Yassen, 2006.p.41). For instance, while there is nothing intrinsically dangerous about the colour red, it has become a symbol for danger in a number of societies, so we need to study why this colour is used as a symbol for danger. Red creates a physical reaction and has been shown to raise blood pressure just as when one is actually in a dangerous situation. Therefore this perhaps explains why the colour red has become a symbol of danger. Consequently, each symbol has a metaphysical dimension that clarifies the philosophy which it is based on and conveys the messages to the people, so that they can communicate and understand folk arts [Fig 5:1] (Yassen, 2006. p.51; Wittkower, 1977.p.11).



Figure 5:1 (A) Ankh is a symbol used by Ancient Egyptian to symbolize the eternal life. (B) The crescent moon and star is used by Muslims to symbolize the faith of Islam.

5.4 Illustrating the Omani Bedouin motifs

Each product item contains a group of dots, lines, abstract geometric figures as well as various colours, each of which are rich in symbolism and suggestion. These symbols, which are represented in abstract motifs, were inherited and have taken root through generations; thereby they have become traditional among the Bedouin and appear in most of their products.

The following are the products and motifs the Bedouin use:

5.4.1 The Rugs ‘Sahha’

This is also known among the Bedouin as a thrown or table [Fig.5:2]; it has distinctive patterns which are inspired by the Islamic decorative motifs, besides some patterns which are inspired by desert life. The Bedouin do not have knowledge about when the motifs were employed in their products, but they believe that they have been used for generations. These traditional motifs consist of:

5.4.1.1 The triangle

There are two methods for using the triangle in the Islamic arts as well as in the Bedouin’s rugs, the downward pointing triangle and the upward pointing triangle, each method has its own symbolic meaning and they are usually combined to form a metaphysical symbolism. Usually the triangle is employed as a symmetrical motif which is repeated in a horizontal reflection and glide reflection to form a pattern and complete one another in terms of their meaning as explained below:



Figure 5:2 The Bedouin Rug

5.4.1.1 The triangle

There are two methods for using the triangle in the Islamic arts as well as in the Bedouin's rugs, the downward pointing triangle and the upward pointing triangle, each method has its own symbolic meaning and they are usually combined to form a metaphysical symbolism. Usually the triangle is employed as a symmetrical motif which is repeated in a horizontal reflection and glide reflection to form a pattern and complete one another in terms of their meaning as explained below:

5.4.1.1.1 The downward pointing triangle

This has been used widely in rugs traditionally but hardly seems to have been used in the prehistoric age, for instance, it is neither seen on the oldest rock carvings nor in cave paintings. However after the advent of Islam the Muslim artists used it to represent the earth as an expression of the consideration of the ground to them, hence it was used by

nomads as well to convey their relationship to the ground and its importance to them (Yassen, 2006. p.165).

5.4.1.1.2 The upward pointing triangle

This has been used very often in Islamic art and architecture to represent the sky; in Islamic philosophy the upward pointed triangle is an expression of the Muslim’s faith towards God [Fig. 5:3].



(A)



(B)



(C)



(D)

Figure 5:3 Utilizing upward and downward triangles in different Bedouin’s products. (A)The triangle woven along the camel’s girth strap as glide reflection symmetry. (B) The triangle woven as glide reflection symmetry along the Bedouin’s rug (C &D) The triangle in the camel bag woven as reflection symmetry

5.4.1.2 The digit seven ‘V’

This symbolized perfection in most ancient civilizations, for example the ancient Egyptians, Greeks and Mesopotamians considered it a sacred number at that time (Qanso, 1995). The importance of the digit seven, which is written in Arabic as the letter ‘V’, became more significant after the arrival of Islam. As it correlates with religion and the Muslim faith, the Muslim artist uses this digit as a decorative element to represent the world around him and express his beliefs. Aziz (2004) states that, “The

whole world of symbolism created around the number seven in all Islamic languages”. Using the shape of the number seven as a motif has become popular in a large number of Muslim representations. Thus it has been passed down through generations and become a tradition used in different areas as well as in woven products. This digit is usually woven in a symmetry as a three vertical translation combination, this in turn also emphasizes the importance of the number three in Muslim’s life [Fig.5:4]. Following are some examples of the significance attached to the number seven as believed by Muslims:

1. According to the Qur’an, God created the universe in six days and sat on the throne on the seventh day.
2. It is the first number mentioned in the Holy Qur’an as well as mention that each atom in our universe consists of seven layers.
3. The number of layers of sky is seven and each layer has a heaven. The word sky is mentioned in the Holy Qur’an seven times only.
4. The earth has seven layers as well.
5. It was also the number of known planets in ancient times up until 1801.
6. The whole Qur’an is organized in a form of number seven.
7. Most of the pilgrimage ceremonies are built upon the repetition of ritual seven times.
8. Muslim Mathematicians believed that the God kept the secret of this number for himself as they found that the digit is the most unique and ambiguous number in that it is the only number that does not have a square root and does not accept division, meaning it cannot be analyzed mathematically.
9. The first and the most important chapter of the holy Qur’an consist of seven verses.
10. The advent of Islam was in the 7th century.

However, the mystery of this number was confused by Muslim artists and this led them to use it as a religious symbol to glorify God and express the prominence of the number in the Islamic world.



Figure 5:4 Using the shape of number seven as a symmetrical pattern in different Bedouin's products

5.4.1.3 The Dots

The dot ‘.’ represents the number zero in Arabic, so it and the shape of the number one ‘1’ are both used to symbolize God in Islamic art and philosophy, because it usually signifies eternity (Cirlot, 1981. p.22). The Muslim belief in the unity of God and Islam is built upon this “there is no God but only one God” so the artists represents this expression of faith in their art works, thus the figure of the one or the dot has long been used as motif to confirm their beliefs in one God [Fig. 5:5& 5:6].



Figure 5:5 Using dots to form a motif to design the camel's saddle bag



Figure 5:6 Employing dots to form a motif in shepherd's rugs as well as Bedouin's

5.4.1.4 The Whorl

This pattern reveals the daily life of desert women who spend most of their time spinning; whether shepherding herds, gathering around the fire to listen to legends and religious stories at night, reading the Qur'an or even when discussing the difficulties of their lives and the problems they face it is hard to see a woman without a spindle in Bedouin society and this naturally rebounds directly on her weaving pattern. Therefore the using of the whorl shape in the rug literally represents women's daily life and the time she spends getting the threads ready to be woven, because of that it takes the shape of sand glasses.

As observed, there are two ways of weaving the whorl on a rug, the first one is simply weaving the outline shape of the whorl only and the other is weaving it filled in. Whorls are regularly woven in series starting with weaving in the outline shape of the whorl and followed by weaving the filled in shape. This sequence of using two methods to weave the whorl was not haphazard; they were woven with the purpose of

symbolizing a single day in Nomadic life in which they start their day with an empty whorl to be filled up by spun yarns as time goes on [Fig.5:7, 5:8 & 5:9].



Figure 5:7 The shape of the whorl



(A)



(B)

Figure 5:8 (A) The outline shape of the whorl. (B) The filled in shape of the whorl.



Figure 5:9 Weaving the shape of different types of whorl in sequence

5.4.1.5 The Six Pointed Star

The shape of the star was considered to be the best pattern used by the Muslim's artist in order to explain the relationship between the sky and the earth. This because it merges the two triangle shapes; the upward pointing triangle which represents the sky and the downward pointing triangle that represents the earth, to create a shape that symbolized the cosmos. This star were used by the Fatimid as a symbol to ward off evil, a box with a complicated pattern was found in Egypt which dated to the Fatimid era and was made by using many small pieces of ivory coating in a wooden base. The shape of the six pointed star was designed in the centre and represents the 'seal of Solomon', which was believed to ward off bad luck [Fig. 5:10]. Another example of use of this star was dated to the Ayyubid era and found on the wooden coffin of Imam al-Hussein in Egypt; the Cenotaph was decorated with geometrical and floral designs and the panels were designed with various shapes, including rectangles, squares, triangles and six pointed stars [Fig. 5:11].



(A)



(B)

Figure 5:10 (A) The seal of Solomon were used by the Fatimid as a symbol to ward off evil. (B) Solomon's Seal on a stone from arch dated to 3-4th century found in the Galilee. Available at: <http://www.mfa.gov.il> [Accessed 16 September 2009]



Figure 5:11 The wooden coffin of Imam al-Hussein in Egypt. Available at: <http://www.eternalegypt.org> [Accessed 16 September 2009]

However, Nomads wove the shape of the star because of the importance of the star in their lives, as was mentioned earlier in chapter two. They weave this shape with a combination of other motifs; i.e. the number seven and the whorl and the dots. When we break up this pattern it will be easy to understand its metaphysics and how the pattern represents all of the Muslim's faith under one motif [Fig. 5:12]

1. In the middle of the star there is a shape of the whorl which represents the daily life of the nomad and the time they spent in spinning [Fig.5:13].

2. They used the six pointed star which consist of two triangles to represent the sky and the earth which they live in between.
3. Underneath the star there is a shape of the number seven woven as a group of dots to represent the layers of the sky and the earth as well as the other important aspects of this number. Moreover the shape of the number seven was woven in the middle of the rug to form a symmetrical motif which emphasizes faith.
4. On top of the star a group of dots formed a dome which was used extensively in Islamic architecture and motifs and also used in Islamic philosophy to represent the cover of the sky and what follows from the spiritual world to express the protection of God.

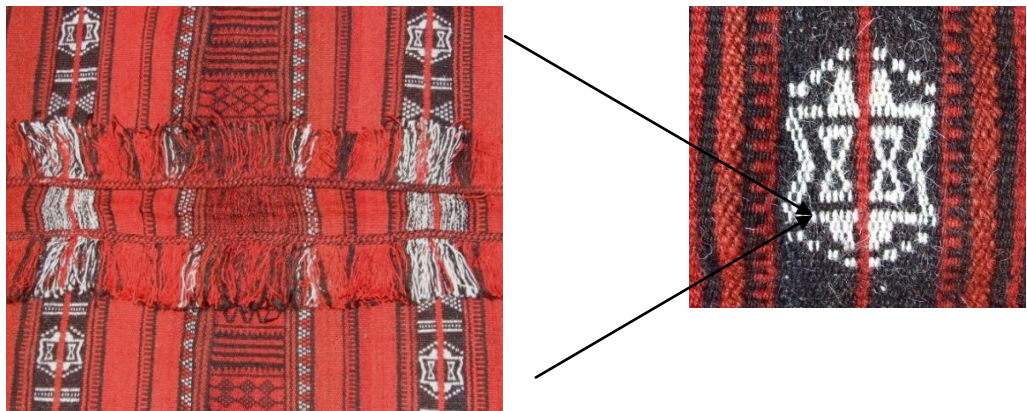


Figure 5:12 Utilizing the six pointed star in almost all the Bedouin products

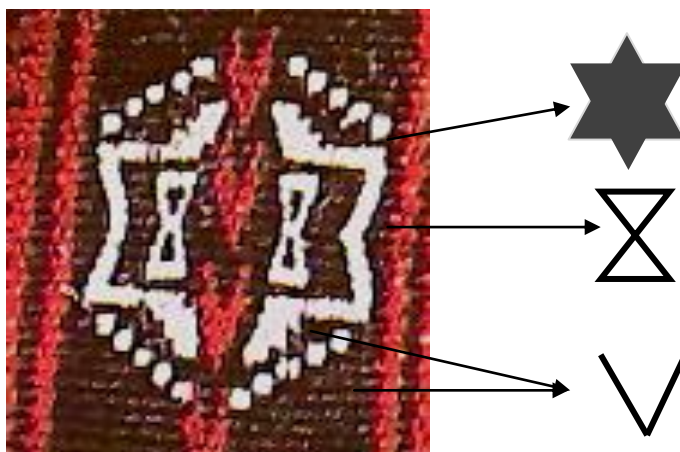


Figure 5:13 illustrating the six pointed star motif

5.4.1.6 The crossed Swords 'X'

This motif is one of the oldest symbols in Islam; The Ottomans adopted the symbolism of swords as they apparently believed it capable of putting out an enemy's eyes and gradually it became one of the main symbols in Islamic World. Some of the Arab countries use this symbol as a logo to represent their country as strong and courageous [Fig. 5: 14]. This symbol is woven in the middle of the filled in whorl as well, it is probably represents the ability and the aptitude of the weaver in spinning the fibres because it always follow the filled in whorl motif [Fig.5:15].



Figure 5:14 The crossed Swords



Figure 5:15 The crossed swords woven in the middle of the filled in whorl

5.4.1.7 *The Culicoides Midges ‘Hamsha’*

This is a type of biting midge which has a pair of broad mottled spotty wings; it commonly occurs in the desert environment, so Nomads used the shape of the midge’s wings as one of their motifs [Fig. 5:16]. Obviously depicting the world around them emphasises that they are using the environment as a source for their imagination.

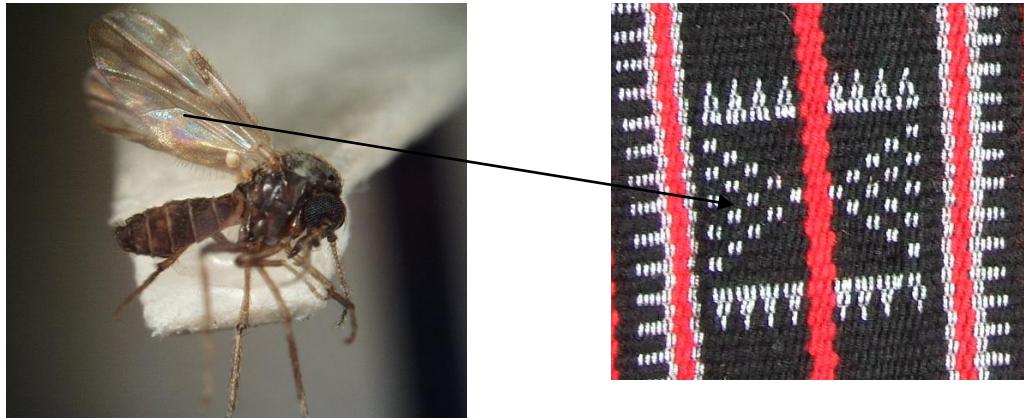


Figure 5:16 Weaving the shape of midge’s spotty wings

5.4.1.8 *The Zigzag line*

According to Islamic thought and philosophy this sign was used to express a wave at sea wave or sand dune in the desert; it was used extensively by the Muslim artists to decorate buildings, textiles, metalwork, and ceramics as well as ornaments, jugs and pitchers. The Saudi Bedouin, called the series of parallel zigzags ‘cobra’ [Fig. 5:17].



Figure 5:17 using parallel zigzag lines to ornament the both sides of the rugs

5.4.1.9 The Tent Shape

This motif is known as a '*ragma um banat*' which is considered to be a very strange name. It means literally the design of the girl's mother; undoubtedly it has a tent shape and the pegs of the tent are clearly shown, inside each side of the tent there are four dots which are called the four girls. This motif certainly represents the nature of the Bedouins' life [Fig 5:18]. The same shape of the tent is used as one of Bedouin woven motif but with slight differences, such as where the front view of the tent is filled up, which could represent the tent during the night time as the front flaps of the tent is usually grabbed and hold together for sleeping [Fig.5:19], while the first shape represents the tent during the day time. These figures may represent the extent of the maternal care for her children, both during the day and at night. Underneath the tent there is a shape of number seven woven as a group of dots which symbolize some religion faiths "as described earlier". On top of the tent a group of dots formed a dome as a symbol of the cover of the sky; both shapes are woven, above and underneath their house, to emphasize the importance of the land which they live on and the divine providence from God.

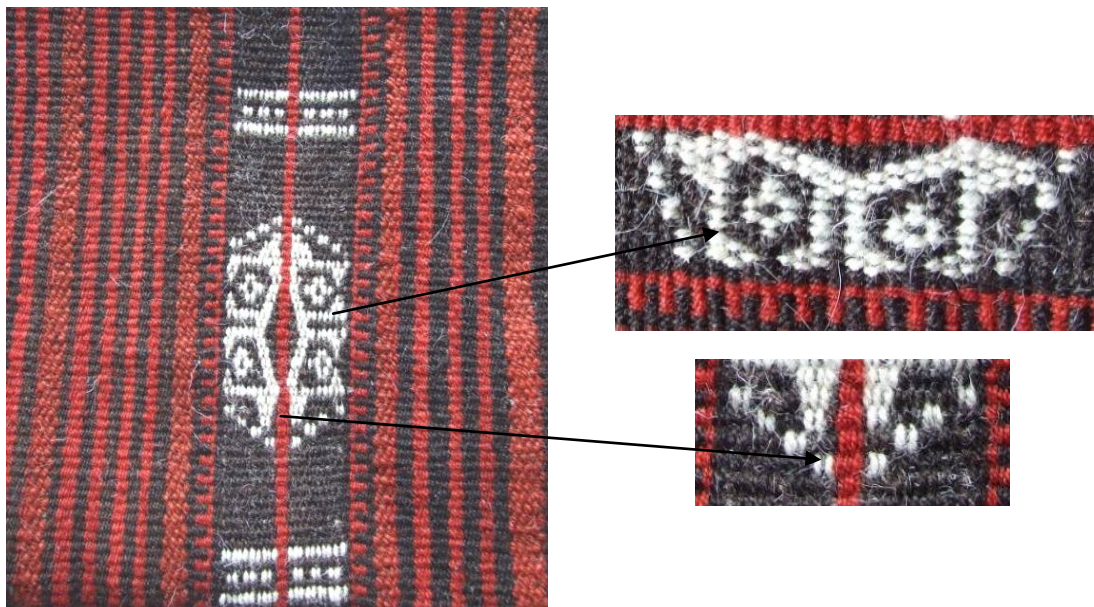


Figure 5:18 This motifs is woven in reflection symmetry



Figure 5:19 weaving the shape of the tent during the night time with a motif called *nathra*, which is used to name a specific group of stars, woven in the both sides of the tent

5.4.1.10 The Extension Line

The extension line is used in all the woven products whether woven by shepherds or Nomads and it was used in Islamic art to express the length of life [Fig 5:20].



Figure 5:20 weaving the extension lines

5.4.1.11 Whittled ‘manjor’

This is a wooden art work used intensively in most Arab countries to decorate doors and windows. *Manjor* or whittled is used in the pattern to separate one motif from another. Since this pattern is known as the name for ornamented doors or windows so the Bedouin used the same idea to represent the new pattern which follows each motif [Fig 5:21].



Figure 5:21 *Manjor* are used to separate one motif from another

5.4.1.12 The Diamond shape

This has been used since ancient times by Seljuk to decorate their carpets. However the Nomads used this shape to represent leafage if it is woven as a filled up pattern, while it represents a traditional Omani thump ring ‘*shahed*’ if they weave the outline of the diamond shape containing another smaller outline inside it [Fig 5:22&5:23].



Figure 5:22 Different methods of weaving the diamond shape, the image in the left shows two leafages woven in reflection symmetry while the image in the right represent only one



Fig 5:23 using the shape of their Jewell to ornament the woven products

5.4.1.13 The Camel Saddle Bag's Patterns

This is decorated in a wide band in the middle of camel saddle bag and contains some geometric motifs woven symmetrically. Most of the motifs clarified earlier such as the triangles, horizontal lines, rhombuses and zigzag lines, but the zigzag line woven in camel saddle bag to symbolize the teeth of camel which called 'dhoros'. These patterns are usually woven in a black colour threads against red background, it is known amongst the weavers as 'ragma hamra' which literally means the red digital pick-up technique design [Fig.5:24].



Figure 5:24 Decorating the camel saddle bag with some geometric motifs

5.4.2 Other Product Patterns

There are some newly invented patterns created by a new generation of weavers, which are used especially by the Bedouins and are inspired by the world around them. They are produced to promote their products for tourists or buyers in the Capital. Examples of these include; horses, lizards, goats, scissors, snakes, camels, coffee pots, human figures, their earrings, toe rings, the slogan of the country and helicopters [Fig 5:24].



Fig 5:24 The Bedouin Introduced motifs from the world around them which is not exceeded beyond the desert they inhabit

5.5 Summary

The sources of the Bedouin patterns are restricted between primitive Islamic motifs and the environment around them. Therefore, weavers never planned the pattern of the product precisely in advance; they simply followed a basic design and filled in the details according to their own choice from the traditional collection of patterns.

They use very simple patterns such as the shape of the six-pointed star which is considered much simpler than later star shape motifs which took their final form in the Mamluks era, in addition, they use the shape of their jewellery to ornament their products as well as for adorning themselves as a way of expressing the beauty of their products. Because of the nature of the Bedouin nomad's life, these patterns could be spread around or derived from other cultures in Arabian Peninsula and changed by local weavers to be added to their collection and once the entire compositional design is established it is repeated without change.

The ornamented Bedouin traditional rugs comprise a lot of the desert's environment, inspiration and heritage, the weavers tried to abstract the complicated designs into simple geometric motifs so they can weave them and modify the desert's solid nature around them.

These ornamental units bear symbols which have been created through different cultural ages and remain with us thus far as traditional aesthetic shapes, and we use them in our contemporary designs to identify our cultural character. On the other hand, the constant repetition of the same patterns and colours created wariness towards purchasing these products, so the weavers themselves have tried very hard to create new designs. Unfortunately a limited experience, knowledge and awareness of the world around them have driven them to follow the same methods to obtain new motifs. As a result they started to weave some invented pattern from the area around which was not appreciated by the people in the cities.

CHAPTER 6
The Market Research

6.1 Introduction

This chapter studies the local marketplace by field work investigation during visits repeated to Oman in July and August of the years 2007 and 2008. It conducts focus groups and interviews with the Bedouin weavers to survey the consumers' and sellers' attitude with the aim to develop initial views and insights in both the local marketplace and the consumers' situation concerning the traditional hand- woven rugs. Additionally, to collect customers' and market's needs.

All conclusions presented in this chapter are based on these surveys which were planned, conducted, recorded and analyzed by the author. Surveys were captured on video and audio tape.

6.2 The Market Situation

Bedouins and shepherds established a good market for their products throughout their villages and towns. This was able to happen once nomads formed settlements in 1970 (Al-araimi, 2003.p.30). When they started weaving and accepting commissions for their work, buyers would specify exact requirements such as the width and length of a particular rug. Sometimes they could not manage to meet all the buyers' requirements because of the lack of raw materials which were only available during the summer months.

Over the past few decades, the process of urbanisation has accelerated with the discovery of oil. This has also led to a vast increase in imported goods, which have now penetrated deep into local markets. These goods include Turkish, Iranian, Syrian and Chinese rugs and cushion covers. As a result of this influx of goods, traditional hand woven rugs have been gradually rejected and replaced by softer and more colourful imported rugs with an array of patterns. In spite of the differences in the imported rugs and the traditional Omani rugs, they have been widely preferred by local people. According to the investigation with the focus groups, the simple reason why imported rugs have been readily accepted has to do with the larger range of different designs and colours and because they use softer fibres.

His Majesty Sultan Qaboos, who is the head of state in Oman, has made efforts to preserve these crafts as part of the historical legacy and cultural heritage of Oman. In March 2003, His Majesty Sultan Qaboos established the Public Authority for Craft Industries. Since then, their principal aim has been to encourage development of the handicraft professions.

This endorsement by the Sultan of Oman led to the adoption of handicraft products as the preferred style to decorate most government buildings, hotels and other public places such as shopping malls and restaurants in Oman.

This in turn has influenced the general population who have started to use the traditional styles to decorate their homes. Unfortunately, Omanis and others who reside in Oman are not able to find traditional products in the local marketplace in the capital area 'Muscat' for the reason that the Bedouin weavers are selling their products by themselves in town markets only when available. In addition to not being able to find these in the marketplace, the consumers need to travel to meet the weavers; there are other problems as well. There is a critical shortage of desired colours, designs, sizes and fibres. That being the case, consumers are forced to purchase imported products that imitate Bedouin products in the Arabian Peninsula.

Not being able to find the desired woven products prompted the researcher to survey the local marketplace to get a better understanding of this very important industry. Through a field study and through discussions with various focus groups, it is hoped that the researcher will be able to draw some conclusions as to why people prefer imported products such as rugs and cushion covers over local ones. One thing is very clear: consumers find it to be a major challenge trying to find the specific products they are looking for in the local market in the capital area. There are many reasons why consumers are more likely to purchase imported goods. Below is a list of some of those reasons:

1. There are no dealers in the markets in the capital area selling traditional rugs or any kind of traditional hand woven products.

2. Bedouin and shepherd weavers sell their products in local market towns when they have pieces ready to sell, which means they are not consistently available even in local market towns.
3. Buyers need to travel far into the interior parts of Oman to find weavers in local market towns willing to sell a rug, while some people are not sure where they can obtain these Bedouin rugs, so they prefer to buy what is available in the area around them.
4. Rugs are woven in a similar pattern and design, using the same motifs so they often do not meet the buyer's colour and design requirements.
5. Because of the lack of quality control, some rugs bleed when they are washed. This happens when they have not been dyed in the proper way. When the consumer realizes this has happened, he is not able to return the damaged product. Knowing this, customers are very reluctant to make purchases.
6. Locally produced textiles use harsh and very coarse threads which are no longer suitable for rugs, cushions or table cloths. Consumers find them to be unattractive, so they are not interested in buying them.
7. They need to be protected from moths, particularly in such a hot country, and this requires special chemical spray treatment.

Interviews were conducted with representatives from the Public Authority for Craft Industries to discuss the situation of hand woven products in the local market regarding the problems stated above. The representatives emphasized that the Public Authority for Craft Industries encourages weavers to produce high quality products by holding an annual crafts competition for the best creative weaver. It has also attempted to help weavers sell their products by establishing a sales outlet in one of the main shopping malls in Muscat. However, the focus group discussion showed that the vast majority of the participants who represented the consumers (73%) were unaware of the existence of the store while (27%) said it did not have an adequate range of woven products.

Recently, one of the development programs for the local weavers, namely the Public Authority for Craft Industries organized a training course sponsored by the Oman

Petroleum Development Company. This course was specifically aimed at weavers and town women interested in learning how to weave kilims and pile rugs. They provided a workshop with suitable imported looms for weaving kilims, vertical looms for pile carpets and traditionally spun colourful softer woollen yarns imported from Jordan. They wanted to help these weavers to increase their income by supporting them in establishing their own business. After the completion of the training course, weavers would be able to produce new styles of flat rugs. This new technique would attract local people and encourage them to buy the local weavers' new products. Also, it would encourage weavers to give more serious attention to their weaving craft.

Similar attempts were made in some neighbouring countries such as Saudi Arabia at the beginning of last century and act as a case study. There were bold efforts to help Bedouins and to develop markets for them but the programme was not successful (Hilden, 2004). In Oman, training weavers to weave kilims and pile rugs instead of improving the traditional rugs could be a way to help the weavers make a living. However, it does little to help preserve or develop the local Bedouin's traditional woven rugs or enhance the motifs of the traditional rugs which are full of Islamic and desert life influences and symbols. Thus, the local Bedouin rug-making may be negatively affected by introducing new weaving techniques and other cultural patterns, such as weaving kilims and pile rugs. It is most unfortunate that there have not been any solid attempts to set up viable markets for traditional products. In addition, there have not been any efforts made to improve traditional products. This may be because consumers prefer to buy new woven products with their new fibres and colours while the traditional designs have been totally forgotten. All of this could change if traditional rugs are developed and improved so they can at least stand a reasonable chance at competing with the new products, which have been introduced. One of the other Authority's future plans, concerning local weavers' products is to create sales outlets at duty free shops at Muscat International Airport and to export them to neighbouring countries.

Based on the results from analysing the focus groups' despondences on the viability of a market for handmade rugs and investigating the local market as well as the interviews conducted with Bedouin and shepherd weavers, they show that there is a missing link

between weavers and consumers in understanding each other's needs and desires. The current situation can be summarized as follows:

Weavers find it to be a major challenge to market their goods. Thus, they are forced to keep their products for long periods of time. As a result of this, their goods are highly susceptible to attacks by moths and other insects. This has caused them to use synthetic yarns such as acrylic to protect their products from such damage. Consumers want to purchase local products, but they have their own demands. Traditional rugs do not meet their needs and even when they are made available consumers find the products to be uninteresting. Over the years, consumers' tastes have changed and they want more creative designs with different motifs.

Nowadays, consumer market research is very much interested in what the customer wants. Market research is obliged to listen to what customers want. After all, if the products do not satisfy the needs and whims of buyers, there is a strong possibility that the product will not be successful. What is needed is customer loyalty and for customers to tell others about a particular product. Weavers cannot afford to just limit their marketing efforts to get customers to purchase their products. They must have an in-depth understanding of who their customers are and what they desire in order to establish a successful business.

6.3 The Customers' Needs

A good marketing plan must focus on the customer's needs, which can be seen as one of the important factors in any marketing success. As a result of the discussion with focus groups that represent the real consumers, the traditional woven rugs in Oman have been unable to meet consumers' needs and their desires. Consumers are interested in products, which have traditional attributes and they are keen to acquire, unique and handmade high quality rugs to decorate their houses that incorporate contemporary designs and colours and quality fibres. The good treated fibres will ensure keeping off the insects, such as moths which easily can attack the natural woollen fibres in such a hot country like Oman, and the smell of the natural fibre which cannot be ignored. The good quality fibres also provide the softness the people need and guarantee the quality of colour lasting.

6.4 The Market Needs

The traditional rug market in the Sultanate of Oman, particularly in the Capital Area, is suffering from a lack of traditional rug dealers to act as a link between the weavers and the customers. A good dealer can facilitate trade by offering customers a wide choice of good quality traditional handmade products with different designs, colours and sizes to satisfy customers demand. Also, they want to help to build a sustained relationship, which encourages weavers to continue doing business with dealers, as well as building long-term customer relationships where the dealer attempts to meet the needs of customers. If relationships are successfully managed, this in turn can have a knock on effect as existing customers can recommend the dealer to their family or friends.

6.5 The prices of the current Bedouin hand-woven rugs

According to the survey, the supply of woven rugs is dependent upon the availability of raw materials which can be obtained only after the spring season. Once the weaver has the raw fibre, there is a lengthy process of preparing the fibre, spinning and dyeing it. The whole process takes about three months before the weaver can commence weaving. Alternatively, some weavers purchase traditional spun threads from the town market where balls of thread cost about 3 Omani Rials³. Therefore, the price of a rug is dependent upon the size and the amount of thread used. The traditional size of a Bedouin rug is 60cmx90cm and would retail at around 48 Rials, while larger sizes such as 150cm- to 200cm retail can be purchased from 35 Rials to 40 Rials. For the imported rugs, the price varies and depends heavily upon to the quality of the manufacture and the size. Generally, the average price of an imported good quality rug with 200cm width and 300cm length is 75 Rials while the normal rug with less quality could be found in 35 Rials with bleeding colours and harsh fibre.

6.6 Summary

The interviews with local weavers and conducting focus groups clarified the importance of studying the marketplace and investigating the local consumer's desire in order to prove successful in establishing a flourishing market. It also developed a good knowledge about consumer demand. This information assisted in targeting the

³ One Omani Rial~ £1.6

consumers with the products they need which can compete in the local marketplace as well as getting customer's loyalty. Bedouin weavers cannot build a sustainable relationship with customers because of the absence of a venue, as most of the weavers are moving from town market to another looking for a customer to buy their products. On the other hand, the products are also not satisfying the customers because of the unfortunate lack of understanding the customer needs.

CHAPTER 7
Weaving Experimental and Result Discussion

7.1 Introduction

This chapter explains the methodology and describes the experimental rug design work. It examines the response of the focus groups to the experimental designs.

7.2 Methodology

The innovative rug designs were planned to be woven by the Bedouin and shepherd weavers in Oman. Therefore, the weavers were asked about the possibility of weaving a number of some innovative motifs, which were designed by using the Scotweave program (Jacquard design). The weavers emphasized the unfeasibility of weaving complicated designs when using a simple ground loom. This took us to new attempts with the local weavers by transferring the innovative designs to point papers. Fortunately, the local weavers in Oman showed their collaboration after modifying and simplifying the designs.

As a result, the experimental designs were woven by the local weavers in Oman which presented the opportunity to examine their skills and ability to weave different motifs by using different fibres as well as test the weavers' receptiveness for re-fashioning their traditional products which was considered essential for the success of the research aims.

7.2.1 The Source of the Motifs

The motifs were inspired by Islamic decorative design established in traditional and modern buildings, calligraphy, pottery, jewellery and ornaments based on chapters 4&5. The patterns were designed symmetrically; most of them in a translation form, on point paper to make it easier for the weavers to read each motif, as each square on the point paper represented one pick of exact colour. The weaver had to count the number of shaded threads in each line and determine which thread needed to be picked up and which left to float on the reverse side of the rug according to the desired colour. The Bedouin weavers found the designs produced using the 'Scotweave Jacquard' software difficult, if not possible, to weave, therefore all the designs were transferred onto a point paper. This method was easier and accepted by the weavers.

7.2.2 Weaving techniques

The Bedouin weavers used the plain weave technique to weave the solid striped part of the rug while using the pick-up technique (these techniques are described broadly in chapter three) to weave the figuring part of the experimental rug designs. The shepherd weavers used only plain weave techniques to weave the experimental rug designs.

7.2.3 Loom and fibre

Both the Bedouins and the shepherds used the simple traditional ground loom to carry out the experimental designs.

The fibres used in these experimental products were chosen according to their suitability for weaving rugs in terms of thickness and strength to endure the tension needed during the warping process for the ground loom.

7.3 Experimental Design (1)

Yarns used: 2/7s Worsted, 4/7s Worsted and Lurex

Colours used: Asparagus green

Army Green

Golden brown

Maize

Persimmon

Black

Weaving Techniques: Warp face up, pick up technique for motifs ”*Ragma*” and plain weave

7.3.1 Patterns Used in Experiment (1)

The main pattern in this rug consists of a repeat of three short lines woven in golden brown lurex threads; the three lines have been used alternately in vertical and horizontal positions and have been woven in the middle of the rug as they would have been

traditionally. The shape of three vertical lines has been used amongst the Bedouin since ancient times as one of the tattoo's '*washem*' design on a woman's chin to adorn her face. The Bedouin considered the tattoo one of the methods to represent the women's beauty. The background has been woven wider in a maize colour and has been bordered with a band which has been ornamented by short horizontal rows woven along the rug. This was known locally as "*gasef*", where the rows are woven alternately in the colour of persimmon and army green colours [Fig. 7:1].

The numbers of solid stripes were restricted to three wider stripes on each side of the design, each stripe has been highlighted by black lines in both ends with different colours as well as a glide reflection of the shape of triangle woven in the traditional method but with a wider space between them [Fig.7:2& 7:3]. This design has been built upon the number three to symbolize the importance of this number in Muslim's life.



Figure 7:1 Three lines used as a motif alternately in vertical and horizontal positions in the middle of the rug



(A)



(B)

Figure 7:2 (A) Three wider stripes on each side of the design. (B) A glide reflection for the shape of triangle used to ornament the sides of the rug



Figure 7:3 The final appearance of the rug in experiment (1)

7.4 Experimental Design (2)

Yarns used: 2/7s Worsted

Colours used: Cinnamon

Goldenrod

Mauve (which is a pale lavender lilac colour)

A dark bluish-gray colour known as Arsenic

Weaving Techniques: Warp face up, pick up technique for motifs”*ragma*” and plain weave

7.4.1 Patterns Used in Experiment (2)

The pattern in this rug was adapted from the ceiling design of one of the oldest forts in Oman called Al-Rustaq Fort. This fort was built by the Persians about four centuries before the advent of Islam, formerly it was known as Al Kisra Fort “the name of the Persian king”, but a major reconstructed and the design work were done under Omani

Governors patronage which started in the 13th century onwards. [Fig. 7:4 & 7:5] (The Ministry of Information, 2008).



Figure 7:4 The Al-Rustaq Fort (The Ministry of Information, 2008)

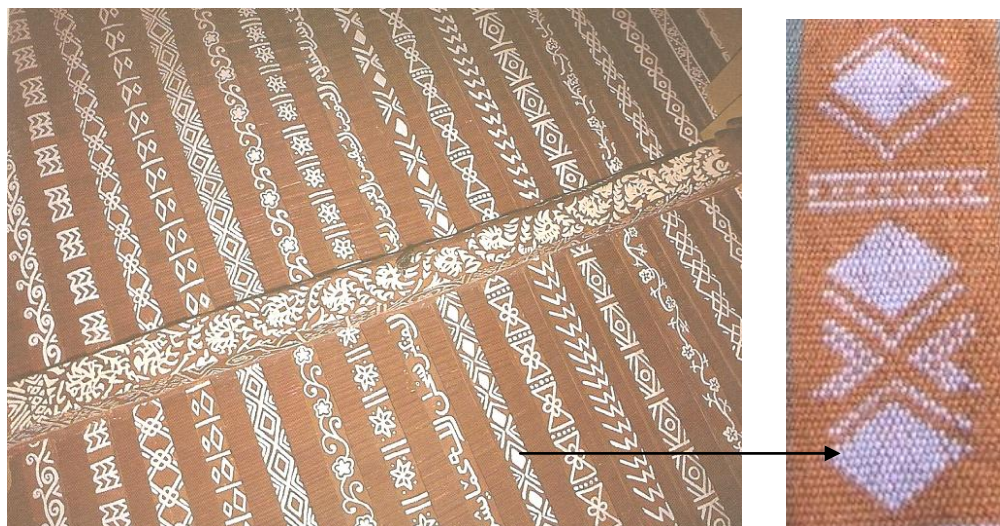


Figure 7:5 The ceiling design inside the fort (The Ministry of Information, 1990)

The main pattern in this rug was woven in the middle and consists of two units of patterns. The first motif contains two diamond shapes, which are representative of the star and in between them, a rotation of the shape of number seven "V" which is representative of some religious belief (that was explained earlier in chapter five). A traditional design known as whittled "*Manjor*" was used to separate each unit of pattern from the other as traditionally done. The second unit of pattern, which repeated alternately with the first unit, consisted of a diamond that was surrounded by the shape

of number seven on both ends [Fig.7:6]. These two units of patterns were translated along the rug. Both sides of the rug were designed with a chain of diamonds adopted from the ornament of historical mosque's design and were woven in a mauve colour against a background of cinnamon colour.



Figure 7:6 Using the rhombus shape in two ornamented units which is repeated and separated as in traditional method

A number of solid stripes woven in goldenrod and mauve colours and other stripes of dark grey colour for bordering each side of the patterned band have given the spirit of the tradition. In addition, short horizontal rows have been woven along the rug alternately in grey and goldenrod colours to decorate each border side. [Fig. 7:7]



Figure 7:7 The final appearance of the rug in experiment (2)

7.5 Experimental Design (3)

Fibres used: 2/7s Worsted

Colours used: Islamic Green

Beige

Goldenrod

yellow

Heliotrope or vivid lavender

Prussian blue or Berlin blue

Weaving Techniques: Warp face up, pick up technique for designs "Ragma" and plain weave

7.5.1 Patterns Used in Experiment (3)

The pattern in this rug was adapted from the Sikandra's Tomb of Akbar in India [Fig. 7:8]. Akbar was a Mughal emperor who considered as a great enthusiast in arts and he designed his mausoleum in Mughal style and began the construction work in 17th century, it was modified by his son who combined the art of Hindu, Christian, Islamic and Buddhist motifs. He used the Islamic style of design which was achieved by negative and positive areas created by different coloured stones [Fig.7:9].



Figure 7:8 Tomb of Akbar in India which built in Islamic Mughal style

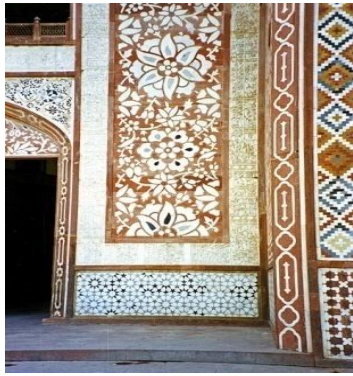


Figure 7:9 Islamic art method were used to decorate Sikandra’s Tomb of Akbar

The main pattern in this rug consisted of a continuous shape of rhombus, inside each shape there are another two smaller lozenges, which have been gradually reduced in size to fit inside each other. This pattern was woven in a beige colour against an Islamic green colour, with a background, bordered by two solid stripes of goldenrod and beige colours [Fig.7:10].



Figure 7:10 Adapting the continuance shape of rhombus from Islamic decorative design

Three patterned bands were used to ornament each side of the rug instead of one as traditionally. The band in the middle was designed with some mosaic patterns which were utilized to decorate the entrance of most Islamic buildings [Fig.7:11]. This band

has a border, from both sides, with two solid stripes woven in goldenrod and blue colours and followed by another patterned band designed with the symbol of minaret, which was used extensively by Muslim artists to decorate the tops of columns of almost all the mosques in Islamic lands [Fig. 7:12 & 7:13].

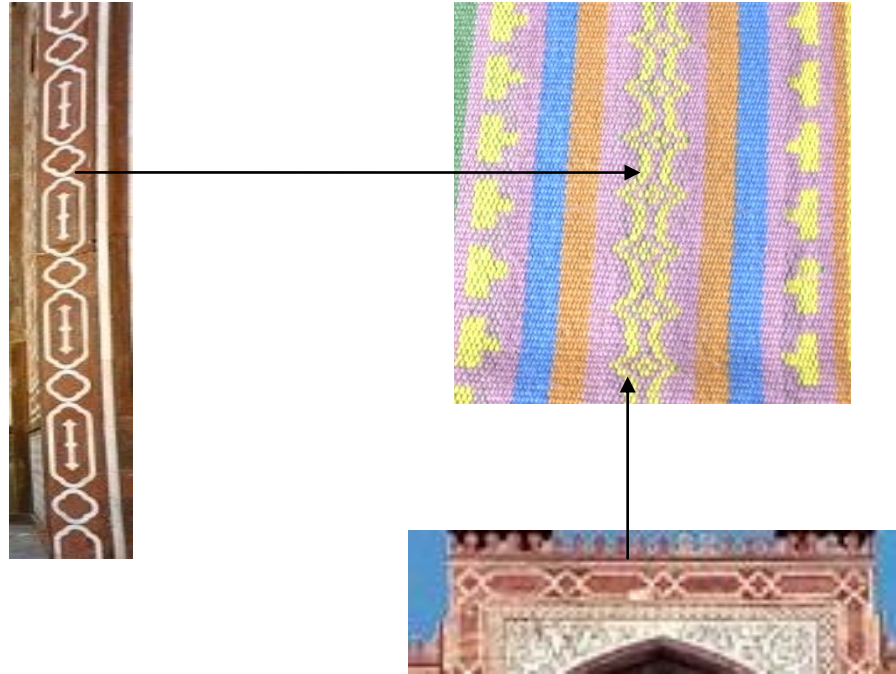


Figure 7:11 This Islamic motif were used in the intrance of most of Islamic religious building

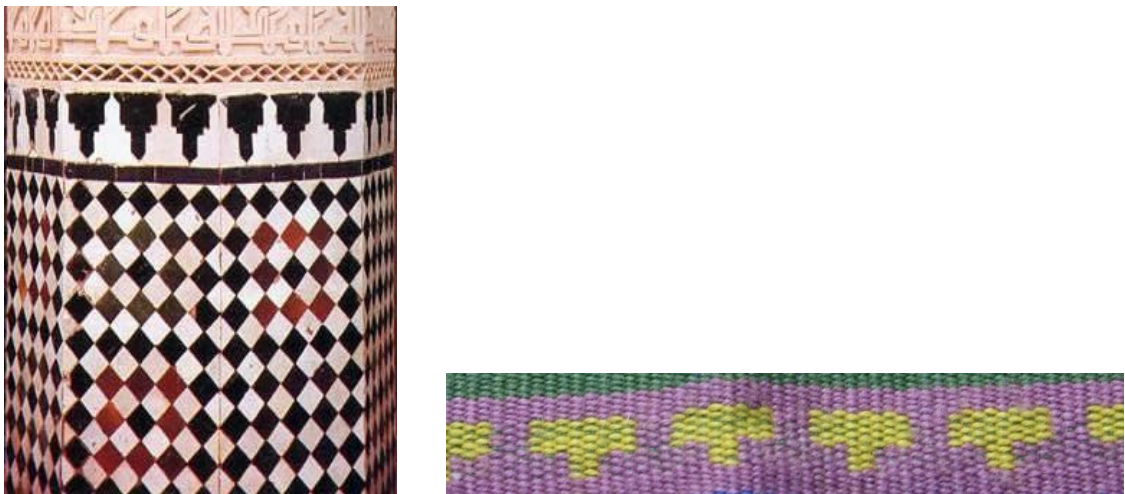


Figure 7:12 Using the shape of the Menarat to ornament the both sides of the rug



Figure 7:13 The final appearance of the rug in experiment (3)

7.6 Experimental Design (4)

Yarns used: 2/7s Worsted

Colours used: Bright turquoise

blue

brass

goldenrod

Xanadu which is a [greenish-grey colour](#)

White

Weaving Techniques: Warp face up, pick up technique for designs "ragma" and plain weave.

7.6.1 Patterns Used in Experiment (4)

The pattern in this rug was adapted from the ceiling design of one of the oldest fort in Oman called Al-Rustaq Fort. The main pattern in this rug consists of a diamond shape repeat with a circle in the centre, both sides have a border with short horizontal rows called *qasef* woven along the rug in alternate colours of brass and greenish gray. A

whittled *Manjor* was used to separate each motif from the other as tradition [Fig. 7:14]. In the both sides of the rug a zigzag line was used to represent the sands movement in the desert ‘dune’. The patterns woven in a white colour while the background woven in the most popular colour in Islamic art, which is the turquoise [Fig 7:15].

A number of solid stripes utilized in between each vertical design bands as tradition. The both sides of the rug designed with short horizontal rows woven symmetrically in a form of glide reflection [Fig. 7:16].

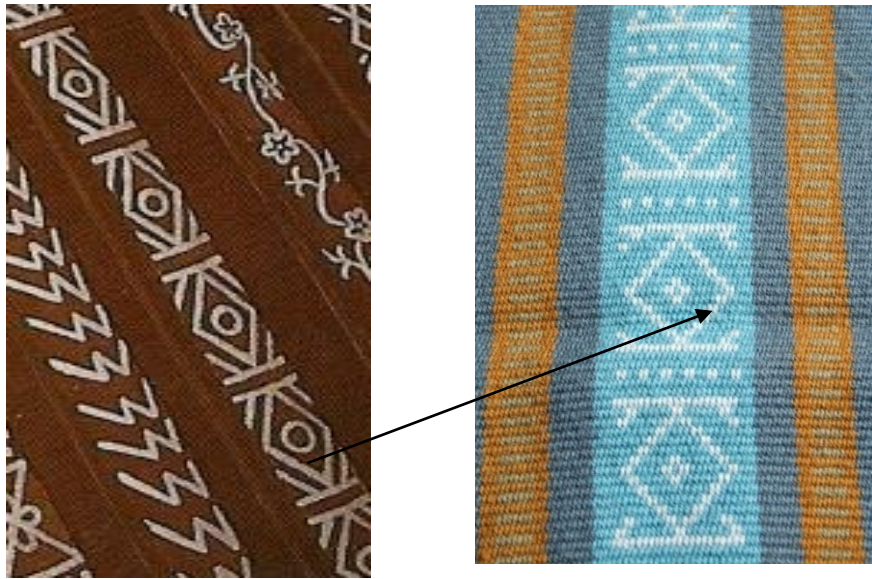


Figure 7:14 Restoration the use of traditional ancient designs by employ them in new products

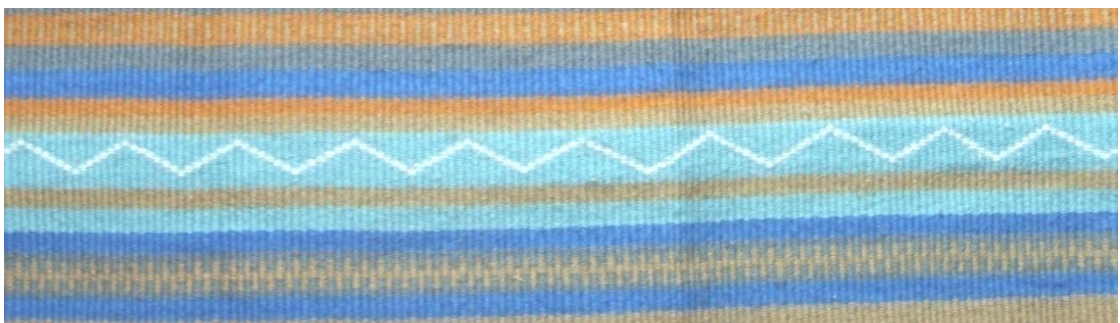


Figure 7:15 Design the both sides of the rug with zigzag line Which symbolise the desert’s sands



Figure 7:16 The final appearance of the rug in experimental 4

7.7 Experimental Design (5)

Yarns used: 2/7s Worsted

Colours used: beige

Midnight blue

Goldenrod

A dark bluish-gray colour known as Arsenic

Midnight green

Weaving Techniques: Warp face up, pick up technique design "ragma" and plain weave.

7.7.1 Patterns Used in Experiment (5)

Kufic script was the main motif in this rug, the word "Alla" which means God was written in Kufic inscription in the shape of lozenge which was symmetrically translated along the rug to design the middle band. The letter "A" in Arabic was written as the

shape of a number one and the following letters, “double L” were taken from the shape of number seven in Arabic, ”V” to emphasize the importance of this number in Islamic culture, while the last letter “H” is written in a geometrical shape of small lozenge. Three repeats of the shape of the number “V” along a line were used to form a horizontal zigzag shape in between the main design. The patterns were woven in beige colour against a midnight blue background and were bordered from each side with two stripes and a pair of zigzag line, which interlaced each other [Fig. 7: 17].

Both sides of the rug contained a number of solid stripes woven in different colours such as midnight green, dark blue, goldenrod and turquoise colour. The sides of the rug have been ornamented with a band containing dots woven in two different colours [Fig. 7:18 & 7:19].



Figure 7:17 A Kufic inscription used for the name of God separated with three repeats of number seven in a line



Figure 7:18 The both sides of the rug ornamented with a band contained dots woven in alternate colours



Figure 7:19 The final appearance of the rug in experimental 5

7.8 Experimental Design (6)

Yarns used: 2/7s Worsted

Colours used: Brown

Blue

Islamic green

Goldenrod

Heliotrope or vivid lavender

beige

Yellow

Weaving Techniques: Warp face up, pick up technique for the designs "ragma" and plain weave.

7.8.1 Patterns Used in Experiment (6)

This rug has a patterned band in the middle, following the traditional method, and three ornamented bands in each side of the rug, which were considered unusual in traditional rug. Reconstructed and reforming the traditional patterns were the main idea to design this rug.

The middle stripe contained a figure of a six-pointed star with a spindle's whorl woven in the centre; the second motif is shaped as the number seven and has been interlaced together with small rhombuses spread around. The third motif has the traditional abstracted shape of the culicoides midges "*Hamosh*" surrounded from both ends with the figure of camel's teeth. This figure is usually utilized by Bedouins to decorate the camel's saddle and women's bag only. The three traditional motifs separated by whittled *Manjor* have been woven symmetrically in translation form along the rug. The patterns were woven in beige colour against a background of brown colour [Fig 7:20].

The second decorated band consisted of a solid figure of whorl and an outline of a circle shape. The circle with a dot in the middle was considered favourable and was one of the oldest motifs in Oman; it is usually utilized to decorative pottery, wood work and

silver work. The shape of whorl and circle, have been woven alternately along the rug in yellow colour against a blue background [Fig 7:21].

The third vertical patterned band consisted of a shape of number seven woven along the rug. Some narrow solid stripes were used in each side of the rug as well. Some solid stripes in different colours were used in between the ornamented bands as well as short horizontal rows which were woven symmetrically in glide reflection form [Fig 7:22].

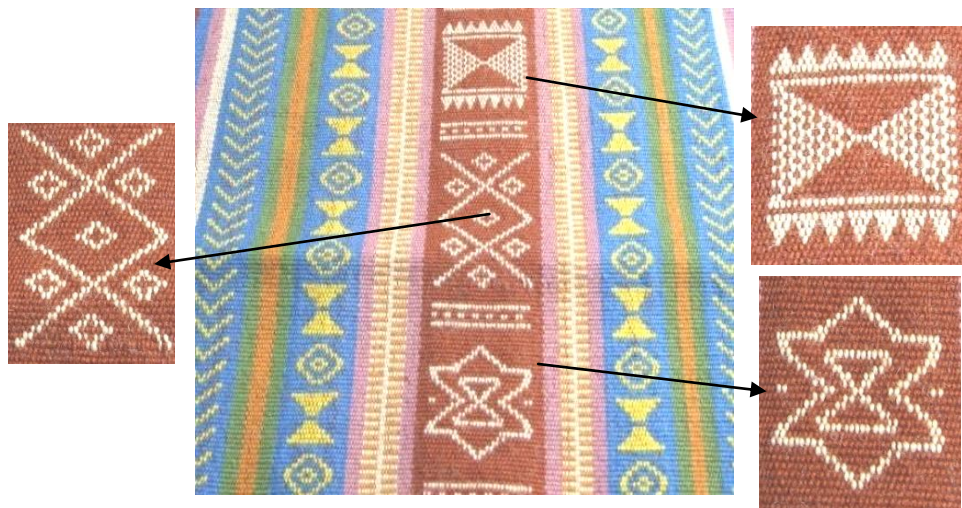


Figure 7:20 The three main patterns which considered as reformation of some traditional woven motifs



Figure 7:21 Using two decorated bands in each sides of the main design



Figure 7:22 The final appearance of the rug in experimental 6

7.9 Experimental Design (7)

Yarns used: 2/7s Worsted

Colours used: black

brown

Cobalt blue

Beige

Green-yellow or green- gold

Brilliant lavender

Weaving Techniques: Warp face up, pick up technique for the designs”*ragma*” and plain weave.

7.9.1 Patterns Used in Experiment (7)

Traditional motifs were used in the middle of this rugs in a small scale with slight differences to give them a new, rather than a traditional appearance. These figures have been woven in beige colour against cobalt a blue background and bordered with a narrow strip of black colour in each side following with short horizontal rows woven in brown colour [Fig. 7:23].

The solid stripes in this design have been woven wider than traditionally. The three different colours were used for each strip, which were highlighted in both sides with black colour to give the rug a new look [Fig. 7:24].

Parallel zigzag lines were woven in both sides of the rug using a beige colour for figuring and cobalt blue for the background [Fig. 7:25].



Figure 7:23 Adapting traditional designs



Figure 7:24 Wider bands were used to replace the narrow traditional stripes



Figure 7: 25 The final appearance of the rug in experimental 7

7.10 Experimental Design (8)

This experimental work was carried out using the shepherd's method of weaving rugs, as they were not familiar with the pick- up technique and their rugs consisted of strips. This experiment tested the impact of introducing new fibres and colours and examined the ability of shepherds' weavers in using different fibres. The shepherds were asked to weave four rugs each of which contained only three colours.

7.10.1 Patterns Used in Experiment (8A)

Yarns used: 100% wool 13 cut Gala, 100% wool melange cheviot "16 cut Gala" and 100% hand spun sheep wool "16 cut Gala"

Colours used: Dark Turquoise
yellow
Black

Weaving Techniques: Plain weave "Warp faced up"

Two ply yarns were used for warping and the traditional two ply hand spun black sheep wool yarns were used for the weft. The weft yarn had twice the thickness of warp thread and was spun with loose twist for about four turns per inch.

The first rug contained a group of narrow stripes about 0.7cm in width and were woven alternately in dark turquoise and black, both sides of the rug have three bands about 1.2cm in width which were decorated with short horizontal rows woven in alternate colours of yellow and black [Fig. 7: 26]. These three bands border from each side with a single yellow stripe while the boundaries of the whole rug were woven with a wide black stripe about 3cm in width as tradition [Fig. 7: 27].



Figure 7:26 Three bands ornamented the both sides of the rug



Figure 7:27 The final appearance of the rug in experimental design 8A

7.10.2 Patterns Used in Experiment (8B)

Yarns used: 100% wool 13 cut Gala, 100% lamb's wool 180 Tex. Count hosiery yarn and 100% hand spun sheep wool

Colours used: Pistachio green

yellow

Black

Weaving Techniques: Plain weave "Warp faced up"

The warp threads were used in two ply, while the weft threads were used as tradition which is 2ply of black colour and hand spun wool yarn that has twice the thickness of warp thread and spun with loose twist for about four turns per inch.

In this rug the middle part was woven with alternate narrow stripes about 0.7cm in width by using yellow and pistachio green colours, but with three wider bands of horizontal short rows woven in the both side of the rug in alternate colours of yellow and black. These bands were separated with solid wide yellow stripes to evaluate the final appearance. The boundaries of the whole rug were woven with a wide black stripe about 3cm in width as tradition [Fig. 7: 28 &7:29].



Figure 7:28 Using three ornamented bands alternately with three solid bands



Figure 7:29 The final appearance of the rug in experiment 8B

7.10.3 Patterns Used in Experiment (8C)

Yarns used: 100% wool melange cheviot yarn, 100% lamb's wool 180 Tex.
Count hosiery yarn and 100% hand spun sheep wool

Colours used: brown

brownish yellow

Black

Weaving Techniques: Plain weave "Warp faced up"

The warp threads were used in two ply yarns, while the weft threads were used as tradition which is 2ply of hand spun black colour sheep wool yarn that has twice the thickness of warp thread and spun with loose twist for about four turns per inch.

In this rug a band of 2cm in width contain short horizontal rows, which have been woven along the rug in alternate colours of brownish yellow and black to festoon the middle of the rug. The band is bordered in each side with single black strip [Fig. 7:30]. Both sides of the rug consist of a number of narrow stripes about 0.5cm in width and have been woven in yellow and brown. This has been followed by a single band about 2cm in width of short horizontal rows woven in brownish yellow colour against a black background and a solid stripe approximately 1.5cm in width has been woven in brownish yellow as well. A wide of 3cm stripes of black colour were ornamented the both sides of the rug [Fig. 7:31].



Figure 7:30 festooned the middle of the rug with short rows



Figure 7:31 The final appearance of the rug in experiment 8C

7.10.4 Patterns Used in Experiment (8D)

Yarns used: 100% wool melange cheviot yarn, 100% wool 13 cut Gala and
100% hand spun sheep wool

Colours used: Sky blue

Yellow

Brown

Black

Weaving Techniques: Plain weave “Warp faced up”

The warp threads were used in two ply yarn, while the weft threads were used as tradition which is 2ply of hand spun black colour of sheep wool yarn that has twice the thickness of warp thread and spun with loose twist for about four turns per inch.

The sky blue colour was used in this rug to decorate and border the sides. Both sides consisted of two bands approximately 2cm in width that decorated horizontal rows of brown and sky blue colours woven alternately. The bands were highlighted with narrow yellow colour threads in each side followed by single solid stripe about 2.5cm in width woven in sky blue colour [Fig. 7:32]. In the middle of the rug a number of narrow stripes about 0.7cm in width were woven in black and yellow colours while the both side edges of the rug were woven in bold black colour [Fig. 7:33].



Figure 7:32 The side design of the rug



Figure 7:33 The final appearance of the rug in experiment 8D

7.11 Results and Discussion

The experimental products were judged by focus groups [see table 1:1 & 1:2]. They represent the real customers for these products. Getting feedback from customers was particularly important and it served a vital purpose in this research. It helped to evaluate the success of the study before launching these new innovative products in the local market.

The innovative products were studied in terms of their characteristics such as motifs, colours, textures and their general final appearance. The customers' acceptance of the products, were examined. The aim was to investigate opportunities for improvement. Through a careful analysis of the opinion poll and based on the feedback of the focus groups' reactions towards the experimental products' characteristics, the following results were recorded [see table 7:1 & Fig. 7:34]:

Characteristics	Motifs	Colours	Textures	Final appearance	willing to purchase
FG 1	99%	96%	90%	99%	100%
FG 2	91%	92%	83%	92%	93%
FG 3	96%	90%	85%	95%	95%
FG 4	95%	93%	86%	96%	96%
FG 5	92%	95%	94%	98%	100%
Average	94.6%	93.2%	87.6%	96%	96.8%

Table 7:1 Survey the opinion poll regarding the experimental products' characteristics

Exactly 96% of the participants in focus groups were excited and showed positive and encouraging responses about the final appearance of the experimental rugs. Almost 97% of the participants were willing to purchase the innovative rugs. They admired the traditional spirit with the contemporary look and emphasized that "It is good to have a fashionable traditional piece at home to enhance the conventional look of Bedouin

products in furnishings.” They also stated that “These rugs will fit easily with their home furniture because of the variety of colours and designs.”

Of the 30 participants surveyed around 93% were highly impressed with the introduction of the new colours and traditional rugs. Close to 95% of the public’s view on the motifs which were used in the experimental products emphasized that these motifs highly improved the rug’s appearance and they were delighted about that. They stated that “A traditional rug having these features would certainly make customers happy”.

A little less than 88% of the participants were impressed with the textures of the experimental rugs and they stressed that the softness of the rug is the main reason why customers would buy them? Apparently, they wanted children to be able to sit on them. A softer fibre would be in a better position to compete with the imported rugs which are available in the local market. While the other 13% of the participants provided favourable comments about the texture. They tended to prefer rugs with thicker fibres as they would be longer lasting. The other consideration was that they should be smooth in texture.

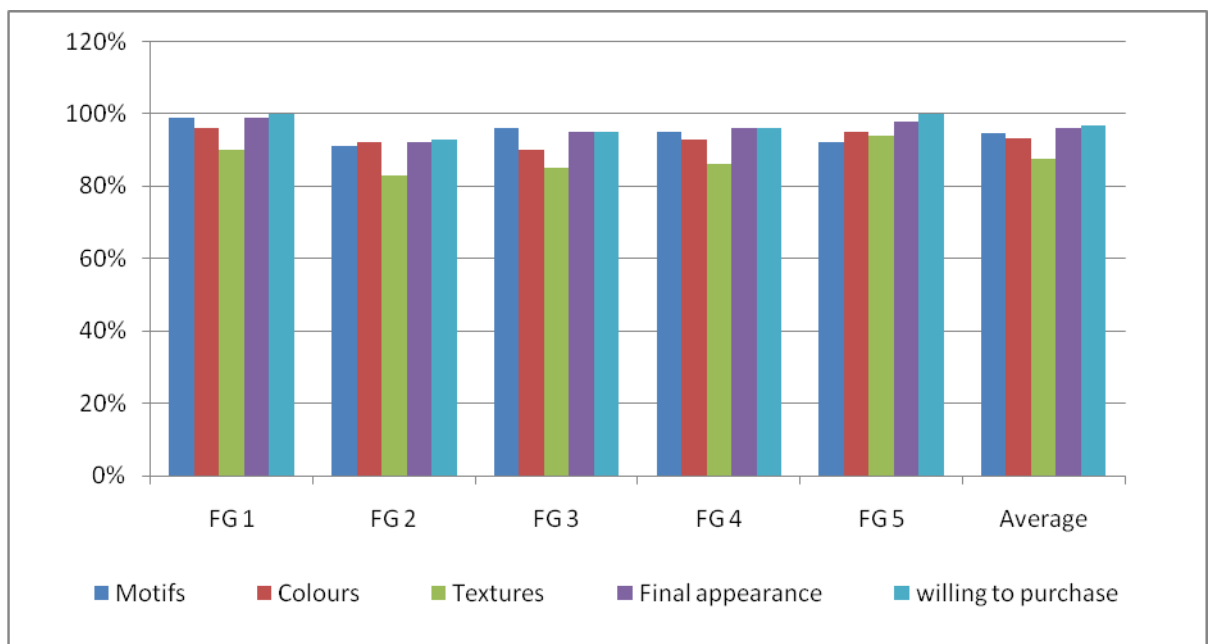


Figure 7:34 Comparing the opinion polls from the focus groups concerning the characteristics of the experimental products

Each experimental work was judged by the focus groups in terms of the motifs which were employed in the rug. Also colours, fibres, textures and the quality of the designs were evaluated and judged. (Table 7:2 & Fig. 7:35) shows the results of the opinion polls concerning each experimental product in percentages.

	Exp.1	Exp.2	Exp.3	Exp.4	Exp.5	Exp.6	Exp.7	Exp.8
FG1	100%	66%	83%	83%	100%	100%	100%	83%
FG2	83%	83%	83%	66%	83%	100%	100%	66%
FG3	83%	83%	66%	100%	66%	100%	100%	66%
FG4	100%	83%	100%	83%	83%	83%	100%	83%
FG5	83%	100%	83%	83%	100%	100%	100%	100%
Average	89.8%	83%	83%	83%	86.4%	96.6%	100%	79.6%

Table 7:2 The opinion poll from the focus groups concerning the final appearance of each experimental product

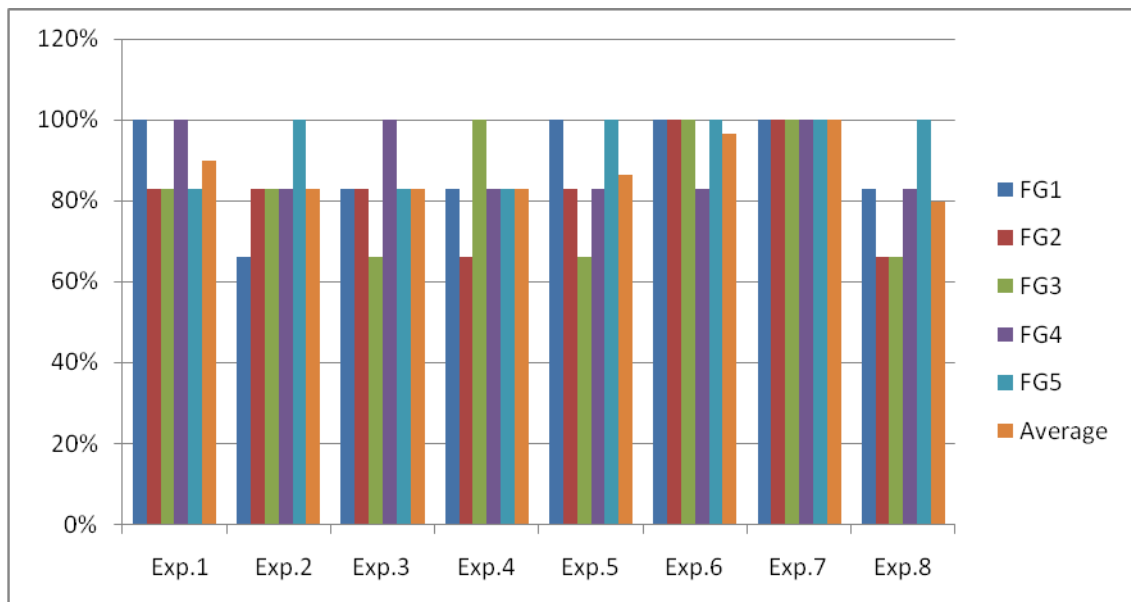


Figure 7:35 comparing the opinion poll from the focus groups concerning the final appearance of each experimental product

One hundred percent of the people in the focus groups were highly impressed with the general aspects of the rugs in experimental seven in terms of the motifs, the strength, the range of colours, the texture and the different traditional Bedouin patterns. Very clearly, this rug scored the highest percentage among the other experimental products which is a clear indication that it is preferred by consumers as it meets their tastes and desires.

Nearly 97% of the participants were attracted by the patterns, colours and appearance of the rug in experimental six. The new motifs in the traditional rug, such as the circle shape, the six pointed star and the horizontal shape were very much liked by the participants in the focus groups. Moreover, some respondents in the focus groups mentioned that blue and brown colours greatly enhanced the rug's appearance.

Almost 90% of the focus groups showed their appreciation for the style of the motifs and colours in the first experimental rug. There was great admiration shown for the gold threads and for the designs against backgrounds of light colour. It was thought that such backgrounds enhanced the style and exterior look of the rug. Since gold and silver threads have played a significant role in the history of Islamic textiles, they are appreciated in all Islamic countries. The positive responses indicate that the use of traditional tattoo designs as traditional motifs in woven rugs, are very much appreciated and could be in great demand if they are put on the market.

Around 86% of the focus groups liked the idea of incorporating a Kufic script for a Bedouin rug in experimental five. This rug can be used as wall hangings because it has written inscriptions on it. It is not the kind of rug which is supposed to be on the floor. Over 59% of the participants thought that using a Kufic inscription as a motif in a traditional rug demonstrates the ability and the proficiency of the local uneducated weavers to transfer nature and abstract designs on their products, while only 40% expressed their satisfaction. However, some had reservations about using religious writing on these rugs, especially if the rugs were going to be used on floors. In the case of non- Arabs using the rugs, they would not be able to understand the words. If any Muslim saw such a rug being used as rug on the floor, he would feel highly insulted.

Because of that, a wall hanging rug with sacred words must be woven with loops on the top to clarify the function of these rugs. In general, this design made a good impression. In fact, about 90% of the focus groups suggest the possibility of weaving wall hangings with more than only one word on them in Kufic script and they even expressed a desire for some verses of the Holy Quran to be on them.

It is clear that 83% of the participants in the focus groups liked and appreciate the concept of using Islamic patterns found in architectures such as the experimental design two, three and four. We can see that 55% of the respondents feel that Islamic motifs completely improved the quality and the appearance of the rugs, while the other 45% feel that adopting Islamic motifs which are utilized throughout the Islamic countries would help to bring their homes into balance and at the same time serve to decorate their homes. Moreover, the variety of colours in experimental rugs two, three and four which were Islamically inspired effectively enhanced the appearance of these rugs. One of the participants stated that “the range of designs, colours and the soft texture will facilitate the customers to find their desire”.

Nearly 80% of the participants show a strongly positive opinion about the rugs in experiment eight. Half of them had favourable remarks about the rugs in experimental work 8A and 8C; they praised the introduction of new colours and the reformed design of the shepherd’s rug. The other 50% of the participants pointed out that the colours and the textures were especially attractive. These rugs caught the attention of the local people in the town where the Shepherds’ workshops are. While the rugs were being woven, tourists were quick to show their admiration for the entire process of rug weaving. They were eager to purchase the innovative products during a tourist tour to the weaver's workshops in the mountains. As a result of such a large demand, which was observed from the local people and the tourists, the weavers asked the researcher to buy these experimental woven rugs for more than they were worth. As they were certain that the rugs would even fetch more money when they resell them. One of the Shepherd weavers stated that “because these rugs are different than usual traditional ones, people would pay any price to have a distinguished rug”.

Another aspect that was observed during the opinion polls about the experimental rugs was their first impressions which can be summarized as follows:

One hundred percent of the participants considered the experimental rugs as imported products from some neighbouring countries. They were unwilling to accept that the rugs could be woven by local Bedouin weavers. This idea of the weaver's limitations or inability has been inculcated deeply in the thoughts of the local people in Oman. Apparently, this is the result of designs which have never changed over the generations.

The participants who were willing to purchase the innovative rugs (table7:1) were keen to know how they could obtain these kinds of rugs and they showed an interest in buying other sizes and designs. This illustrates the fact that consumers in Oman are facing difficulties in obtaining what they want because of the lack of dealers in the Omani marketplace. Dealers usually have a good knowledge and experience about the traditional products they sell because of this they play a significant role between buyers and weavers. Their function is to convey the customers' needs to the weavers. In addition, they give buyers information about the rugs. They tell buyers about the source of the designs, colours and the fibres which enhance the value of each rug.

It is worth mentioning that 85% of the focus groups strongly held belief that local weavers do not have the aptitude to weave different motifs and produce more attractive rugs. They were convinced that local weavers are set in their ways and are not willing to change or adopt new patterns. One of the participants stated that "If Bedouin weavers have abilities and skills for using different fibres to weave various patterns, then why are they still using and repeating the same designs which have never changed?". This suggests and emphasized the marketing need and develops the local weavers.

On the other hand, the experimental rugs that were woven by local weavers proved that there is no lack of aptitude, creativity or expertise in using different fibres and weaving new motifs to produce better quality rugs. Based on these results, it can be assumed that local weavers have the ability to compete with weavers from other countries. The

only thing which is needed is an artistic supervision. If a supervisor is on hand, he will be able to improve the weavers' ability by keeping them up to date with the development of the hand woven rug industry. This would allow them to expand their knowledge and in doing so it would allow them to keep up with contemporary colours. They will become well acquainted with the fashionable furnishing products in the domestic market, which would ensure that they meet all the needs of the customers.

Only 2% of the participants in the focus groups were aware of the abilities of the shepherd weavers and could differentiate the shepherds' products from Bedouin ones. There were some comments which were made about the products in experiment 8. The general comments were about the absence of the motifs in these rugs.

Shepherd weavers have no knowledge about weaving abstract figures or geometric designs. Their designs are simple and very plain. Thus, they are restricted to making changes in the yarns and the colours of the ends threads to form solid stripes of colour and have the skills to change the warp colours alternately during the warping process which allows them to form short horizontal rows along the rug. They use these two forms to achieve their desired appearance. In spite of having limited skills, shepherd weavers appreciated the changes and accepted to modernizing their rugs. The immediate feedback from customers and tourists during the weaving process of these experimental works encouraged them to change their styles, fibres and colours. They were very much interested in finding out from the researcher how to obtain these coloured threads. These demands from the weavers to obtain new weaving threads simply emphasize and stress their willingness to introduce other fibres in their woven item. In fact, investigation of the local marketplace show that the market is devoid of fibres suitable for weaving rugs, as no one uses them in Oman.

In general, Bedouins and the shepherd weavers were enthusiastic about the new geometric patterns. At first, weavers were hesitant about their abilities to weave the new designs when they had the opportunity to weave a pattern from printed papers, designed in a jacquard design programme by using Scot weave computer software. To resolve this and make it easier for the weavers to understand the structure of the motifs,

the weavers were given a choice of various designs drawn on point papers. This was the very first time that ever had to deal with such designs on point papers. Initially, they picked the simplest designs, however, they gradually moved on to the more sophisticated designs. In the weaver's point of view, the main reason for choosing a simple design was to test their technical ability for weaving new patterns as well as experiment with the durability of the yarns.

They were successful in weaving most of the patterns. They demonstrated their ability in using the pick-up techniques which is more flexible and allows them to introduce different kinds of motifs. The most important factor was their acceptance for change. Without their acceptance for change, it would have been nearly impossible to introduced new designs. These implications shedding light on the weavers needs. The local weavers in Oman need support and training programme to develop their ability to weave more complicated patterns to produce more beautiful traditional rugs.

Finally, the results show [Table 7:3& Fig. 7:37] that the top experimental design work, which was the most admired, is the rug designed in the experimental seven (100%) responses. Experimental six came second (96.6%) followed by the design in an experimental one (89.8%). The rug in an experimental five came fourth with (86.4%) responses while the rugs in experimental woks two, three and four came fifth with equal number of responses (83%). The eighth experiment design came in sixth position.

Experimental design works	The average in % of the focus groups responses	The experimental designs ranks
Rug design in Exp.1	89.8%	Third
Rug design in Exp.2	83%	fifth
Rug design in Exp.3	83%	fifth
Rug design in Exp.4	83%	fifth
Rug design in Exp.5	86.4%	forth
Rug design in Exp.6	96.6%	second
Rug design in Exp.7	100%	first
Rug design in Exp.8	79.6%	sixth

Table 7:3 The experimental designs ranked in order according to the responses from the focus groups

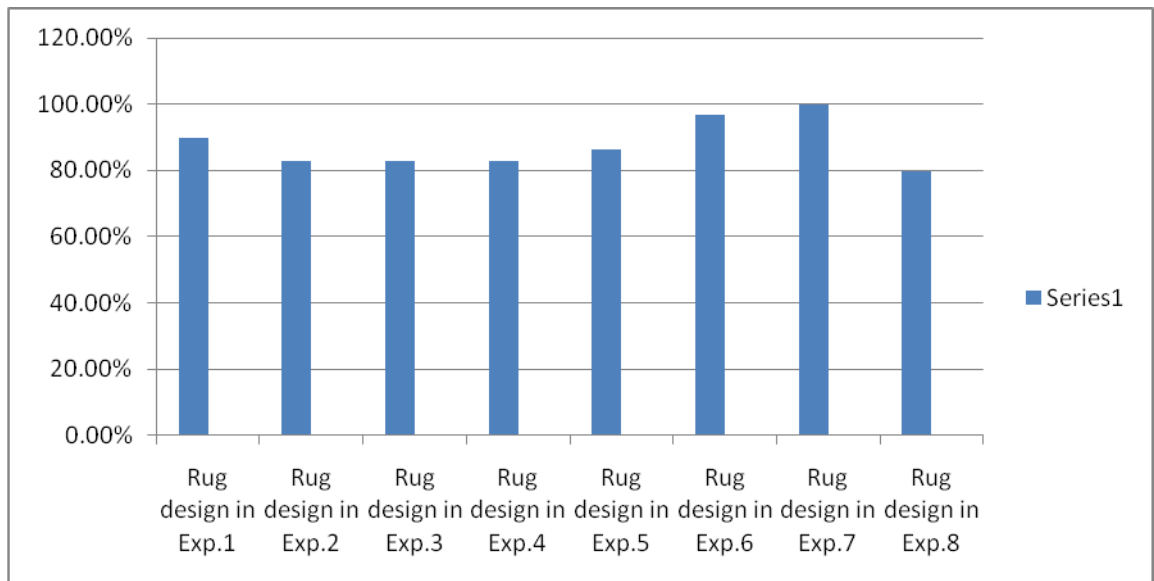


Figure 7:37 The chart show the position of each experimental design in order

The table (7:3) shows that the Experimental design (7 & 6) got a very high percentage of responses. This emphasized that the patterns, colours and the appearance of these rugs were highly satisfied the consumers and met their desire. The patterns utilized in both rugs were adopted and inspired from the traditional hand-woven products' motifs

which reconstructed to have new look. Around six different figuring motifs were ornamented each rug. The colours which involved in both rugs are totally new for traditional rugs, the contrast and strong colours were used against each other. In addition, about six colours were introduced to weave each rug. This implication emphasized that the consumers liked the more patterned and colourful rug. These results give a good knowledge about consumers' taste in Oman and stress on the impact of Islamic designs which has its influences on most of Arab people.

7.12 Summary

The participants in each focus group were a great source of information. Data collection on market research could not have been done without the help of the focus groups as they provided invaluable information about consumers and market situation. Getting feedback to evaluate the experimental products and examine their acceptance in the local market was one of the most important issues that came out of the focus groups.

To get the first impression of the focus groups, the participants were not made aware when the meetings commenced that the rugs were woven by the local weavers. Thus, they assumed that the rugs were imported or were woven by weavers from other countries. When they were informed that these products were woven by Bedouin weavers, six participants in focus groups one and three could not believe that Bedouins had the abilities and skills to weave motifs beyond the traditional ones.

The discussions with the focus groups went very well. The participants provided a wide range of feedback. Some of the most interesting issues which came up during the discussions with the focus groups were: the quality of the rugs, the source of the motifs, the colours employed and the fibres. The groups were all in agreement about aesthetics and the product itself being the two most important reasons why consumers are attracted to the product. Those two aspects would allow the product to successfully compete in the market. Nearly all the groups judged the experimental designs in terms of the quality of the design "motifs and colours" and the quality of weaving. Those very features seem to affect and determine consumer purchase of the rugs. The motifs and the colours in experimental designs one, three, five, six, seven and eight A were all

highly appreciated by the participants. Some participants in the focus groups were so excited about the rugs that they wanted to purchase the experimental rugs themselves. The views on texture were mostly favourable. However, some focus group members thought that using a thicker yarn would give depth and a thickness to the rug which would make it more suitable to cover marble floors.

The participants were asked if they would buy the rugs for their homes. Twenty seven of the participants said “of course” while three other participants said if it was not used as a rug, it could be used to decorate a particular surface in their homes.

One important issue which was discussed in the focus groups and in particular the FG1, FG4 & FG5, groups was the importance of a suitable venue for selling the products. The prominence of appropriate place and dealer were pointed out by more than 96.8% of the participants in focus groups. The participants suggest that the venue should be in the oldest traditional market in Oman which is located in the Capital Area. Most of the handicrafts products except the Bedouin Nomad rugs in Oman are available in this market. This traditional market is considered to be one of the best and one of the oldest markets in the Arabian Peninsula [Fig 7:38]. It was established over 200 years ago and is considered to be a must see place in the eyes of tourists. Many visitors from neighbouring countries get many artefacts from this traditional market as well (The Middle East Journal, 2006). Moreover, the prices for all kinds of handicrafts products are much cheaper compared to other places in the country. Hand- woven rugs are not expected to be as cheap as imported mass-industry produced rugs, as cost depends heavily on the fibres which in all probability will be imported. The complicated motifs and the sizes of the rugs are also important but for hand-made traditional rugs to be successful in any market, the patterns themselves and the colour must have a quality design and the rug must have a superior finish that can compete with the imported rugs while the price will depend on the quality of the rug, size and so forth.

Another important point was on just how important it is for dealers to be able to provide expert knowledge on the traditional woven products. There was also some useful

information and insight given from FG5 on how to run a successful business dealing with hand-made rugs.

It was revealed that there are a high percentage of people who appreciate and are willing to purchase the innovative designs. Clearly this proves the success of the experimental designs. There seems to be no question that once the traditional hand-woven products are up-dated with the latest designs that there will be a big demand for them in the local market if the correct design development and marketing campaign is employed.

Bedouins displayed their willingness to co-operate with the researcher. This suggests that they are anxious to improve their abilities. They showed an interest in weaving more sophisticated motifs. The results indicate that there is genuine interest in developing the traditional handicraft products and that there is a thirst for introducing new motifs, colours and fibres. This would ensure that the product is more marketable and will also serve the aim of reviving traditional handicrafts. When this is done, it will almost certainly ensure that this traditional hand-craft will be passed onto the new generation.



Figure 7:38 The oldest traditional market in the city Muscat. Photograph by Abdulla Saif

CHAPTER 8
Conclusion and Future Recommendations

8.1 Introduction

The history of rug and hand woven textile design has had a significant impact on the Islamic world. This chapter derived conclusions of the investigation of this history and its influences in today's woven industry. It also examines the result of utilizing the technology in weaving rug design on a fabric to function as upholstery in home furnishing. Finally, recommendations for future work are suggested.

8.2 Conclusion

Studying the history of rugs and hand-woven textiles designs in the Islamic world has clarified that this craft industry was distinguished by both the physical process of weaving and an artistic effort of designing. Thus, the industry of hand woven textiles production flourished over the centuries during different Islamic periods, under the patronage of the rulers themselves, who employed a number of elite artists to design these woven products to represent the monarch and used them for political purposes as gifts from the royal court.

The designers of hand woven textiles might be professional painters or other creative people who co-operate with the skilled weavers to create an aesthetically pleasing product. The textiles and rugs produced in workshops of the courts to use in palaces, as diplomatic gifts or for the luxury trade were always expected to fulfil to the demand for new designs. On the other hand, for Bedouin people, the design of a rug once established and become popular it might be copied and adapted by other Bedouin weavers for generations, even for centuries, without further recourse to a designer (Gallery, 1976). Nowadays, according to focus groups, most people in the city of Muscat are willing to spend huge amounts of money for creative and unique handicraft works to decorate their homes with traditional products. These products including hand- woven rugs could give homes a sense of Bedouin life style. With the unique rugs designs, occupants would be reminded of the ancient ways of life which were rich in cultural resources. But the consumers in Oman hunt on new imported products because of the lack of local traditions in the marketplace. Therefore, to provide the market with acceptable traditional woven products, the impacts of social changes and the development cannot be ignored.

Lately, the markets have been swamped with imported products with new colours and patterns. Baker (1995) states “For centuries in order to maximise sales the Islamic textiles worker has adjusted output to satisfy the preferences of the urban clientele as well as those of the local customer”. Hence, it is difficult for the primeval Bedouin weavers to be successful and establish a contemporary market unless they work under the supervision of a designer to produce exactly what people and the market need with respect to the styles and the aesthetics of tradition.

Establishing a market for hand-made traditional rugs is a very important issue, but an issue which is more important than that is to reorganize the innovative methods to market handicraft goods. This process must be carried out through a specialized vendor “dealer” who has a special location and the location should be widely known. These dealers should have a lot of information about the products and should be able to provide the buyers with the specific information about the rugs. The prominence of the venue and the dealer was one of the major issues which concerned most of the participants in focus groups. They suggest the oldest traditional market in Muscat because of the popularity of this place as the best venue to sell the traditional rugs.

The study of Islamic decorative arts in chapter four helps us to understand the influences of Islamic design which formed the Arab’s taste and what consumers’ desire. These needs were taken in to consideration when designing the experimental products. Therefore, the feedback from the focus groups was encouraging and very positive and the experimental rug designs woven by the local Bedouin weavers got high praise from 96% of the participants. This revealed the importance of studying customers' and markets' needs before producing new products.

Developing and introducing new motifs and colours to Bedouins’ rugs do not compromise the beauty of Bedouin rugs or eliminate the characteristics of traditional motifs which symbolize their culture, thoughts, beliefs and Bedouin nomad’s way of life and other cultural aspects are still very much in evidence.

It could symbolize mystical or sacred meanings as well. The Bedouin used the symmetric rhythm for weaving simple geometric motifs to show their artistry and abilities. This was clearly brought out in chapter five.

Preserving and reviving this craft were two important aspects when coming up with fresh designs in the innovative experimental rugs. All the rugs in the experimental designs adhered to the traditional ways of organizing the structure of the designs to keep the identity of the tradition while the motifs and the colours were inspired by Omani and Islamic decorative arts. Most of the patterns in Islamic designs carried a similar metaphysical symbolism throughout Islamic lands because of the unity of the thoughts and beliefs of Arab people.

The positive and encouraged responses from the focus groups were an evidence for the successful in introducing Islamic or cultural patterns. The most successful design got an appreciation from 100% of the focus groups. The high percentage of participants in the focus groups who willing to purchase the innovative rugs is also emphasized the importance of developing and enhancing the handicraft products.

The results of the focus groups' feedback which serve to examine the innovative experimental designs in the local market revealed that consumers are ready for some modifications. They want the rug industry to accept the innovative designs. The weavers are receptive to re-fashioning their traditional products. They are keen to show their new skills and anxious about weaving different motifs and want to use different fibres. These results highlighted the success in achieving the research aims, which can be concluded in the possibility of reviving the handicraft industry in Oman and a readiness by Bedouins and consumers to accept many of the changes to traditional hand woven products given the indicated training and marketing needs.

8.3 Traditional Weaving Technique – Innovation

The aim of this experiment was to examine the possibility of weaving innovative rug designs on a Jacquard loom to produce fabrics for soft furnishings, which could be used as cushion covers, throw rugs or as curtains, to decorate homes, along with the use of locally woven rugs.

The purpose of this experiment was to help initiate a new direction for production possibilities at the Textile Factory in Oman. An interview was conducted with the head manager of the factory. This interview brought out the importance of refurbishing the factory. This factory was established in 1976 in one of the interior regions of Oman, called the Wilayat of Samayel, under the sponsorship of the Ministry of Culture and Heritage. In 2003, this factory fell under the auspices of The Public Authority for Craft Industries. There are six power looms in the factory; they were made in Japan in 1982. Three of them are out of order and they cannot be fixed because of the unavailability of spare parts as many generations of new looms have replaced it since then.

Recently, the factory has produced some pit loom products such as loincloths, men's turbans, women's shawls and men's waist shawls, which are sold locally as items of traditional dress.

The following is the methods and the patterns used to produce the innovative product:

Yarns used:	2/12s cotton, 2/12s viscose
Colours used:	Black white
Weaving Techniques:	Double cloth, Jacquard weave
Loom used:	Jacquard loom

The pattern used in this fabric was suitable to be woven as a rug. It is designed using computer design software “Scot weave programme- Jacquard design”. It has a width of 12 inches and is woven on a Jacquard loom with three repeats. The patterns consist of some traditional rug motifs, which have been reconstructed to give it a new look:

The six-pointed star is considered to be one of the traditional Bedouin and Islamic motifs. It has been woven as a group of four stars assembled at the centre of the design and this pattern is considered to be a main motif and repeated vertically along the fabric [see Fig.8:1]. On each side of this pattern there are three band ornamented with some geometric shapes as follows:

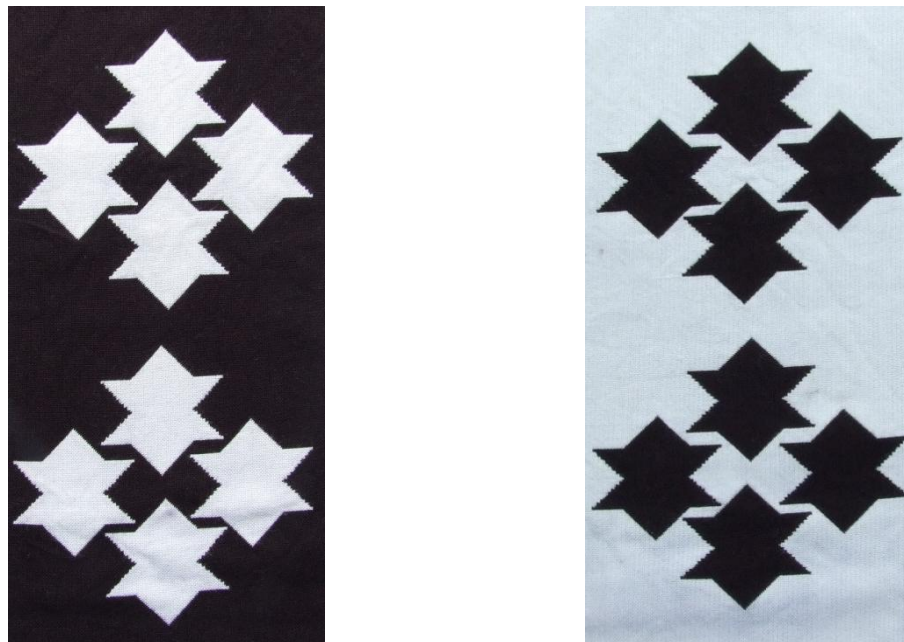


Figure 8:1 The six pointed star woven in the middle of the design

- A stripe contains short horizontal rows woven on both sides of the main motif [Fig 8:2].

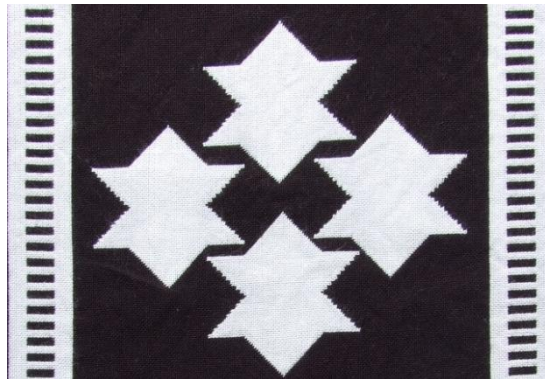


Figure 8:2 The short horizontal rows bordered the stars

- A band contains some geometric figures woven alternately such as the downward pointing triangle, the upward pointing triangle, which have been woven symmetrically as a horizontal reflection, and the shape of the pentagon which is widely used by Muslim artists [Fig 8:3]. This band has been woven on both sides of the main motif as well.



Figure 8:3 Geometric shapes woven in a band

- The band contains the shape of the number seven and it is written in Arabic (٧) which is used because of the importance of this shape in Islamic art [Fig. 8:4].

- Some solid stripes were used in between the three patterned bands as tradition [Fig. 8:5]. This design is repeated three times to form a fabric with a width of 36 inches [Fig. 8:6].



Figure 8:4 Designing the band with the shape of number seven



Figure 8:5 Solid stripes with decorated bands used to ornament the stars



(A)



(B)

Figure 8: 6 (A&B) The three repeats of the design woven in black and white colour

8.3.1 The Advantages of Utilizing Technology

Using a high technology loom will certainly help in the production process with the hope of having the results listed below:

- it speeds up the process of production.
- it simplify the process of producing textiles with intricate woven patterns.
- it has the ability to produce different kind of fabrics.
- the patterns can easily be stored to be used again to reproduce the desired patterns.
- it does not need an experienced or skilled weaver to produce the desired pattern.

8.4 Future Recommendations

During the investigation of the traditional handicraft industry in Oman, the researcher faced a few obstacles. Not much research has been done about traditional hand craft in Oman. However, the researcher was able to find some research that was done in 1989 by Gigi Jones. Prior to that, nothing else had been done. The study of the history of weaving in Oman, the origins of patterns, symbolism and the various motifs had never been undertaken. Further to this, no research had ever been conducted on the marketability of these products or how to establish a sound market. The national museums in Oman are free from any documented information and products that represent the Bedouins' and shepherds' hand-woven products.

This investigation has started the process of documenting the history of the traditional hand weaving industry in Oman, the traditional looms and studied in- depth the symbolism of Bedouin woven motifs, but some recommendations are intended to address the lack of research on the traditional hand craft industry in Oman.

- Conduct further in-depth study into the origins of Bedouin patterns in Arabian Peninsula and record them using their local names in each region. This will help future researchers.

- Catalogue the images of hand woven products and the development of the woven motifs through the centuries.
- Exhibit traditional hand woven products in the national museums to discover more about the history of these products.

With the aim of helping local weavers and to allow them to revive the hand weaving industry, some recommendations have been suggested to the Public Authority for Craft Industries which represents the official Authority concerning hand crafts in Oman:

- Establish suitable centres in different regions in Oman, according to the numbers of weavers in that area, so weavers can gather in this centre and work under supervision. The supervisor could be one of the local ‘highly-skilled’ weavers who would work in turn under the supervision of a designer. The designer would be the official person responsible for designing the rugs according to market needs, whilst respecting the traditional motifs woven by local weavers. Designers should be up-to-date in their knowledge in the field of the rug industry; upholstery design industry and colour trends. This comes out with the importance of establishing design schools in Oman.
- Improve the quality of hand-made rugs in terms of the fibres used by Bedouins to be more suitable for producing in-door rugs. Therefore, a suitable rug yarn must be imported to be available for the weavers who already registered with the Authority to ensure the use of this yarn under a supervision of a designer to produce more artistry products.
- Conduct market surveys on an ongoing basis to study the local marketplace with the aim of establishing the information necessary to produce a marketing plan.

- Establish a new outlet through rug dealers, so that people can find these types of rugs more easily.

- Improve and develop the Textile Factory in Oman by introducing the latest looms for the purpose of including the production of upholstery fabrics. These fabrics need to be designed with traditional motifs, Islamic patterns or motifs inspired by traditional rugs which have a contemporary look and colour. The upholstery can be used as cushion covers, curtains and throw or for other decorative and ornamental uses in many places such as government buildings, resorts, hotels and local people's homes.

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