The Alti Bolaq Carpet Company

Differentiating carpet quality

Material of production

Design, materials, colour, workmanship and expressive capacity are all elements that serve to differentiate quality in carpets. Some of these dimension are readily assessed, other are more open to interpretation.

First there is a choice of materials with respect to the warp (the longitudinal threads of the textile backing), the weft (the latitudinal threads of the textile backing) and the pile. Silk has a fineness and brilliance to it that allows suppleness in the final product and an intricacy of design consistent with a high knot count (see below) and these may be the most expensive of carpets. However they are not hard wearing (particularly if silk is used warp, weft and pile[1]) and therefore are limited in their functional value. Silk carpets are produced in the Andkhoy region, most notably by weavers in Alti Bolaq village but it is a very small proportion (2%) of weavers who have the skills and capital to produce these carpets.

Wool particularly if used throughout the carpet gives distinctive qualities that enhance fluidity of design and tonal warmth related to the dyes (Ford, 1981: 16). Wool however has particular qualities that make it susceptible to damage or stretching that can distort the shape of the carpet – for some this can be accepted as a distinctive feature of the handmade carpet and to be celebrated. For international markets that seek uniformity and product certainty it is a flaw. For these reasons cotton, which has more stable and reliable properties, can be used for the warp and the weft but this gives rigidity to the structure of the carpet that may well be reflected in the design outcome. Parson (1983:?) bemoaned the extent to which cotton warp and wefts were being used in carpet production in northern Afghanistan from the 1970s onwards regarding it as a degeneration in quality. However the carpets being traded in the Andkhoy carpet market today are largely made with woollen warp and wefts.

However wool itself has important qualities that not only affect the lustre of the carpet but also how the wool interacts and takes dyes, either chemical or natural. The traditional wool used in Afghan carpet production comes from the Qaraqul breed of sheep and it is characterised by the length of the staple (the fibre of wool which defines its length and degree of fineness), the large fibre diameter, its high lustre, its 'handle' (the absence of scratchiness) and its crimp (a high number of waves per 10 cm). In addition the quality of the wool is affected by part of the body from which it comes, the time of year at which it is sheared and the nutrition of the sheep.

[1] Carpets can be made with silk warp and wefts and woollen pile but not vice versa

Traditional practice with respect to the processing of the Qaraqul wool led to careful separation out of wool collected at different times of the year and the sorting of wool according to the portion of the fleece from which it came.

However as described in the main body of the report, the Qaraqul sheep population in Afghanistan collapsed after a severe winter in early 1970 and although it was to largely recover before, the years of conflict and drought (which led to a second collapse of the sheep population), has led to a penetration of the wool market by wool from other sources. These most notable of these are wool from Pakistan, widely labelled as Pakistan (and pejoratively labelled as 'the wrong sort' of wool), wool from Iran, wool from the middle east which is being used for the *Chob Rang* carpets, and wool from Belgium[2], widely known as *Belgique*. Each of these has different qualities.

What characterises them all (possibly with the exception of some of the *Chob Rang* wool) is the fact they are machine spun, homogenising wools of different quality. Pakistan wool is largely believed to be of the lowest quality, and is often contaminated with synthetic fibers (which can be determined by the distinctive smell from the burning of the wool). The Iranian wool appears to contain significant amounts of merino wool which has a short staple, a lower lustre and reputedly low durability. The *Belqique* which is regarded as highest quality of wool currently available in the market is liked both by consumer and weaver for its softer qualities and abilities to provide a tighter knot carpet. It remains unclear exactly what breed of sheep (or what combination of breeds) this wool is derived from. It should be remember that worldwide there are over some 200 breeds of sheep each with distinctive qualities but largely bred for meat and fine wool production, which are not qualities favourable to wool for carpets.

However the qualities of wool associated with the traditional Afghan carpet, notably the discriminate selection of wool, purity of source and hand spinning have largely gone from current carpet production.

The colours

The colours of a carpet are determined by the dyestuffs that are used, the type of wool that is used, the dyeing process and the kind of wash that is applied after the carpet is finished. Up until 1850, natural vegetables dyes used from a wide range of plants and minerals were used exclusively for the dyeing of wool. The best quality dyes produced subtle and harmonious colours that were not fully fast to either light or washing. As the carpets aged, the colours gradually changed, if anything becoming richer and

[2] It might appear the Belgium as a source of wool for Afghanistan is extremely unlikely but it should not be forgotten that the Low Countries of Europe were the centre the wool industry in the 14th century and Belgium has a long history of carpet production.

mellower in hue. Vegetable dyes continued to be used both among the Mauri rugs (see later) and also with the *Chob Rang*[3] carpets.

From the 1850s onwards chemical dyes started to be used. Initially the dyes were of poor quality and were fugitive, neither fast to light or washing. However since the 1920s and onwards the chemical dyes have been developed and two of the important colours – indigo blue and madder red can now be reproduced exactly by chemical means. There are two basic types of chemical dyes – those that are fast and do not fade or mellow, thus removing the ageing process that is associated with the best quality dyes. The second type, semi-fast dyes soften with age and mellow and are often difficult to distinguish from the vegetables dyes. Indeed in the view of Ford[4] it is almost impossible in practice to distinguish between good semi-fast chemical dyes and vegetables dyes by the eye and this can only be done through chemical analysis. Nevertheless vegetables dyed wool commands a price premium, not least for the work involved in the dyeing process. Specialists traditionally undertook this. However the use of vegetable dyes in contrast to chemical dyes on a commercial scale requires high labour inputs and is therefore expensive. Variations in the shades of colour are determined by both the dyeing process and the type of wool. Different shades of red, often found in the Afghan carpets are often achieved by using the dyestuff on different shades of yarn.

The final part of the production process is the washing which is essentially a finishing process that helps remove any excess dye, washed out the loose fibres and brings out the sheen or lustre of the carpet. The type of washing that is used can contribute towards the development and induce ageing effects through the toning of colour. For example bright reds can be toned down to any shade from rust, rose, copper to brown, gold or beige.

The structure

The structure of the carpet is determined by the way in which the loops of wool are tied or knotted around the warp strings and are anchored in place by a weft string. There are essentially two types of knots. The first is the Turkish knot which is symmetrical and, it is argued by some, contributes to the more angular geometric designs associated with Turkmen carpets[5]. The second is the Persian knot, which is an asymmetrical knot and here the warps are half staggered. A weft string holds the loops of wool in. The knotting can either be single wefted with a single row of knots per single pass of the warp thread or double wefted where the weft thread is passed twice per row of knots. Double wefting completely covers the warp threads.

For double wefting there is also choice as to whether the wefts are of equal or different thickness and this affects the pattern of the weave. If a different

[3] Chob Rang literally means 'wood colour'.
[4] Ford, 1981.
[5] Ibid.

thickness of weft is used, one thick weft thread and one thin one under looser tension, this sets up the warps in two different planes; this is know as the ridge backed technique which is one of the best structures to be used. A distinctive feature of the double weft is that the knots are basically square with as many knots per unit of length as there as per unit of width. Turkmen carpets largely are double wefted with wefts of equal weight. This means that the warps are all in the same plain and the back is flat and smooth.

Two types of tricks have been often found in carpets of Turkmen design produced in . The first is the use of what is known as the *jufti* knot where the knot is tied over four warps strings and this leads to half the knot number. This is relatively easy to detect. The second trick is to use very thin warps and wefts so that double the number of knots can be tied and this can give the appearance of four times the actual knot count. Such carpets are not durable, indicating the importance of the relative weight of the warp, weft and pile to structural quality.

The final dimension of the structure is the knot count, and the more counts per unit area, the finer the weave is. Table 1 summarises by knot count the various qualities of weaving that are associated with the various carpets to be found in the Andkhoy carpet market. The table does not include carpets made of silk which can achieve knot densities 1 million per m^2. (650 per $inch^2$).

Table 1-1: Knot range for different wool types.

Knots /m2	Knots / 10 cm	Knots / in2	Local Wool	Pakistan	Chob Rang	Belgique
40 000	20	25				
90 000	30	60			Coarse	
100 000	32	65	Coarse			
110 000	33	70		Coarse		
164 000	40	106			Fine	
171 000	41	110	Fine			Coarse
200 000	45	130		Fine		
230 000	48	150				
250 000	50	160				Fine
300 000	55	194				
320 000	57	206				
460 000	68	300				
1 000 000	100	650				

However higher knot count in itself does not necessarily mean a more durable carpet and well made lower knot count carpets can achieve better prices than higher knot carpets. Other features in the structure that can contribute to the quality of the carpet include the ending of the carpet – the kilim at both ends of the carpet, whether it is left, knotted, plaited or decorated and the selvedge or the side edge of the carpet formed by turning of the weft threads at the end of each row. These can either be decorated or under poor conditions of manufacture sown on afterwards.

Designs and Production

If design is reduced to its lowest common denominator, then a fundamental difference can be made between designs made up of rectilinear or geometric elements – they lie at 45,90 and 180 degrees to each other and those that are curvilinear or floral designs with genuine curved lines. The former are associated with the nomadic or tribal Turkmen and define a tradition when the weaver was also the designer of the carpet. The latter curvilinear designs, which are a finer weave, in order to be able to achieve their effect, need the pattern to be drawn out on graph paper and requires some kind of manufacturing organisation, since specialist skills were required to undertake the drawing out of the pattern. Here the designer is separate from the weaver and this also implies that carpets are made to order and for sale to designs set by the manufacturer or designer.

Note should be made that curvilinear designs date back to an explosion of floral designs around the Persian and Turkish Court Manufactories in the 16th Century and relate also to the emergence of an elite consumer market for luxuries in the western world during the 17th Century[6]. Although these court sponsored manufactories were to decline in the late 18th century, western interest in oriental carpets was to be revived in the 19th Century. A number of firms originating from the west including Ziegler (an Anglo-Swiss company) and Oriental Carpet Manufactory were to establish themselves in Persia, leading to a renewal of carpet production in Persia from 1880 onwards.

In contrast the geometric designs that dominate the Turkmen carpets are directly traceable to the carpets of Anatolia in the 13- 16th Century and although there are influence of the Persian manufactories on these a long tribal lineage in the design is evident. This is not the place to explore the significant designs and the details of the motifs known as *gols* (often called *guls* and interpreted as flowers) which probably have individual significance in terms of clan or tribal identity. Ford[7] presents a connoisseurs view of the classical Turkmen design:

There is only one set layout for the traditional design of the whole Turkoman area: several rows of repeating octagonal or other polygonal motifs knows as gols on a red or (occasionally) blue background, usually interspersed with another set of repeating motifs (secondary gols), the whole encased in a rich array of narrow geometric borders; what they illustrate is the magnificent variety that can be achieved within the confines of the one rigid formal layout. The essence of Turkoman design is restraint: the ability to make so much out of so little, to achieve a remarkable depth of expression combined and recombining little twists and odds and ends of design elements

[6]Maxine Berg and Helen Clifford, (Eds) 1999. Consumers and Luxury; Consumer Culture in Europe, 1650-1850. Manchester, Manchester University Press.
[7] Ford, op.cit p. 175.

Up until the early 1980s it was possible still to clearly identify carpets with particular locations in northern Afghanistan – designs had a distinctive spatial identity and summary details of these are presented in Table 2.

Table 2: Summary of most significant designs/ locations for carpet weaving up to 1980.

Bokhara	Any rug in Tekke design
Mauri	Mauri after the Merv oasis from where the weave originated
Mauri Zair Sha	From Heart region to a design created in the 1950s; associated with the Tekke tribe
Mauri Shakh	Group of distinctive Tekke designs, from Marmazit near Balkh and west of Shakh near Maimana
Kizil Atak	Kizil Atak, near Shebergang; inaccurately called Mauri as Ersari and not Tekke tribe
Alti Bolagh	Near Andkhoy; fine structure, Ersari tribe
Jangalarik	East of Aq Cha
Afghan Ersari	Andkhoy, Farukh, Taghan, Chakseh
Kazan	Aq Chah & Dali tribe from Kunduz
Waziri	Confederation of weaving groups
Daulatabad	Prayer mats

It must be clear now that carpets can be differentiated in terms of quality but what defines quality depends on a number of inter-related elements. Parsons[8] summarised the position well.

> *In tribal production such as is found in Afghanistan, where yard is hand spun, the knot count of any given piece should never be equated with quality. The combination of colour, design and material is far more important than the number of knots in a given area. This does not mean that the standard of knotting is unimportant, for obviously the regularity and tightness, or density, of the fabric are important factors yet one cannot ignore the fact that in the last analysis it is the yarn count of the warp, weft and pile which very largely predetermines the knot count.*

[8] Parsons, op. cit. p14.