Rugs and carpets of the Orient

The Oriental rug has ancient traditions. It is not known when and where rugs were first made but it was certainly in prehistoric times. The oldest rugs probably had no pile; they were probably smooth like Kelim or Sumakh rugs, as far as can be told from archaeological excavations of the Pharaohs' burial chambers. However, a Knotted rug, approximately 2,500 years old, was found during excavations in the Altai Mountains near the border of Mongolia. This rug, known as the Pazyryk rug, is almost square and measures approximately 6 ft. 3 in. X 6ft. 4 in. or 190 x 200cm. it s made with the Ghiordes knot, and the pattern consists of a central field broken up into small squares and surrounded by borders with horsemen and animals. Considering its great age, the greater part of this rut is in surprisingly good shape.

Rugs are depicted on several reliefs that are more than 2,000 years old. There is one in Persepolis, which shows an ambassador from a foreign power presenting rugs as a gift to the Persian King. Ancient writings also testify that knotted rugs were to be found in palaces and temples in most oriental countries. Among the ancient rugs that still exist mention can be made of 13.th-century rugs in the Ala-ed-din mosque in Konya, Asia Minor, and the Ming and Mabry rugs from the 15th century. The last can now be found in the Statens Historiska Museum, Stockholm.

It was only natural that the nomads of the past needed rugs, both for protection from the cold and as an ornament in their tents. In those days the rugs had relatively simple patterns with repeating geometrical of stylized designs. The material for pile was wool, goats 'hair, camels' hair and occasionally silk. Gold and silver threads and precious stones were included in the finest rugs intended for royal palaces and temples.

Development

The reign of Shah Abbas in Persia in the late 16th and early 17th centuries was one of the most important periods in the history of carpets. The Shah understood and encouraged the manufacture of rugs, organized large court factories and obtained outstanding artists who composed wonderful patterns with flowers and figures that are still being woven today, nearly 400 years later. Shah Abbas father, Shah Tahmasp, had the famous Ardabil carpet made, which is now in the Victoria and Albert Museum in London and is regarded as one of the most magnificent rugs in the world. In measures approximately 17 ft. 5 in. x 34 ft. 5 in. or 5.30 x 10.50 metres, is quite tightly woven, has about 32,500,000 knots, a warp and weft of silk and the Sehna type of knot, i.e., the Persian knot. According to the inscription on the carpet it was woven by maksud of Kashan, slave of the Temple. This is one of a pair; the other carpet is in the Los Angeles County Museum of Art.

Other rugs from this time are a magnificent example in silk belonging to the Swedish Royal family and the Danish "Coronation Rug" in Copenhagen. Quality, charm of design, lively colouring and excellent handicraft characterize these rugs and make them works of art of the highest order. After the death of Shan Abbas carpets had a chequered history. It is true to say that the standard of rug production was highly dependent on the interest shown by the reigning prince. The continuous feuds and wars, with frequent changes of ruler, prevented much interest being paid to this industry.

New days

The majority of early dyes were vegetable. The first attempts to produce completely new ones came in the late 19th century, with the range of chrome dyes; these, however, were not fast. Aniline dyes, from coal tar, were manufactured commercially about 1860, and were immediately exported to the East where they met a long felt want for certain colours not obtainable from the natural dyes the available. These colours were a deep purple, bright green, strong pink, mauve and bright yellow.

It is understandable that the rug-maker was attracted by the new dyes. They saved him the time-consuming process of extracting his dyes from animals and plates, while the actual process of dyeing

was both simpler and more convenient; but they were not very waterproof and they tended to fade in the light. In time the Persian authorities prohibited their use. Later synthetic dyes reproduced the older vegetable ones such as indigo and madder. Modern chemical dyes are highly sophisticated compounds produced with a known degrade of light-fastness which is measured according to an international standard.

Production

Form the end of the 19th century the demand for oriental rugs rose sharply and exports to other parts of the world shot up. In Turkey a completely new rug production was organized, in sizes more suitable for contemporary requirements. Persian patterns where copied, the weaving was coarse, patterns and colours became stereotyped. The more important types among these new rugs came to be known as Ushak (the name of an important group of carpets dating from the 16th-17th centuries), Eskisher, Spara and Ghiordes (where some of the finest prayer rugs had been made in the 18the century).

In Persia, too, at his time an English business concern started to organize factories in Tabriz as well as in Sultanabad, present-day Arak. They were followed by other European and American companies who also started production in different parts of Persia. This new form of manufacture produced new qualities and patterns and above all standardized sizes to certain dimensions suitable for Europe and America.

Since the Second World War, a number of new problems have arisen in manufacturing carpets in Persia. The industry has expended enormously and absorbed both labour and raw materials. Wages have risen and with them the standard of living. The price of wool is now a more important factor than it was, as a result of the industry's increased demand for this material.

All this has forced the factories to rationalize production, to concentrate on a limited number of different qualities in respects of both density and wool quality, and to spin and dye the wool in larger batches (unless spinning and dyeing are done at the weaving station) in order to reduce the cost of transport. Even so, rugs are still being made in all qualities, from simple, cheap bazaar rugs to the highest grades. Thus Tabriz and Kerman, for instance, one can order any size, any dyes and any patterns one likes. And one can still buy wonderful qualities with more than 650 knots per square inch (1,000,000 per square metre) and made with the best wool in the world.

Among the nomads and in the village, rugs are still being made in the traditional patterns and colours. These weavers aim at producing rugs as god as those made by their ancestors more than a thousand years ago, using the same simple tolls. Here one still find tradition and a feeling for dyes and patterns.

Finally, it must be emphasized that all true oriental rugs are always knotted by hand; all talk of mechanical production is simply slander. This handicraft is too valuable to the Orient to be spoiled. The materials in an oriental rug are chiefly wool or silk combined with cotton. Flax and jute are used to a small extent only.

The pile is of wool, goats 'hair and camel hair or silk. Te warp may be of wool, cattle hair-or a mixture of the two, cotton, silk, flax and, in India, jute as well. The weft is made from the same materials as the warp.

Wool

The Persian lamb is widely known for its excellent wool. But even so, the quality varies considerably for several reasons. Climate and pasturage are two, since sheep from the hill regions, where the climate is colder, have more pliable and stronger wool than those from warmer places near sea level. Moreover, not only does wool from different sheep vary in quality but there is a considerable difference between the wool from different parts of the same sheep. The wool of the Persian lamb is particularly suitable for fug making. It gives a mixture of rather coarse, long and glossy outer hair and finer, shorter and softer undercoat. The outer hairs give the material the necessary strength and glossiness, while the undercoat is necessary for spinning. Wool with a high proportion of soft, fine

undercoat is most suitable for clothes but not at all for rugs. These require coarser wool that gives a pile which is springy, dense, robust and glossy, i.e., wool with a preponderance of long outer hairs. The weft, on the other hand, does not require the high glossiness. Nor does the material need to be so robust, since it is held by the warp. Consequently the weft can be made from coarse, relatively short wool of a quality inferior to that used for the pile. The best wool in Persia comes from Kurdistan in the west and from Khurasan in the north-east. The sheep are generally sheared once a year, but sometimes twice. A particularly fine mixture is obtained by mixing the spring wool with lambs' wool, i.e., the wool obtained in the autumn from lambs born that spring. This mixture is used only for the very finest rugs.

Naturally there are comparable wools to be found in other countries of the East. Turkey, the Caucasus Turkestan, India and China all produce wool fully equal to that from Persia.

Goat's hair (cattle hair) is not used to any great extent for the pile but mostly for warp and weft as well as for edging the sides of the rug. Camel hair is now used very seldom. The Camel-hair browns, e.g., in the Hamadan rugs, are generally dyed wool. Camel hair has the unfortunate property of giving off a far from pleasant smell in hot, humid weather.

Silk is produced in the district round the Caspian Sea, where the climate is subtropical, and of course in China and Turkey. It is used for pile, warp and weft in the manufacture of exclusive, tightly woven rugs. Artificial silk has also been introduced in recent times. However, this material is not as durable as pure silk and its appearance deteriorates when it becomes soiled and has to be washed.

Cotton is cultivated almost everywhere in Persia nowadays and spinning-factories are to be found in Tabriz, Kazvin, Isfahan, Yazd, Kashan and elsewhere. It is mostly used for warp and weft.

Flax is not particularly common in the warp and weft of oriental rugs. In Turkestan, India and sometimes even in Persia one finds rugs with the warp in this material, though these are usually particularly tightly woven rugs which need a thin warp.

Jute used to be used for the warp of Indian rugs, though not to any large extent. The material, which is hard and brittle, is not very durable.

After shearing, the wool is cleaned and sorted into different qualities according to use. It is then washed in streams or other watercourses, dried and bleached in the open air. After this treatment, it is sent to be carded. The nomads and some villagers, however, still card the wool by hand, using ancient methods.

The yarn is then spun by hand into different size according to use: the warp requires a yarn that is tightly and finely spun; the weft both coarse and fine yarn but not so tightly spun, and the pile a strong but quite loose yarn so that the ends of the knots have the appearance of brushes after they have been tied. There are very few places in Persia where machine-spun yarn is used. In China, on the other hand, all rugs are now made from machine-spun yarn.

Cotton yarn is mostly spun by machine but sometimes by hand in simple rugs, if the manufacturer cannot afford to have the yarn spun or is prevented by transport difficulties.

Tanners' wool is a simpler and cheaper type of wool obtained from slaughtered animals. It is not cut from the hide but is loosened by a chemical process, which naturally affects its quality. This "dead" wool is never comparable with that from living animals; it is less durable, the dye does not take so well and the colours soon turn lifeless and shabby. The use of this type of wool is practically entirely confined to simple bazaar qualities.

The treatment of the wool involves so many important processes that it s worth mentioning a few details.

Before the sheep is sheared, it is usually washed if this is at all feasible. This gives two advantages; the wool will be cleaner and the animal is easier to shear. The wool is collected in bunches and

immediately washed in running water. This should be done with great caution as the wool should remain greasy. It is then spread out on the ground to dry in the sun. It is turned continuously in order to get it dry as soon as possible and then it is sorted.

The dark and light wools are separated in sorting, since their use is always distinct and they are thus treated differently right from the start. Twigs and straw, which are always found, are also removed.

Carding is nowadays mostly done mechanically. But in the village and among the nomads the ancient methods are still in use. Large quantities are beaten with a bow-like instrument, with the bowstring drawn very tight.

Hand spinning is done according to one of two methods, either by use of the spinning wheel and distaff, or of a heavy, almost pear-shaped wooden top, which requires great skill and gives a surprisingly even and fine yarn.

Natural dyes

In the orient practically every family has had its own recipe for the dyeing of yarn in the various colours and these recipes have been handed down from generation to generation. They are based on animal and plant dyes and are naturally the best. They give the yarn a natural sheen.

A few examples of the most common plant dyes are given below:

Blue	indigo
Red	madder root, kermes and cochineal (dried scale insects)
Yellow	vine leaves, pomegranate peel, saffron
Brown	walnut shell, oak bark
Green	indigo + vine leaves or pomegranate peel
Black	indigo + henna, iron oxide (vinegar and iron filings)
Orange	henna + madder
Cream	walnut shell, pomegranate

In addition to the above there are innumerable mixtures and variations for deep and light shades, as well as many different ways of preparing the yarn for dyeing. Dyeing with a certain colour may take one day in one place, while the same colour somewhere else and with some other method may take up to three or four days. Dyeing with indigo according to ancient methods may take no less than fifteen days.

Aniline dyes

Since natural dyes require a time-consuming and laborious process it was not surprising that people succumbed to the temptation of using aniline dyes wherever possible, but the result did not come up to expectations. The Persian authorities gradually realized the danger to their foremost handicraft and, as already mentioned, introduced laws to hinder the use of aniline dyes. Their import was forbidden but even so they were smuggled into the country in large quantities and it proved difficult to keep a check on the dyers and rug manufacturers. In spite of all prohibitions and high export tariffs, a great many rugs were produced with aniline-dyed yarns.

The disadvantage with aniline dyes-apart from the fact that they fade and run-is that the wool loses its fat and becomes stiff and dry. Consequently, the fibres break more easily under pressure, which is bound to happen with carpet.

Yarn coloured with vegetable dyes has exactly the opposite properties; the wool becomes softer and, moreover, retains the animal fat.

Checking the dye

How can the layman tell whether the yarn has been coloured with aniline or vegetable dyes a definite answer really requires a chemical analysis but here are some tips about how to detect anomalies that are characteristic of aniline-dyed yarn, provided that the carpet has been in use for some years or has been washed with alkaline substances.

Fold the carpet so that the pile separates right down the warp. With a vegetable dye, the yarn should be the same colour at the top of the pile as at the bottom, possibly with a slight difference in shade. On the other hand if the difference in colour is great, e.g., blue-violet near the warp and blue-grey on the surface, or dark green near the warp and yellowish on the surface, one can be fairly certain that an inferior type of dye has been used, probably aniline.

Weavings has already been stated, carpets are today woven in the Orient in exactly the same way as they were a thousand years ago. When people say that these carpets must be produced by mechanical means, they are speaking out of ignorance; presumably they cannot imagine that so even a carpet can be produced by hand. One reason for this attitude is probably that industrial products such as Wilton and Administer carpets copy oriental patterns. Many people cannot see the difference between these and the genuine hand-woven carpet. Some oriental carpets cost so little that many people regard this as sufficient evidence that they cannot be hand-made. Anyone who has travelled in the East and seen a carpet being woven can, however, testify otherwise.

The weaver's instruments are simple and homemade. The yarn is cut off with a knife after the knot has been made. In Tabriz a knife fitted with a hook is used for catching up the warp threads. The weft and rows of knots are packed together with a heavy iron comb-beater with a handle. The newly woven part is combed with a strong steel comb before it is trimmed roughly while it is still in the loom. After the carpet has been removed from the loom it is given a final trim with shears and a razor-like instrument.

Knots

There are two basic knots, the Turkish Ghiordes knot, also known as the Turk-Baft, and the Persia Sehna not, also known as the Farsi-Baft.

The difference between them is that the Ghiordes knot encircles both warp threads, while the Sehna knot encircles one but is only loosely wound round the other. The difference is clearly shown in the drawing on the next page.

Each technique has its own advantages. Ghiordes is easier to tie in a coarse carpet, while Sehna gives a more elegant surface and better definition of the pattern.

A knot tie around one warp thread was used in Spanish carpets of the 15^{th}-17^{th} centuries, but is not found in the East.

The deceptive Jufti or "double knot", whereby the yarn is tied to four warp threads instead of two was first introduced in north-east Persia and parts of Turkestan. Unfortunately, this technique has spread rather rapidly. The great disadvantage is that the carpets do not wear so well, while some of the cheaper qualities lack density in the pile.

For the weaver, however, this technique doubles output as only half the numbers of knots have to be tied compared with the traditional method. The technique cuts cost but produces an inferior carpet.

To tell whether a carpet has been knotted with the Ghirodes or the Sehna knot, fold it backwards and inspect the base of the pile. The top of the Ghiordes knot can be seen going across two warp threads. The ends of the knot emerge between the two warp threads under the top of the knot to form a bushy pile. The rows of Ghiordes knots, one above the other, form a pronounced stripe. The top of the Sehna knot only covers one warp thread, so that one end of the pile emerges immediately below it and the other on the far side of the second warp thread used for the knot. The second warp thread can usually be seen by separating the ends of the pile. In most cases the type of knot can be recognized simply by

feeling the pile. A carpet woven with the Ghiordes knot usually has the nap running directly towards one end, while a carpet tied with the Sehna knot will have the nap running towards one corner.

The choice of knot varies a great deal between different districts, and both types are sometimes used in one and the same locality. The main reason for this is that people from different tribes have retained their traditional technique. The Turks use the Turkish knot and the Persians the Persian, but intermarriage and migration can lead to both knots being used within the same community.

In Persia and Turkey weaving is done by men, women and children. In the Caucasus, Turkestan and among the nomads, however, only the women weave. In China, India and Pakistan it is the men who sit at the looms, while women and children do the trimming, finishing off and other details. Output naturally varies from weaver to weaver, but is approximately 6,000-12,000 knots per 8-hour shift.

The usual method of producing a carpet is as follows, a certain number of warp threads are attached to the beam, according to the width and density required in the finished carpet. A simple mechanism separates alternate warp threads into two sets, creating an alley called the shed through which the weft is passed. The position of the two sets is reversed after the passage of each weft thread.

Before starting with the carpet proper, an edge or border of varying width is first woven, sometimes with a pattern, sometimes in different coloured bands.

When this has been done, knotting can begin. With the left hand or with the hooked knife, which is held throughout in the right hand, the weaver grasps two warp threads and ties a knot round these with both hands and pulls downwards, after which the yarn is cut.

After each row of knots, weft thread is passed in between the warp threads above the row. Usually, two weft threads are passed between each row of knots. Kerman and Bijar carpets, however, have the weft in sets of three, while sets of four to six are found in carpets from Khurasan and Kazak as well as in Samarkand, Khotan, Kashgar, and Yarkand carpets of East Turkestan. These larger set produce a lateral ribbed pattern on the back of the carpet. In some cases a larger set of weft threads is included only after every fourth or sixth row of knots.

Sehna, Hamadan, Karaja and some of the Bahktiari carpets have only one weft thread between each row of knots. This technique is also discernible from the reverse of the carpet, where the warp threads are visible every other time they are left uncovered by the weft, producing a dotted appearance on the back. Another variation is to use what is known as a double warp. Here, one weft thread is passed between the warp threads at he usual tension but the next weft thread is inserted more loosely. As a result, one of the warp threads will lie behind or under the other one, and the knot will lie on its side, thus increasing the carpet’s density.

The row of knots and the wefts are now beaten together, using a heavy iron comb. This operation is repeated after every row of knots. After every third to fifth row comes the first rough trimming of the carpet, but the final trimming is not done until the carpet has been taken down from the loom. The work continues in this way until the carpet proper is finished, whereupon a second edge is woven, similar to that made at the beginning.

The sides or selvages of a carpet always have a protective edging, either woven in with the ordinary weft or over sewn after the process of weaving. The nomads ornament the sides of their carpets with tassels, and the ends are often in different colours.

Most carpets have fringes at both ends, but many from western Persia have a fringe at only one end, the other being simply the woven edge where knotting began . a fringe may be knotted or simply hang straight from the woven edge. Note that the end sewing, fringes and woven edges of carpets are frequently distinctive to certain districts, and so are of value in classification.

Design

The enormous variety displayed by the designs of oriental carpets is a fascinating and stimulating study in itself. Different types of patterns and designs have been developed in different districts. Geometrical designs are often found together with other motifs but in some places they have been refined and may characterize the place of manufacture. The most common designs are those base on flowers but these have been revised and stylized into a number of different types. Religion is of decisive importance in the use of the human form in art. The Koran does not permit the portrayal of living beings. Both people and animals are portrayed nevertheless in Persia, where religious attitudes are more liberal, and in the Caucasus. This is also the case in China, where the designs are markedly different from those of Central Asia.

When considering the designs on different carpets one should bear in mind both the function of the carpet and the environment in which it was produced. A number of terms for carpets indicate their use, e.g., Enessi which indicates a door drapery, Hehbelyk which is a sadle cover and Namaslyk which is the prayer-rug of the Moslem. These terms also give some indication of the size. This is even more true of names like Ghali, which means carpet and stands for the large rectangular type usually found in the centre of a Persian room. Around this lie the Kenareher, runners, often comprising a series with the same design. There are several other similar terms, all of them with definite types of design suitable to their function and size (se pages 213-214).

So far as the conditions under which they are produced are concerned, a distinction must be made between carpets for domestic needs and those done to order on a more magnificent scale. The carpets produced by nomadic tribes differ from those made by the settled population in that they are woven more intuitively without recourse to any pattern or drawing. They are generally relatively small, with geometrical and stylized designs. Settled weavers usually work from a predesigned pattern or cartoon and are thus able to produce carpets with richer, more varied designs. The cartoon is known as a Talim and consists of squared paper on which the pattern is reproduced. Each square stands for a knot in that particular colour. Mostly, the weavers work independently with this sketch in front of them. In the past, however, a foreman dictated the colours, particularly if two identical carpets were to be made. He then placed himself between a pair of looms and dictated the work for both carpets.

The composition of the design thus depends upon the type of carpet and follows carefully defined rules. On the basis of the pattern of the field, one can distinguish between four different types.

1. Medallion design.
2. All-over or repeat design.
3. Design with figures or representational design.
4. Niche and tree design.

The first group comprise the patterns in which the field, in a single colour or with small designs, is dominated by a central medallion. The second group, with its dense repeating patern cut off by the borders, has a more ancient appearance and is often based on more geometrical shapes. The third group comprises the naturalistic reproductions of people and animals. The last group, the niche and tree design, is uniform from the point of view of function, even though the pattern varies considerably.

These typical field designs are nearly always surrounded by a main border and narrower secondary borders or guards. Exceptions to this rule are, for instance, certain prayer rugs with the niche design and recent Saruk and Kerman carpets, which often have a broken floral border, and the Chinese carpets, which include a number of special types outside this classification

The numerous details found in oriental carpets include a number that are very common. One of these is the Mir-Ibotha design, an oval figure filled with rosettes and flowers. This may be interpreted in several ways: as a winding river, as the imprint of a clenched, bloody hand, or as a flame. Another classical design, common as the main pattern, is the Shah Abbas design. This consists of large floral designs, cloud bands, arabesques, vases and palmettos. Guli Henna is a pattern showing a stylized

Henna plant. The Mina-Khanipatern, a floral design surrounded by four similar smaller flowers, is also used as a main design.

In the borders one finds patterns that are more familiar to the western world. A couple of examples of simple geometrical designs and ornaments are the meander and the device called “the running dog”. The Greek cross is also found, but more common is the swastika, a symbol of happiness.

Another type of pattern sometimes found on carpets consists of inscriptions and dates with Arabic writing. The decorative inscriptions comprise aphorisms by some well-known author, such as Sadi, Hafez or Firdausi, but they may also be verses from the Koran. They are generally surrounded by a cartouche.

Dates in Arabic numerals refer, of course, to the Mohammedan calendar. This starts with Mohammed’s journey from Mecca on the 16th July, 622 A.D. the Mhammedan year is shorter than ours by approximately 1/33. To arrive at a carpet’s age on the basis of an Arabic date, e.g., 132 proceed as follows:

Divide the date by 33 (1322 ÷ 33 =40).

Subtract the quotient from the year (1322 – 40=1282).

Add 622 (1282 + 622=1904).

Thus a carpet of 1322 by the Arabic calendar should be dated 1904 according to our calendar.

However one cannot always rely on a carpet’s date being genuine. It has happened that the figures have been a altered to a more advantageous date.

In the past each district used its traditional patterns and designs, which served as a means of telling where a particular carpet had been made. This is no longer the case; Tabriz patterns are now made in Kerman, and, vice versa, Seraband patterns in Turkey, Kerman patterns in Arak, etc.

There are many details that should be checked when buying a carpet. Some of them can be seen to at once, others must wait until the carpet has been taken home for a final look. Unfortunately, most buyers attach the greatest importance to exact colours and measurements. However, greater attention should be paid to quality, condition and pattern. A good carpet will in fact last a lifetime and should consequently be bought to be enjoyed as a work of art. Once again, let me repeat: rely only on reputable firms with long experience. You can then have confidence in your purchase. Buying at auctions and the like, with no chance of thoroughly checking the piece, can only be described as happy-go-lucky.

First check:

That the carpet lies flat on the floor; bulges or folds will lead to greater wear in those places and detract from the appearance of the carpet; that the carpet is not too crooked; minor deviations should be accepted since this is a handicraft, particularly in the case of nomad carpets.

That the Kelim edges at the ends and the over sewing or braiding along the sides is not damaged, since these are intended to protect the knotted part of the carpet. Minor damage can easily be made good by a specialist without detracting from the carpet’s value;

That the pattern is in harmony with the carpet’s size in that there is no uncalled-for mutilation of the pattern at the border and that each corner that the harmony is maintained there as well. After that, check the pile of the carpet. The surface should not be too uneven as a result of poor trimming or other factors.

Check the colours too. Make sure that the colours have not run into the light parts that the surface of the pile has neither faded nor become excessively discoloured when compared with the colour inside. Nowadays there is not much risk of meeting aniline dyed carpets, apart from some Turkish pieces and

some older Indian carpets. Minor differences in colour between the surface and the foot of the pile may be tolerated.

By moistening the surface of the pile one can check a couple of pints. If a lot of colour comes off when the surface is rubbed with a piece of white linen, the colour is of inferior quality. Then one can smell the damp part of the carpet. A strong whiff of chlorine means that the carpet has been dry-cleaned and was probably rinsed badly after the treatment. This may mean a loss of durability. Excessively bleached carpets, so-called gold-Bokhara or gold-Afghan, may have a shorter lifetime after such treatment.

The next step is to inspect the underside of the carpet. First the evenness of the knots, then whether the carpet has been repaired. This is easiest to see on the back. A minor repair probably done is no great disadvantage, but large repairs can affect the carpet's value.

Damage from moths on the underside will lay bare the wrap in those places. As a result, the pile may work loose if the knot's anchorage has been eaten up by the moth.

The warp and the weft may b damaged as well but unfortunately this cannot always be seen.

Such damage may be due to one of two causes; either the yarn is too weak in relation to the carpet's weight or the carpet nay have become damp and not been allowed to dry in a suitable manner.

To discover whether the weft is too weak or damaged, a rather extreme test can be made: fold back the carpet along a row of knots, then take hold of the folded carpet with both hands quite close to each other and pull both hands apart and downwards so as to bear on the weft threads. A cracking sound means that the weft have broken, leaving a longitudinal split. Such a test must be made with the utmost care, preferably by a specialist.

Sometimes a carpet that is specially washed receives such hard treatment that certain colours, usually in plain fields, have to be touched up. This can be seen because the colour will not be evenly distributed over the pile and there will be a large difference in colour between the pile and the back of the carpet.

Some carpets display belts of various widths in different shades, so called "abrashes". There are several reasons for this. Several different batches of yarn may have been used, with some of them dyed a slightly different shade. Wool from different sheep may also take differently even though it is all dipped in the same dye bath. A large number of wide abrashes in one carpet id not particularly attractive but a few simply give the carpet a more lively appearance and consequently can be tolerated. However, these abrashes can hardly be controlled by the carpet-maker and will therefore be found even in the best qualities.

How does one distinguish between genuine and imitation?

Some of the most reliable indications are illustrated here.

A genuine carpet is knotted; the pile yarn is taken around one or more warp threads. This can be easily checked by folding the carpet vertically with the pile uppermost. The machine-woven jute Wilton is easily mistaken for knotted carpet but no knots will be found at the bottom of the pile. The yarn runs loosely round the warp threads and can easily be pulled free.

The side edge of the genuine carpet is always somewhat uneven and wavy, with the yarn in several colours. The machine-woven carpet, on the other hand, has an even, straight side edge, which is attached after the carpet has been woven.

The fringe on a genuine carpet is always formed from the warp and may not be knotted. However, a machine-woven carpet can also have a fringe made from the warp, though generally the fringe has been finished. This gives the artificial appearance on the carpet.

A carpet should be evaluated on the following grounds:

1. Density:

The number of knots to the square inch or centimetre is highly relevant to a carpet's value, since the weavers are paid by the number of knots the tie. Wages are calculated to account for half a carpet's production costs.

2. Material:

Naturally there is different in cost between good and inferior wool but the difference in price is relatively small in relation to the carpet's total cost.

3. Colour:

There may be a great difference between the cost of synthetic dyes and the considerably more expensive vegetable dyes.

4. Labour:

The details of the pattern can be executed skilfully or poorly. Sometimes the pattern is mutilated in order to keep the carpet within certain size. This may affect both the field and the borders. What usually happens is that the border pattern does not fit at the end corners.

5. Patter:

A simple or minor pattern cost less than, for instance a figure pattern. It should also be noted that high density knotting, good materials and vegetable dyes make the strongest carpets.

In the case of antique carpets, there is also age, history and condition to be considered.

The carpet at home:

When trying out a carpet at home, remember to turn it in different direction, since all carpets have one light and one dark aspect. When seen against the pile, the carpet appears darkest and the pattern stands out most clearly. Seen from the other direction, the carpet will appear much lighter.

There are places in the home for which a carpet should be chosen primarily from the point of view of durability and the practical necessity of having a carpet of which one dose not grow tried and that is easy to look after.

A carpet for the hall should preferably be heavy and robust, i.e. durable, while one for a dining room should have a dense, short pile since this is more practical and easy to look after.

Carpets with light colours are generally more practical than dark ones and an over-all pattern is more practical than a large, plain field.

As a general rule, carpets with a cotton warp lie better than those with a warp of wool or goats, hair. This disadvantage, however, can be eliminated by using a suitable under-carpet. A carpet with a cotton wrap will not wear so well.

When faced with a choice between the former, because in most cases there will probably be greater value in a product on which more time has been spent. Moreover, age will have given the carpet a certain prestige.

Experience has shown that many carpets become worn out or damaged too early owing to bad handling. Here, then, is some simple advice about caring for your carpets.

During the first months a new carpet should definitely not be beaten and preferably not vacuum cleaned, at any rate not too often. This is because the pile should first be trod well in, since this makes the surface less liable to wear.

A new carpet will moult a certain amount, depending on the length of its pile but this does not affect the quality or lifetime and will gradually cease. In wool piles, it is the short fibres that moult, leaving

mostly the shiny top hair, so that a carpet develops its proper sheen only after a certain amount of wear. Never try to pull out knots or thick threads; let an expert cut or fasten them.

If it becomes essential to beat a carpet, this should be done with a broad-bladed beating stick, not with an ordinary rattan or wooden stick. Otherwise, the fine warp or weft threads are easily broken, leaving a hole. Always beat the carpet from behind. The dust will then work out on to the top of the pile, from where it is easily removed with a dry brush used “with the pile”.

When vacuum cleaning, make sure that the mouthpiece is smooth; always work in the direction of the pile, so that the dust is not pressed back into the carpet. It is wrong to continue vacuum cleaning for as long as fluff keeps on coming into the cleaner, since in this way it is possible to destroy the carpet’s pile entirely.

Spots of dirt and fat should be removed with volatile cleaning agents: petrol or carbon tetrachloride. Always use a clean rag, and make sure that it is done in a well-ventilated room or out of doors to avoid the fumes from these liquids. Spots that are difficult to remove or a thoroughly dirty carpet should be washed by a specialist. Do not try to clean the carpet with, for instance, damp tea leaves, a wet rag or the like. The dust will only become moist and fasten more firmly in the caper, the colours will loose their freshness and the carpet will look shabby.

If moths are suspected, use suitable insecticide, carefully inspect the entire carpet, use the beater and vacuum cleaner and leave it to lie for hours in the sun and fresh air. Extensive moth damage may make it necessary to have the carpet washed, disinfected and moth-proofed at the same time. This is not particularly expensive but is extremely effective.

A ragged fringe or side is not only unsightly but also easily leads to the edge being torn. It is therefore best to have any damage mended as soon as possible. A good way of prolonging the lifetime of a carpet is to use a foundation of sponge rubber of month-proofed, honeycomb felt with a rubber base. This also prevents the carpet from sliding about, which is not only annoying but can be dangerous. The foundation should of course be slightly smaller than the carpet to avoid the foundation from being seen outside the edges.

When scrubbing or washing the floor, do not fold the carpet but roll it up. Moreover, make sure that the floor is quite dry before putting back the carpet as otherwise it will absorb the moisture and easily become mouldy and brittle. Do not polish the floor underneath the carpet as the polish may give rise to spots that are impossible to remove.

Remember that the lifetime of a carpet is very largely dependent upon the treatment it receives. Treated properly and carefully, it will last longer. Investing capital in a fine, hand-woven carpet is investing in a work of art.

In the carpet trade one can both read and hear completely misleading terms of various kinds used by ignorant salesmen to impress customers. One example is when a carpet is called a Zarnim. This is not the name for a carpet but simply the oriental term for the size approximately 3 ft. 4 in. X 5 ft. (100x150cm.). The term can be used regardless of the district from which the carpet comes, and of course a carpet should also be given the name of the district where it is made. Moreover, there are a number of double names; some are justified, e.g., Pendic-Bokhara of Royal-Kashan are far too specific to be relied on, since they may well be mis-applied by salesmen with insufficient knowledge. The additional terms are, of course, meant to emphasise the extra high quality of the carpet.

Another misleading term is Mecca-Shiraz. In fact, no Shiraz carpets are made in Mecca and this is simply a means of indicating a high quality and thereby justifying a higher price.

Laver-Kerman is often heard in the trade as a name for an older, thinner type of Kerman. Leaver is not a place but simply indicates a better quality than the ordinary Kerman. This may be a case of confusion with Ravar, north of Kerman, where very fine qualities used to be made.

Here, finally, are some terms with their explanations as well as some terms for sizes and patterns. Note that in the West, the term “rug” is used to denote pieces up to 8 ft. X 4 ft. approx. (224 x 122 cm.); anything larger is called a “carpet”.

With a completely new carpet that has not been washed with alkalis there will be no difference in colour; instead, inspect the parts of the carpet where uncoloured yarn borders with coloured. If the coloured dye has run on to the white are, an inferior dye has been used, though this discoloration may also be due to badly dyed weft yarn. It so happens that the weft of many types of carpet is dyed blue or red and since in general it is loosely woven and the dyer does not always use the best dyes for the warp and weft, the colours may run rather badly in the light parts of the carpet.

Another method is to dip a piece of white cloth in a strong soap solution and then rub it across the colours. If a lot of colour comes off on to the cloth, genuine dyes have not been used for that carpet. However, one must remember that yarn coloured with vegetable dyes may also give off some of its colour, though to a much slighter extent.

Even vegetable dyes can give carpet a rather hard colour composition. In order to soften this effect and, above all, to improve the sheen, carpets are sometimes washed with various chemicals by specialists, usually with good results, but this method should not be attempted by a layman. On inspection, the pile of such a carpet will be found to be paler (bleached) at the top. A blue may be lighter at the surface but is nonetheless blue. Certain composite colours may have changed, e.g., a green may lose its yellow and become more blue at the surface. This latter case shows that the green has been dyed by using indigo+vine leaves or promegranate peel.

The most beautiful changes in colour or shades come with age, which gives a slightly softer appearance and often heightens the sheen.

Modern chemical dyes

Early in the present century much better synthetic dyes were introduced, which include the so-called alizarin and the advanced chrome dyes. In quality and fastness they are now almost equal with the vegetable dyes, with one tiny “but”: the chemical dyes do not give the same warmth and softness as the vegetable dyes; instead, the carpet has a harder almost metallic sheen. This does soften, however, after about ten of fifteen years. Moreover, the dyes are fast to sunlight and washing, and experts hold that alizarin red and alizarin blue are fully comparable to the corresponding vegetable dyes, since they contain the same chemical substances.

Characteristic colours

The various carpet districts and countries have largely the following typical colours:

Turkestan, Hamadan, Seraband and Heriz:

Madder-lake

Turkey, Meshed and Birjand: cochineal red.

The Caucasus, China and nomads: blue.

Kerman, Qum, Isfahan and Nain: cream or white.

Arak (Sultanabad): pink.

Many large districts, Tabriz among them, do not make particular use of any one colour.

Weaving

As has already been stated, carpets are today woven in the Orient in exactly the same way as they were.

(Design)

Moreover, patterns strongly influenced by European taste are being used to a considerable extent. Thus, almost the entire production of Kerman is now concentrated on making carpets with floral patterns in the European style, with decorative medallions and broken floral borders, in order to satisfy buyers from Europe and other parts of the world. Carpets with European patterns and also intended for export are made in other districts as well.

This foreign element in the traditional patterns is naturally unfortunate and the native art is being threatened by new compositions. In some places and districts, however, this danger has been recognized and efforts are being made to restore the ancient patterns and at the same time abandon the modern thickness of certain carpets.

Turkey

In turkey carpets had been manufactured both for the domestic market and for export to Europe for centuries, but in about 1860 as a result of increased trade with Europe, manufacture was arranged in a more business-like manner and consequently the traditional patterns which had been associated with definite districts began to lose their identity. Prayer rugs are characteristic products of the old order. Their pattern and colour vary according to the place where they were made. The Turkish designs consist of geometrical forms and stylized floral patterns. As already mentioned, the portrayal of people and animals is prohibited, though in Kayseri and Brusa a number of hunting carpets have been produced in recent years, i.e., carpets portraying both people and animals.

Persia

There is an enormous wealth and variety of patterns in Persian production. The geometrical patterns-cross, star and rosette designs-gave way in the 16th century to another type consisting of medallions, flowering tendrils and arabesques. There was also a tendency to allow the field to dominate the carpet's pattern.

The details are largely based on naturalistic floral patterns; though geometrical shapes also appear. The Persian craftsmen also depicted people and animals, indicating the perspective by placing the figures above instead of behind one another.

The Caucasus

The Caucasian types of carpet comprise both prayer rugs and carpets with a medallion design and repeating patterns. When the design is based on a large motif, smaller devices are often used to fill in the space. The patterns are essentially geometrical. Even flowers and figures, when used, are highly stylized.

Turkestan

The Turk-man carpets derive their character from being produced by a nomadic people. The carpets were woven for use in the Kibitkan, the tent. Only in recent times have carpets been made for sale; these are often different in size from those made for home use. The various tribes have their characteristic patterns, though geometrical diamonds and octagons dominate.

China

The patterns of Chinese carpets differ considerably from those of Central Asia. This is because the art of carpet-making came to China relatively late, probably in the 15th-17th centuries (if one excepts the few pieces said to have been produced around the 1st century A.D.). The patterns then adopted for carpets were taken from the other arts.

There are several special types of Chinese carpet: the temple carpet consists of two or more square fields with the same pattern; the pillar carpet has a human figure or a dragon covering the entire field and was intended to be wrapped around a pillar. The design is meant to join at the sides, thus it has no borders. The picture carpet, as items name suggests, is intended to be seen from one end only.

The patterns of the carpets are often symbolic and refer to Chinese, Taoist or Buddhist traditions. The Chinese symbols include the dragon, which is the finest, and was originally the emperor's emblem, symbolizing a positive and beneficial force, and the very common sign for happiness, show, which appears in various designs. The swastika is very common and symbolizes long life, the number ten thousand and the heart of Buddha. Taoist symbols include the crane, indicating long life, the phoenix for immortality and the deer for prosperity. Another common animal symbol, of Buddhist origin, is the lion, the guardian of the temple. Border patterns may be of a general type such as the meander and pearl borders, but they also include stylized mountains and waves.

Modern development of Oriental rug and carpet-making has involved considerable rationalization of production methods, notably in the substitution of machine-spun for hand-spun yarns and the use of synthetic colouring. There has also been a movement to establish standard grades for the depth and density of pile.

Rationalization was made necessary largely because of rising costs, especially of labour. In those countries where rapidly improving economic and social conditions are giving much wider educational and career opportunities, it has become difficult to attract recruits to carpet-making, and considerably higher wages have now to be offered.

This situation is particularly acute in Persia, traditionally one of the major carpet-producing countries, but now transformed by the vast wealth derived from its oil exports. Although the government remains determined to promote the export of carpets, and subsidizes the industry, the greatly increased wages now necessary to attract an adequate labour force will drastically affect the final cost of the product. As a result, Persian hand-knotted carpets will face increasingly severe competition from those produced in less developed countries such as India and Pakistan, where good quality carpets, made by lower paid craftsmen, can still be manufactured and sold at considerably less cost. It remains to be seen whether, in these circumstances, Persian carpets can continue to dominate the world market.

In the mid-1970s the annual value of exported Persian carpets was around $100,000,000 to $120,000,000; of this, some $21,000,000-worrh went to the United States and some £6,000,000-worth to the United Kingdom. During the years 1945 to 1965 exports had been mainly of cheap quality examples of Hamadan, Shiraz, Karaja, Bahktiari, Tabriz and Kerman types. However, from the mid-1960s there has been increasing demand for better quality Isfahan, Nain, Keshan, Qum and Tabriz types, made with density grades as high as 650 knots per square inch, or about one million knots per square meter. It is satisfactory to note that, although the export market is still dominated by the cheaper varieties, production of high density carpets has increased during the last 20 years.

In Turkey there seems to have been no post-war increase in carpet-making, and those manufactured are still only small in size. Caucasian output remains low, although the industry is now state-controlled and production has marginally increased. The situation in Turkestan is similar, with a significant improvement in the quality of most of the Bokhara types produced. It is impossible even approximately to assess developments in China, although it seems likely that both the quality and the quantity of production have improved.

In India and Pakistan production and export of carpets, especially to Europe and the United States, has considerably increased. This success is largely due to a vast improvement in quality, both countries now producing close, tightly-knotted carpets with densities ranging from 160 to 390 knots pet square inch or about 25 to 60 knots per square centimetre, and imitating Persian, Turkish and Turk-man design. In the mid-1970s India exported approximately $15,000,000-worth of carpets annually to the United States and £1.200, 000-worth to the United Kingdom; Pakistan's receipts were around $ 5,000,000 and £2,400,000 respectively.

The following description of oriental carpets is divided into six major groups in accordance with the largest producer counties. These will be treated in the following order:

TURKEY, PERSIA, THE CAUCASUS, TURKESTAN, CHINA, and INDIA and PAKISTAN

This is followed by a section on woven carpets and Kelim.

The names of the many different carpets on the market indicate the place of district where they were made, or the name of the tribe which produced them.

There is always something to distinguish carpets of different districts. It may be the knot technique, the material, the colour, the pattern or the way in which the selvages are formed.

However, migration, intermarriage, and direct imitation of the techniques and patterns of other places may make it quite difficult for even a good expert to say where a carpet was produced and what its name should be. But anyone who has really become acquainted with the peculiarities of the various types should be able to do this ninety-five per cent of the time.

Another source of confusion is that the same name can be spelt in so many different ways. The English spelling used here is that which best indicates the Persian pronunciation of the different names.

The description of the major carpet districts includes some notes on historical, geographical and cultural circumstances that are of significance to the production of carpets.

TURKEY

The oldest existing Turkish carpets are to be found in the city of Konya on the ancient trade route from Syria and Mesopotamia toe Europe. They are considered to be from the 13th century, when the Seljuk dynasty was still in power in Asia Minor with Konya as the capital. Several mosques and burial chambers tell of the lively pilgrim city and commercial centre of that time. Having lain for centuries in the Ala-ed-dim mosque, the carpets have now been removed to the temple of the Maulavier Order, which is now a museum foe Seljuk and Osman art.

The craftsmen of Konya and the entire province have a traditional name for their masterly skill and the district is a centre for Turkish carpet-making. The place has been known for thousands of years. Monuments with a curious pictorial writing show that it was occupied by the Hitties, who ruled over much of Asia Minor from about 2100-1300 B.C. Konya (ancient Iconium) remained important for many centuries. Saint Paul suffered persecution there during his journeys through Asia Minor. Later it was the capital of the Roman province of Lycaonia, and from 1099 A.D. of the Seljuk sultanate of Rum.

Turkish carpet-making has been influenced to a considerable extent by the Greeks, who for centuries dominated production on the west coast of Anatolia and the islands off the mainland. It was chiefly the Greek communities that, together with the Armenians and Kurds, took care of production in Turkey. The Greeks, however, were expelled when the republic was set up in 1923, and Turkey’s population now consists of about 86 per cent of Turks. There is now no national religion but the Mohammedan creed is acknowledged by the great majority.

In the 16th and 17 th centuries the standard of Turkish carpets was very high and the pieces from those times are fully equal to the carpets of Persia. The sultans imported Persian designers as well as extremely skilful dyers and weavers who were commissioned to produce magnificent articles for court.

In the home, carpets were woven for domestic use, particular care being taken with the prayer rugs. Almost every home had one or two looms. Carpet-making was a traditional domestic craft particularly in Izmir (Smyrna), Ghiordes, Usak, Kula and Sivas. During the second part of the 19th century European trading houses started the mass production of large carpets of coarse quality with imitation Persian designs. With the introduction of aniline dyes for this commissioned work the vegetable dyes traditionally used in the East began to be abandoned. The art of carpet-making was in danger of being degraded.

Turkish carpets are very different in type from Persian. They are more coarsely woven and always with the Ghiordes knot. The patterns are different, being based more on prayer niches, and the designs

are more geometrical. The Koran does not permit the portrayal of people and animals,though hunting scenes have appeared in recent years on carpets from Kayseri and Brusa. They are probably woven by Armenians.

Carpets from Asia Minor are collectively known as Anatolian. The varieties are named after their place of manufacture or the commercial centre where they are purchased for further transport. Thus a Smyrna carpet may have been woven in the interior-many come from the south-western province of Aydin. The largest producers are Ankara and the province of Konya. The older carpets from the city of Usak beyond Smyrna, an ancient seat of carpet-marking, are easily recognized by their technique and exquisite colours.

However, it is not very convenient to describe the Turkish carpets on a geographical basis and consequently they have been grouped into older and modern types. The former group includes the carpets still being made today according to ancient methods without any European influence.

The latter, with each carpet noted as “modern Production”, will describe later.