

KNOTTED CARPETS FROM THE TAKLAMAKAN: A MEDIUM OF IDEOLOGICAL AND AESTHETIC EXCHANGE ON THE SILK ROAD, 700 BCE-700 CE

Zhang He 张禾

William Paterson University

More than a century ago, while exploring Xinjiang, or Chinese Central Asia, the British archaeologist Aurel Stein discovered some small fragments of knotted carpets in Niya, Kaladun, Loulan and a few minor places in the Taklamakan Desert. These fragments are now stored at the Victoria and Albert Museum in London. At the time, Stein's collection, dated from the first century BCE to the fifth century CE, represented the earliest existing samples of knotted carpets ever recorded. Then, in the 1950s, Soviet archaeologists excavated several knotted carpet pieces, including a complete one, in the Pazyryk Valley in the Altai region. The Pazyryk specimen, dated to 400 BCE, caused a huge sensation when it was recognized as being the earliest knotted carpet ever found.

However, since the 1950s, there have been several major discoveries in Xinjiang [Fig. 1]. These discoveries have not only pushed back the earliest dates to 700 BCE, but have also yielded more complete pieces of higher quality and greater diversity in motifs, thereby greatly enlarging our knowledge of knotted carpets in the oases of the Taklamakan Desert. The most important are seven pieces of knotted carpets excavated in 2003 from Yanghai 洋海, an ancient cemetery in Shanshan County, Turfan District.

Dated to as early as 700 BCE (Jia et al. 2009), the Yanghai carpet pieces are approximately three centuries older than the Pazyryk carpets (Rudenko 1970), making them the earliest knotted carpets found anywhere in the world. This earlier date, along with the quantity of the specimens, suggests that the oases of the Taklamakan Desert were some of the earliest producers of knotted carpets.

The Yanghai site is not alone. Since the 1950s, sites near Niya, from which Stein had recovered some tools for carpet-making and documents in Karosthi referring to business transactions involving carpets—also yielded approximately ten pieces, each dated to between the 2nd and 4th centuries CE. The fact that these documents contained the earliest and most frequent terminology for carpets yet found, along with the large number of the actual carpets excavated, indicate that Niya and a few other towns in the Khotan region were centers of



Fig. 1. Map of Xinjiang Uyghur Autonomous Region. Sites where knotted carpets were discovered are marked by a red triangle. Cartography by Debbie Newell.

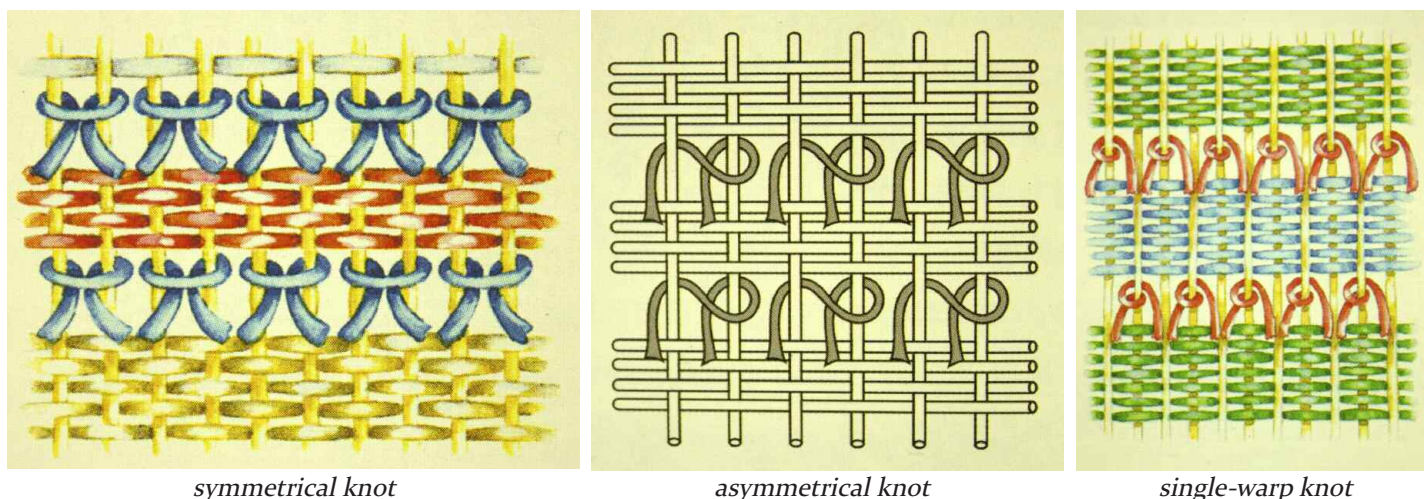


Fig. 2. Illustration of knotting techniques (Jia, Li, and Zhang 2009).

carpet-making. And indeed, in Shanpula, a village by the east bank of the Yurong River in Luopu County, Khotan District, many pieces of knotted carpets, often revealing the most beautiful colors and complex designs, have also been found.

There are several more sites in the Taklamakan, such as Loulan, Yingpan, and Zhagunluk, where tens of complete and large fragment carpets with interesting and beautiful designs have been found in recent decades [see Fig. 1]. All these discoveries have filled in many of the gaps in the history of knotted carpet-making that exist between the Pazyryk samples (400 BCE) and the appearance of the knotted carpets specimens in Fostat, Egypt during the 9th-13th centuries CE and later in Anatolia during the 13th-14th centuries CE (Aslanapa 1988).

In light of all these new and interesting finds, it is imperative that we situate Taklamakan carpet specimens with a global history of knotted carpet production. It is now clear that the knotted carpet-making industry has thousands of years of history in the Khotan region. Together with silk and jade, knotted carpets may be considered a third type of unique merchandise that passed through the Silk Road via Khotan for thousands of years.

This article will focus on the earliest appearance of the carpet around 700 BCE to the disappearance of the material from the archaeological record after the Tang dynasty (618-907 CE). It will provide a brief introduction to the basic technique of weaving and knotting, an examination of the terminol-

ogy found in several languages, descriptions of some major findings, and analyses of the motifs and styles in relation to several different cultures crossing the Silk Road.

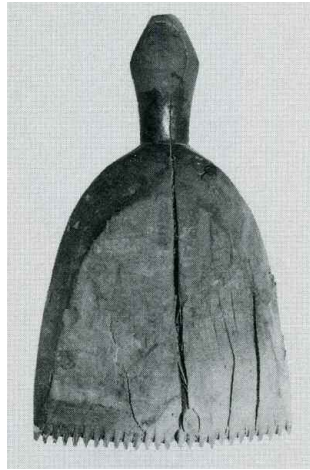
Knotted Carpets

What is a knotted carpet? A carpet is a piece of fabric to cover a bed or floor. The fabric can be pressed as raw wool into felt, flat-woven as tapestry, or woven with extra yarn threads piled up on warps to produce a thicker and fluffier surface. This last type is called the knotted pile carpet, or simply knotted carpet.

To make a knotted carpet, one starts with the plain weaving of vertical warp threads and horizontal weft threads. After one or several rows of wefts, extra threads will be added by tying on the warps and then cutting the threads, with one or centimeter-long thread-heads left on. There are different methods for tying the knots [Fig. 2]. Symmetrical knotting is when the thread is tied on two adjacent warps, with a loop on each warp, and ended between the warps. Asymmetrical knotting refers to the process of looping the thread on one warp, extending the thread on the next warp, and then cut, leaving the ends open. Single-warp knotting is when the thread makes a loop on one warp, before being cut, skipping one warp, and tied again; the next row of knots would then change the warp, with the empty warp tied and skipping the former tied warp. A fourth method is called “U-shaped knotting” (Jia 2015: 184). This refers to the way the thread is laid on a single warp, cut, then skips one



Niya HTBoo437



Niya NN266



Kaladun

Fig. 3. Weft beaters from Niya and Kaladun (from left: author photo; Zhongri Niya 1996; Yue 2009).

warp and is tied again. According to my analysis, the samples examined in this article are single-warp knots with a clear loop.¹

Historically, the three types of tying or knotting method have been given several different names. For instance, the symmetrical knot is also known as the Turkish or Ghiordes knot; the asymmetrical knot as a Persian or Sehna knot; and the single-warp knot as the Spanish knot. These names are not associated with the cultural origins of the techniques (Zhang 2018b), since all three techniques were already known in the Taklamakan region long before they were affiliated with any particular ethnic group—much less Spaniards! In order to avoid confusion, I will use only those terms that describe the structure of the knots: symmetrical, asymmetrical, and single-warp.

Ground or foundation weaving is basically plain weaving with warp and weft crossing each other evenly. Most carpets in this study have plain ground weaving, but there are also occasional twill (Niya and Zhagunluq) and even slit-tapestry (Loulan) weaving. The slit-tapestry weaving is found on the edge of a small knotted carpet fragment found by Stein, where a series of stepped triangles in blue and red colors.

The materials used to create all of the warps, wefts, and knotted piles in knotted carpets in the Taklamakan region from 700 BCE to 700 CE mostly consist of sheep wool and goat wool, with the occasional mixture of cow and horse hair with sheep wool. Indeed, it was not until relatively recent times that weavers in Xinjiang began to use

cotton threads for ground warps and wefts (Jia et al. 2009). This differs from other parts of the world, such as in Egypt, Anatolia, and India, where weavers have long used flax and later cotton for warps and wefts. Even today, experts in Xinjiang can often tell the origins of wool simply by touch, and determine whether it came from Khotan or Loulan. The Khotan region is often thought to produce the best quality wool in the region.

Tools that are used for carpet-making include the ground, upright looms, knives, weft-beaters, and scissors. Excavations have not yielded any physical evidence of looms thus far. But according to the studies of Zhang and Jia (1984), upright looms were very likely used early in the history of knotted carpets. The ground loom was occasionally used for narrow strip bands of weaving, but probably not for knotted ones. In Niya, at least eight weft-beaters have been found (see also Zhongri Niya 1996).² Made of wood, each one is about the size of a human hand, with a little handle on one end. Though the size of the beaters varies, the average measurement is 20 x 10 cm, including the handle. The quantity of the weft-beaters found at Niya points to the likelihood of the Niya-Khotan region as a center of carpet-making [Fig. 3].

Terminology

What did the people who lived in the ancient oases of the Taklamakan call their various textile products? Thanks to the Kharosthi, Khotanese, Sogdian, and Chinese documents recovered from the Taklamakan, among others, we now know some of

those terms.³ Among them, the best known is that included in the Kharosthi documents discovered in Niya by Stein, in which *Khotani* carpets are mentioned numerous times. With the subsequent discoveries of many actual carpets Niya and Shanpula as well, it is not surprising to learn that *Khotani* carpets were already well-known among the oases in the Taklamakan at least seventeen hundred years ago. The several hundred Niya documents, written in Kharosthi, give us not only the terminology of many kinds of local products, but also a good glimpse into the economic and social life of the region during the third and fourth centuries (Burrow 1940). In these documents, words for carpets, such as *kojava* and *tavastaga*, appear frequently as commodities for commercial transactions, payments, and gifts.

Beginning in the second half of the fourth century and into the early part of the fifth century CE, the people of Khotan adopted the Brahmi script to record an eastern Iranian language known as Saka. This new language, referred to as the Khotan-Saka language, or Khotanese, by the English scholar Harold Walter Bailey, provided new words for carpets. According to Bailey's *Dictionary of Khotan Saka* (1979), from about the fourth to the eleventh century CE, there were two main words for carpets in Khotanese: *gahāvara* and *thauracaihā*.

As early as the first century CE, Chinese documents make mention of various sorts of textiles produced in the "Western Region," which partially overlapped with modern-day Xinjiang. These terms include *ji* 罽, *qushu* or *quyu* 毳毼, and *tadeng* 氍毹. This last term was used by the famous historian Ban Gu 班固 (?-92 CE) in a letter to his brother Ban Chao 班超 (32-102 CE), the general of the Western Region, asking him to buy *tadeng* from the Yuezhi tribes (Yu 1600). Since some of these terms are known foreign transliterations, I have pared them down to two words, which parallel the terms found in the Kharosthi and Khotanese documents: *qushu* and *tadeng*.

The Sogdians, who spoke an eastern Iranian language, also left their own terminology for certain textiles. In Sogdian texts, carpets are called *fāspā* and *parštarn*, which are derived from the Old Persian words *fraspāt* and *upastərəna*. These Sogdian terms were in use from the 4th to 10th centuries CE.

As for Turkic terminology, the earliest terms for carpets appear in Maḥmūd Kāshgari's *Turkic Dictionary* (Kashgari 1072-74). According to Kāshgari's dictionary and those that followed, these terms include the words *kiviz*, *tavrattī*, and *töşe:k*.

Although the paired terms I listed above all refer to carpets, it is often unclear whether they refer to a flat-woven carpet or knotted-pile carpet. The ancient weavers and traders of these textiles must have known the difference (that is why there were so many different terms), but these distinctions were likely blurred in daily usage. (Even today, people speaking in English use "rugs" and "carpets" to refer to both knotted and piled carpets.) Since there is no record of any explanation of these ancient terminologies, we must differentiate among the swarms of words to figure out which ones were the most likely terms for the knotted carpets.

According to my analysis, from at least the third to the eleventh century CE, the terms used in the Taklamakan region for a knotted carpet were likely as follows:

tavastaga — Niya Kharosthi; 3rd-4th c. CE
thauracaihā — Khotanese; 4th-11th c. CE
fāspā, *parštarn* — Sogdian; 4th-10th c. CE
tadeng 氍毹 — Chinese; 3rd c. BCE - 13th c. CE
tavrattī, *töşe:k* — Turkic; 8th-11th c. CE

After 800 CE, many more terms would appear from New Persian languages to name different types of woven textiles. These include words such as *gelim*, *kilim*, *qhali*, *hali*, *palaz*, and *zulus*. Two of these terms—*gelim/kilim* and *qali/hali*—would eventually be adopted by Uyghur and Kazakh weavers, and are still used in the region today. In their present-day usage, *gelim/kilim* is used to refer to a flat-woven textile, while *qali/hali* refers mostly to knotted carpets.

In some later Chinese documents, however, several descriptive words were used to specify knotted carpets. In the records of a Yuan Dynasty (1279-1368) production book for the Office of Felt (Zhan Ju) and Office of Cut-Yarn Carpets and Wax-dye Cloth (Jianhua maotan labu ju), we find the phrases "cut-yarn *tan*" 剪绒毯 and "cut-yarn patterned *tan*" 剪绒花毯 used to describe the production of knotted carpets for Emperor Yingzong's (Gegeen Khan r.



Fig. 4a-c. Three carpet fragments from Yanghai (from left: Jia 2015; Jia, Li, and Zhang 2009; Jia 2015).

1320-1323) mausoleum hall and for the hall of Empress Sadabala (or Sugabala) in the year of 1328. And in 1906, near the end of the Qing Dynasty, the *Xinjiang Gazetteer* includes mention of a “planted yarn carpet” (*zairong tan* 栽绒毯), a term now regularly used in Chinese.

Discoveries of the 20th and 21st Centuries

Stein’s Findings

During his expeditions in the Taklamakan desert in the early 20th century, Aurel Stein removed some small fragments of knotted carpets from the Loulan sites LC and LE and from Karadong/Keriya. The Loulan LC fragments were subsequently dated from 150 BCE-60 CE, while the Loulan LE and Karadong fragments were dated to 200-400 CE. Although these pieces are small in size, experts have identified three knotting techniques used in them: symmetrical, asymmetrical, and single-warp knots. Currently most of the Stein’s carpet fragments are stored in the Victoria and Albert Museum in London and can be viewed online.

Since Stein’s collections are all so small and fragmentary, there have been very few attempts to study the design patterns. What remains on these fragments are short straight and diagonal lines, little dots, hooks, and diamonds. The color palette includes red, pink, dark and light blue, and dark and light brown. Judging by the few limited motifs, these fragments may be roughly classified into geometric and dynamic or free-style designs.

Yanghai (ca. 700 BCE)

Since 2003, the Yanghai discoveries have included not one or two but seven large pieces of knotted carpets, with a range of dates between 1100 BCE-700 BCE—thus making them the oldest knotted

carpets ever found in the modern world (Jia et al. 2009: 12; and Jia 2015: 167).⁴ The ancient cemetery site of Yanghai is in Shanshan County, Turfan District. The cemetery is estimated to contain more than two thousand tombs spanning a period of about one thousand years. There are four chronological phases (Tulufanishi 2019), with the knotted carpets belonging to the second phase (11th-8th century BCE) and early third phase (7th-4th century BCE). All seven fragments are knotted in symmetrical knots on plain woven ground, and have been identified as saddle mats (Jia 2015). The designs on the carpets are mostly triangles, diamonds, and a kind of waving interlocking F-motif. They do not contain any live figures.

03SYIM87:23 / 40x78cm / Symmetrical Knot

This piece [Fig. 4a] has a diamond-shaped grid pattern in blue and red. On the tip of the blue diamond, there is a little light blue dot, and the tip of the red diamond has a yellow dot. On the reverse side there are four layers of felt in natural white color, which could indicate a saddle mat.

03SYIM138:2 / 53x43cm / Symmetrical Knot

This piece [Fig. 4b] presents a pattern of triangles in alternating red and blue colors. On each tip of a triangle there is a yellow dot.

03SYIM189:7 / 53x49.5cm / Symmetrical Knot

This piece [Fig. 4c-d] shows a little more complex design. A letter F motif is doubled head-to-head sharing the top line. This motif repeats itself in a curvilinear fashion in alternative colors of red, yellow, blue, and green, creating an impression of water waves.



Fig. 4d. Detail of Yanghai carpet in Fig. 4c (Yue 2009).

Zhagunluke (ca. 3rd Century BCE)

The Zhagunluke site lies in Qiemo County, Bayinguoleng Mongol Autonomous District. It was first excavated in 1996–98, and its carpet fragments have been dated to the 3rd-2nd century BCE. From a chronological perspective, the Zhagunluke site comes after Yanghai. There are two pieces of note.



Fig. 5. Plain carpet from Zhagunluk, Xinjiang Uyghur Autonomous Region Museum (author photo).

96QZIIM2:9 / 84x73cm / Asymmetrical Knot

This piece [Fig. 5] is in a plain natural off-white color with no apparent decorative designs, although there are some dark brown yarn heads on the foundation. It is asymmetrically knotted on a twill woven ground. The use of twill ground weaving is rare, with only one other piece from Niya made by such means. The knotting on

this piece seems to be the earliest use of this kind in the Taklamakan.

98QZIM124:8-9/10x18.5cm/Asymmetrical Knot

This carpet uses orange color for the ground and red, blue, brown, and yellow colors for the knotted threads. Unfortunately, the knotted threads are so badly worn that it is difficult to identify any specific design motif (see Xinjiang Weiwuer zizhiqu bowuguan 2016: 330–31)

Yingpan (ca. 200-400 CE)

The site of Yingpan, which lies in Yuli County, Bayinguoleng Mongol Autonomous District, was visited by Stein, Sven Hedin, and a few other early explorers, but none of them reporting finding knotted carpet. Later on, however, the site yielded several large pieces, including at least three near complete ones—possibly more on the black market—with interesting designs. Most of them are dated to between 200-400 CE, and all three types of knotting are applied.

89YYC3:1 / 95x260cm / Symmetrical Knot

In 1989, archaeologists discovered a carpet with a lion image in the central field, an inner border with diamonds, and an outer border with short bars and checker-board patterns [Fig. 6]. The lion is more geometric in its body shape. Its face is in frontal perspective within a square, while its legs and paws are defined with straight lines and sharp angles. The basic color is bright yellow, which is still amazingly bright. Other colors include red, blue, and brown. Its knotting is symmetrical on a plain foundation. The carpet was cut on all four sides, so the designs on the outer borders are not clear.

Fig. 6. Carpet with a lion in geometric style, Yingpan (Jia, Li, and Zhang 2009).

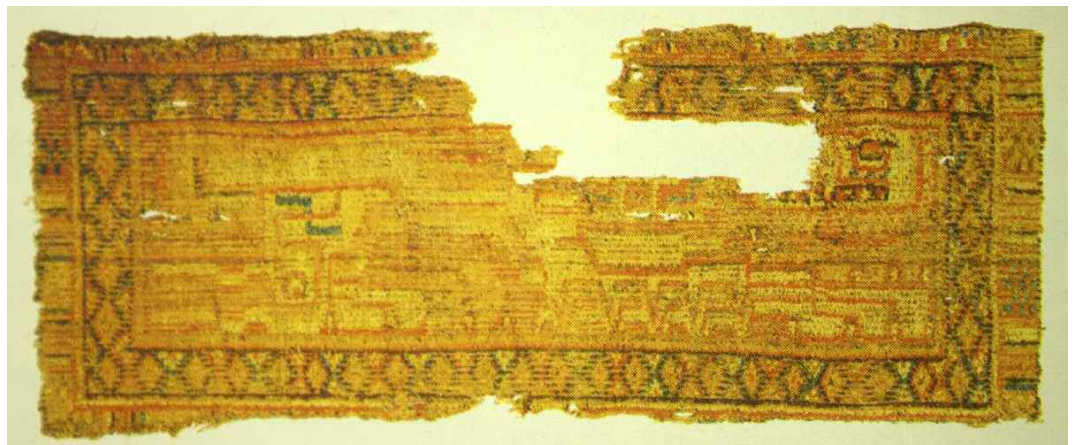




Fig. 7. Carpet with a lion in dynamic style, Yingpan (Yue 2009).

95YYM15:1 / 312x178cm / Single-warp Knot

In sharp contrast to the geometric lion design described in Fig. 6, a fragment discovered in 1995 features a dynamic crouching lion with its body defined by curving lines [Fig. 7]. With a more natural look, this lion also shows its face frontally. Its rich mane is zigzagged in several layers and its rear body reveals a hip and hindlegs in natural shapes. With a lifted waist, the lion displays its energy and movement. The inner border is made of organic foliage, an obvious Hellenistic motif. The outer borders, however, are cut off. The ground color is deep red, the lion's body is beige outlined in blue, and the lion's face and features are outlined in deep red. This carpet was found covering a coffin.

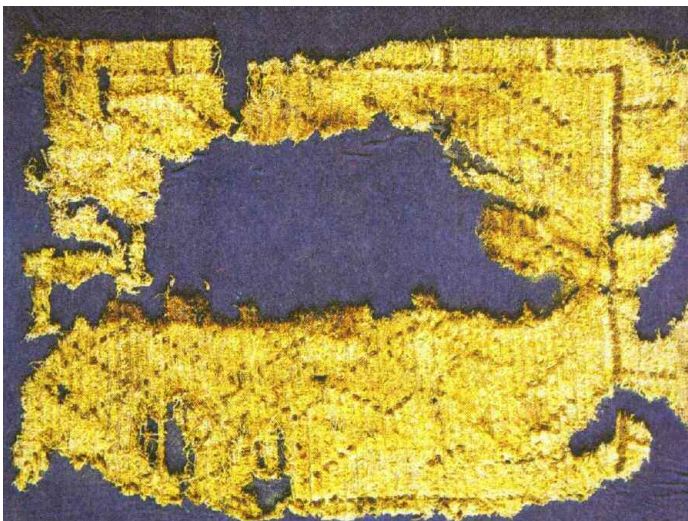


Fig. 8. Carpet with a diamond grid, Yingpan (Jia 2015).

99YYM12:8 / 215x115cm / Symmetrical Knot

An excavation in 1999 yielded a symmetrically knotted carpet with large diamond grid lines in dark brown or black color throughout the design, with only the border in rectangular outlines [Fig. 8]. The ground color is beige or light yellow. The di-

amonds include the colors of natural brown, pink, and light yellow. This piece was found wrapped around a body in the tomb. It resembles a fragment collected by Stein, probably from Loulan, and now stored in the Indian National Museum in New Delhi.

Loulan (c. 150 BCE-60 CE; 1-200 CE; 200-400 CE)

Loulan is where Stein found most of his carpet samples, but none has a complete design. While a handful of pieces show

clear straight and short lines, along with a series of scrolls, obviously intended as border designs, there is a small piece that carries enough lines and colors that one may see a dynamic tendency for the design. It contains dark blue lines done in a cursive fashion, bright red color for ground, and yellowish colors in some areas and for border lines. This piece is reportedly tied in single-warp knotting. In the 1990s and 2000s, many new pieces were unearthed from Loulan, including a few complete ones. Unfortunately, some large pieces were smuggled out of the country.

98RLEM1 / 266x103cm / Symmetrical Knot

A relatively complete piece [Fig. 9, 9a], now stored in Xinjiang Institute of Archaeology, shows a design of a geometric lion identical to the one from Yingpan [see Fig. 6], which is also stored in the same institute. This piece was found in Stein's site LE (now called *fangcheng* 方城). It looks like it was made on the same blueprint as the one in Yingpan, except for the colors. The center image consists of a (crouching?) lion situated on the right. The face is in frontal perspective and squared with big eyes and a mouth with exposed fangs, while the background color in the central field is red. The inner border has a diamond-framed pattern all around, and in each diamond there are various colors of red, yellow, brown, blue, and white.

03RLEM1 / 71.5x40cm / Symmetrical Knot

Though another big piece also came from the same LE site, archaeologists were only able to recover three small fragments from the same carpet. Among these, the largest one [Fig. 10] shows what appears to be a tiger's tail with stripes, done in a natural curved manner. The background is black



Fig. 9. Carpet with a lion in geometric style, Loulan (Yue 2009).



Fig. 9a. Detail of Fig. 9, Xinjiang Institute of Archaeology (author photo).



Fig. 10. Carpet with a tiger's tail, Loulan(?), Xinjiang Institute of Archaeology (author photo).

filled with little diamond-shaped motifs in beige. A little portion of the inner border has been preserved, with its flora and foliage motifs done in Hellenistic style. Based on an examination of the nearly complete piece of this carpet, it is certain that this portion of the tiger's tail belongs to this carpet. The complete design shows two felines. Judging by the two bodies and tails, one striped (left) and one plain (right), these are probably intended to be a tiger and a lion. The two felines are shown in profile, face to face, jumping up, as if to attack each other. The treatment of the images is natural and free, and the colors for the animals are brightly reddish or orange and yellow. The outer border has a row of rectangles filled in with grid-like pattern in various colors.



Fig. 11. Carpet with grapes in diamond grid, Loulan (Jia 2015).

Number unavailable / 258x131cm / Symmetrical Knot

Only a small portion of this piece [Fig. 11], likely looted from the very same LE site, has been recovered by archaeologists. The piece measures 258 x 131 cm in a pattern of diamond framework filled in with bunches of grapes and leaves or possibly insects. The colors of the bunches of grapes include black with white dots, red with white dots, red with black dots, and beige with black dots. The inner border is composed of V-shaped motifs with spirals at the two heads, and a candle-stand like motif with three sticks. The outer border shows short, zigzagged diagonal lines in alternative colors.

80RLMB2:93 / 18x9cm / Single-warp Knot (knots on double sides)

The site of Gutai (孤台, Stein's LC) has yielded a small piece, made in unique fashion, that has been dated to the 1st-3rd centuries CE. It has single-warp knots piled on both reverse and obverse sides. The more decorative front side includes the colors of red, blue, yellow, green, orange, cream, and white. The other side contains only natural white color knotted threads. The piece is too small and damaged to show any particular design. This double-sided knotting method appears in Shanpula (Khotan) as well (see Fig. 17a). At various Loulan sites, many small fragments have been found that can be dated to earlier eras, for example, 2nd century BCE to 2nd century CE. Most of these feature geometric motifs such as bars, triangles, squared scrolls, and checker-boards. They are either too small or too worn-out to render clear designs.

Niya (ca. 200-400 CE)

Though Stein visited Niya, one of his favorite sites, three times, he did not find a single piece of knotted carpet. He did, however, unearth a few weft beaters for knotted carpet weaving and hundreds of Kharosthi documents. In 1959, two small pieces were found at Niya (Xinjiang Weiwuer zizhiqu bowuguan 1975). Then in 1995, a joint Sino-Japanese team found seven pieces, among which at least four or five were nearly complete. All were found either wrapping or covering a body [Fig. 12] (Zhongri Niya 1999b, 2007), which resulted in significant damage to the colors of the designs. It appears as if these pieces were already worn long before they were used for the burial.

Fig. 12. Tomb with a body covered with a carpet, Niya (Zhongri Niya 1996b).



59MNM1:51, 52 / 30x21cm, 16x14cm / Symmetrical Knot

The two small pieces discovered in 1959 [Fig. 13] contained symmetrical knots, with black, brown, red, blue/green colors and geometric designs.

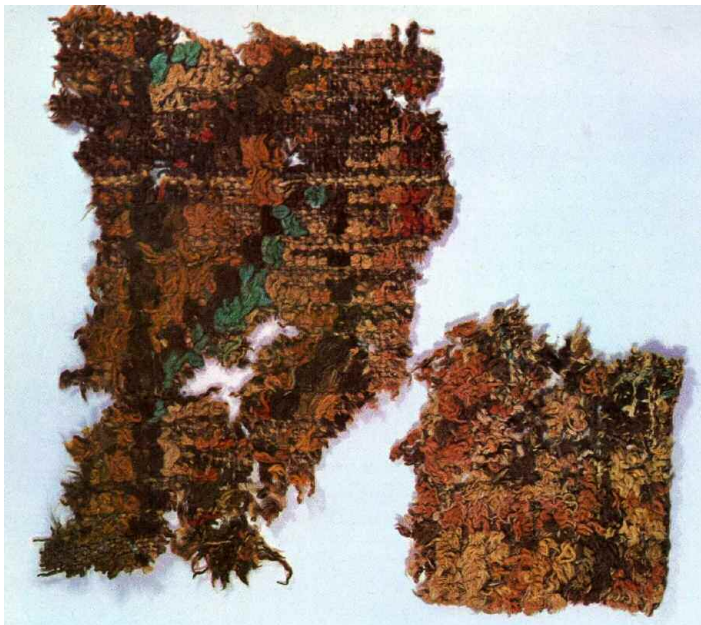


Fig. 13. Carpet fragments from Niya (Xinjiang Weiwuer zizhiqu bowuguan 1975).

95MNI3:28 / 295x128cm / Symmetrical Knot

A large piece of impressive size, this carpet features a diamond grid (known as a “turtle-shell” or *guijia wen* 龟甲纹 pattern among Chinese scholars). It also includes small triangles and diamonds, with each diamond of the grid done in different colors. Each joint of the net has an emphasized dot in darker color. The inner border is composed of a series of rectangles, each of which contains a heart-shaped leaf. The middle border has a series of scroll-running waves done in a relatively natural manner. The outer border has four or five stripes in different shades of colors, from lighter to darker.

95MNI8:3 / 238x118cm / Symmetrical Knot

This is another large piece [Fig. 14], one that already had one of its ends cut off when it was unearthed, thus making it impossible to determine the original length. Much like the previous carpet, it also has a blue diamond grid, with each diamond containing an eight-petal flower in alternating colors of yellow, green, and pink. The background color is red-brown. There are four borders. The inner border has a few stripes of rainbow-like colors and series of triangles in green and pink color

to make both positive and negative triangles. The next border is wide with a broad square zigzag line in yellow, and in each open square on both sides of the line there is a six-petal flower set against black or dark brown ground. Next to this border is the one with running-scroll waves in dark brown on yellow. The outer border has stripes in yellow, blue, green, red, white, and brown.

95MNI3:61 / 150x110cm / Symmetrical Knot

A third large piece is incomplete. The design is similar to the last two carpets: a basic diamond grid in the central field, with each diamond containing small triangles of different colors. Its inner border is a series of rectangles with a heart-shaped leaf in each. The middle border has running square scroll waves. The outer border has stripes of rainbow-like colors.

95MNI3:29 / 112x58cm / Symmetrical and Asymmetrical Knots

One of the large fragments shows a simple design of only line stripes, which appear yellow, light yellow, brown, and orange. This piece is special in that its ground weaving is twill and there are two kinds of knots used together: symmetrical and asymmetrical knots.

95MNI4 / Measurement NA / Knot NA

This large piece covers, and likely wraps, a body, as shown in the black and white photo [see Fig. 12]. It appears to have some simple stripes in a couple of different colors.

Fig. 14. Carpet detail (95MNI8:3), Niya (Zhongri Niya 2007).





Fig. 15. Carpet with leaves, Shanpula (Yue 2009).

Shanpula-excavated (ca. 200 BCE-200 CE)

In the 1980s and 90s, archaeologists excavated six knotted carpets in Shanpula, Luopu County, Khotan District. In the early 2000s, more pieces were found on the edge of the previous excavated sites. They are divided into two separate groups.

84LSIK2:1 / 76x74cm / Symmetrical Knot

This is a complete carpet [Fig. 15], clearly a saddle mat, and found still on the saddle of a horse in a pit. It is in a very good condition. The piece has been exhibited in and out of China on many occasions, so it is already popularly known. Almost a square, the central field of the design is also a square with a diamond grid in red color. Within each diamond is a heart-shaped leaf with a little stem and two or four tiny branches in yellow on black background; the body of the leaf is pink and the stems are yellow. Although this motif is identified as a leaf, it also seems to resemble some sort of little insect [Fig. 15a]. The center is framed with red, yellow, orange, and black colors. Next to the frame is the wide inner border running through with a thin blue square zigzag line. In each open square, there is a large five-partite leaf in yellow on black and bright red background. The outer border has two different patterns on two opposite sides: the upper and bottom sides show a series of chevrons in red, black, orange, yellow, and white



Fig. 15a. Details from the carpet in Fig. 15 (Xinjiang Weiwuer zizhiqu bowuguan 2001).

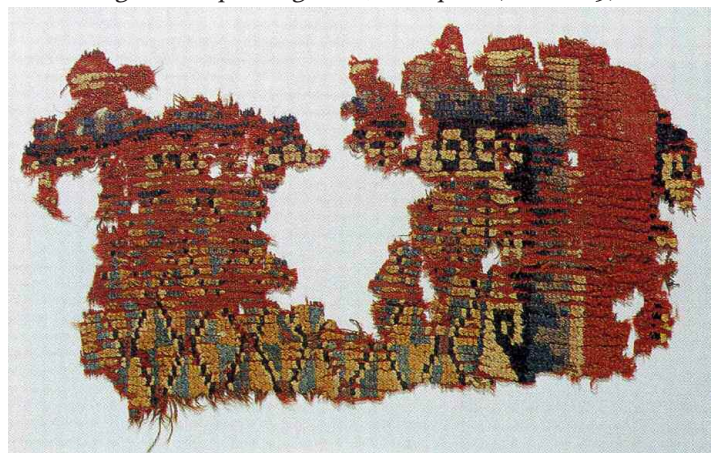
colors, while the other two opposite sides reveal diagonal lines in the order of the same colors as the other sides.

The two shapes of the leaves on the design seem to be the leaves of the *populus euphratica* tree, the most common trees one sees in the Taklamakan Desert. This tree produces several very differently shaped leaves, sometimes on a single small branch. Some are long and thin like willow leaves, some are oval or heart-shaped, some are short and wide with tiny teeth similar to the maidenhair leaves, and some are long with two- or three-tiered splits.

84LSIM01:161 / 31x17.5cm / Symmetrical Knot

Although only a corner, this fragment [Fig. 16] is good enough to show clear design motifs and colors. The center design is a diamond grid in black color; in each diamond are four small triangles in yellow and light blue colors. The inner border is a row of running square scroll waves in black and beige. The middle border is a series of triangles in

Fig. 16. Carpet fragment, Shanpula (Yue 2009).



deep blue and beige against each other. And the outer border is plain with red color.

84LSIMo1:347 / 67x71cm / Asymmetrical Knot

This piece shows a simple design of long stripes in the colors of red, deep blue, light blue, grass green, yellow, and brown.

84LSIM1:405 / 35x27cm / Symmetrical Knot

This is a plain piece with natural color.

Shanpula-looted (ca. 400-600 CE)

In 2008, on the edge of the main cemetery in Shanpula where the most woolen textiles were excavated, five complete knotted carpets were dug up by looters who were later caught by the police. All five carpets are made of single-warp knots, and one of them, the largest of all, has a full pile also on the reverse side in a natural plain color. All five have striking bright colors and show a unique figurative and naturalistic design style, different from most of the others discussed so far. Four of the five carpets also have some Brahmi script in the Khotan-Saka language woven in. The author has already done both an iconographic and stylistic analysis (Zhang 2010, 2012) and will only summarize the descriptions here.

o8LPSB1 / 265x150cm / Single-warp Knot (knots on double sides)

This large piece [Fig. 17, 17a] has at least thirty-five human figures and some trees and furniture, arranged in seven rows in the center area. In the second row (counting from the bottom up), there are three or four words of Brahmi script that appear to read “*ha dī vā*” (Duan Qing 2010), but they have not been successfully deciphered yet. The human figures are in a rich and large repertoire, which includes young and old people, men, women, children, a



Fig. 17. Carpet with human figures and Brahmi/Khotanese inscriptions, Shanpula (photo by Qi Xiaoshan).



Fig. 17a. Back side of the carpet in Fig. 17, Shanpula (author photo).



Fig. 18. Carpet with human figures, Shanpula (photo by Qi Xiaoshan).

king and queen, musicians playing the flute and harp or veena, and a dancer. It also shows people wearing beautiful fancy dresses and headdresses, or those who wear only dhotis. One small figure in blue appears twice in the design. The first time it shows a ball-like motif in its right hand to a nearly nude woman who is seated in an Indian royal sitting posture in the bottom row. The other time it holds something up with its right arm and is accompanied by a girl playing the flute in the fifth row from bottom. It is this little blue figure that provides an important clue for a possible iconography. Most likely, it is a depiction of the young Krishna, god of herdsmen and an avatar of Vishnu, whose name means dark blue or black and who is always portrayed in Hindu art in blue or black (Zhang 2010; see also Figs. 45, 46, 47). The overall ground color is bright red.



Fig. 19a. Backside of carpet in Fig. 19 showing two layers of felt (photo by Qi Xiaoshan).

There are two borders. The inner border is composed of rainbow-like strips in red, yellow, light blue, and deep blue, and a series of running-scroll waves in deep blue and white against each other and with a red dot on the tip of the wave. The running waves are treated more naturally in soft curve scrolls. The outer border is wide with some very busy motifs intertwined in alternating colors of light blue, pink, yellow, dark blue, and red, all on bright red ground. The motifs appear to be stylized images of animals, though they have not been successfully identified yet. This wide border is outlined with a thin yellow line on two sides, and a heavy blue line on the outer side.

o8LPSB₂ / 220x109cm / Single-warp Knot

The design of this carpet [Fig. 18] seems to be a scaled-down copy of the first one. With sixteen human figures, the center design contains the basic characters for the Krishna childhood story, with little blue Krishna appearing once in the fourth row from the bottom. The borders are also the same, while the “animal” motifs cannot be identified.

o8LPSB₃ / 123x119cm / Single-warp Knot (extra two layers of felt sown on)

o8LPSB₄ / 114x119cm / Single-warp Knot

o8LPSB₅ / 117x116cm / Single-warp Knot

These three smaller pieces [Figs. 19, 19a, 20, 21] show a similar design: two winged figures in the

Fig. 19. Carpet with Putti figures and Brahmi/Khotanese inscriptions, Shanpula (photo by Qi Xiaoshan).





Figs. 20-21. Carpets with Putti figures and Brahmi/Khotanese inscriptions, Shanpula (photos by Qi Xiaoshan).

center field on red ground, placed upside-down relative to each other and head-to-head, so that each appears to be running or flying to their left. One figure is completely nude, and the other has a short dress on. The chubby bodies with wings and the way they hold long ribbons make these figure look very much like the Putti in Roman art. A Khotanese inscription woven in yellow and blue fills the areas to either side of the figures' heads. The inscription reads "*Spāvatā meri sūmā ho ā*," which translates as "The spāvata-official Meri gave [this] to Sūma" (Duan 2010). The subject seems to be a dedication to a god or mortal.

The border designs in all three pieces are also similar to each other. The inner border is composed of chevrons in various colors. The middle border is the widest one and is filled with stylized animals that are difficult to identify. I could only identify possible birds, camels, and snakes. The outer border is a single S-curved vine with heart-shaped leaves in alternating colors of red, yellow, blue, and black.

Kashgar (ca. 400-907 CE)

In 1959, the site of Tuokuzalai, in Tumushuk County in the Kashgar region, yielded two small pieces. One piece is dated to the 5th-6th centuries CE, measured 17 x 13 cm with symmetrical knotting, and has two or three colors in some small geo-

metric shapes. The design is not identifiable. The other piece is only 6 x 6 cm and is dated to the Late Tang (875-907 CE); however, it is good enough to show a sing-warp knotting.

Xinjiang and Dunhuang after 700 CE

It is worth observing that no knotted carpet dating to the period between the Tang (618-907) and Ming (1368-1644) dynasties has been found in an archaeological excavation in the Taklamakan.⁵ The lone exception is the tiny piece from Kashgar noted above, which has been dated to the Late Tang. The reasons for the lack of such materials could be many, but most likely political turmoil was a major cause. The change of dynasties and ruling groups, along with its related warfare, would interrupt production and reduce productivity of many goods, or even block tribute and trade routes entirely. The diminished attention paid by the late Tang and Song dynasties to the far western regions, along with their own weakened military force could be contributing factors. Only in the mural paintings in Dunhuang caves do we really still see carpets, which appear until the early Yuan Dynasty in the late 13th century. But even the Yuan dynasty, which was ruled by Mongols who favored woolen materials and carpets, did not leave material traces of carpets. Until the Qing dynasty, carpets only appear in paintings.



a. Dunhuang cave 172, High Tang (713-766 CE), by Sun Xiaoli



b. Dunhuang cave 112, Mid-Tang (762-827 CE), by Chang Shana

Fig. 22a-b. Details of reconstructed carpet paintings on Dunhuang murals (Chang 1986).

In roughly two hundred images of paintings from the Dunhuang murals that depict carpets—limited to those clearly used to cover a floor with people sitting, standing, or dancing on top, and likely all knotted carpets—a large number involve carpets integrated into scenes of palaces, paradise, and landscapes, where Buddhist practitioners sit and meditate or travelers their their rest. Although abundant designs are found, many of them are simply variations in color and details of a few major designs. Among them, two major designs are conspicuous: a triangle or diamond grid pattern and a five-, six-, or eight-petal (or rosette) flower pattern (see Figs. 22a, 22b, 23, 24). The former looks like the continuation of the Taklamakan geometric style (see discussion below), and the latter seems to lean more toward a Han Chinese influence and style. There is also a combination of the two, an example of which appears in Dunhuang Cave 98, where the primary donors are the king and queen of Khotan. While the queen and her attendants are represented standing on the square or long carpets of the flower pattern, the king himself is standing on a carpet with diamond-shaped flowers against a dark brown backdrop, thereby creating the effect of a diamond grid [Fig. 25].

After Dunhuang, the next appearance of the knotted carpets can be found in paintings of the Yuan (1279-1368) and Ming dynasty (1368-1644). Several scroll paintings have shown the Mongols or other nomads with their yurts and carpets. We see also mention

in the Yuan dynasty official records of making “cut-yarn” carpets in some official workshops, which are obviously knotted carpets. In the Ming dynasty, it seems there was a purposeful slow-down of the carpet making industry. For instance, it is recorded that in the tenth year of the Hongzhi 弘治 emperor (1500 CE), Emperor Xiaozong 孝宗 wanted to repair and replace

about one hundred “dragon” and plain carpets. The head of the Ministry of Public Works (Gong Bu 工部), however, begged the emperor not to do so, for

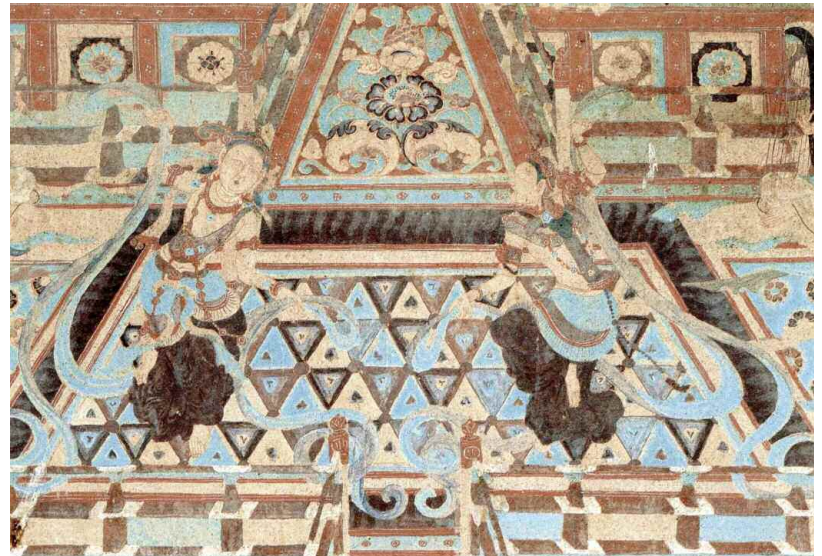


Fig. 23. Dunhuang Cave 156, north wall, late Tang, 827-859 CE (Duan 2006).

Fig. 24. Dunhuang Cave 196, north wall, late Tang, 827-859 CE (Duan 2006).



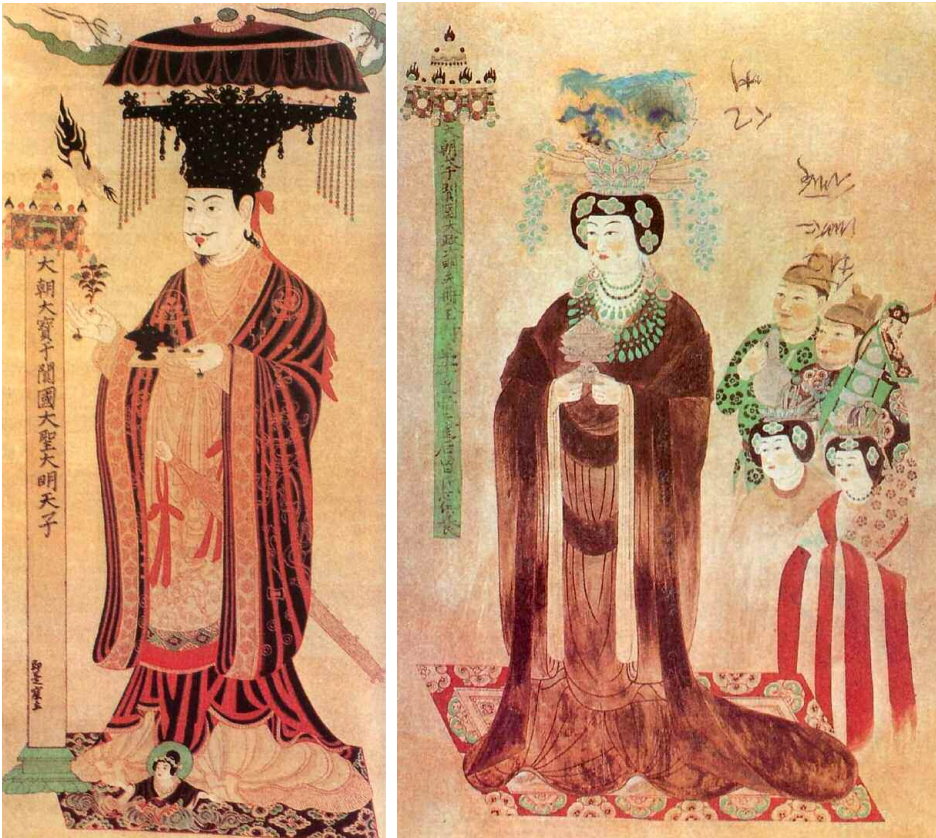


Fig. 25. King and Queen of Khotan, reconstructed painting from Dunhuang cave 98, east wall, Five Dynasties (907-960 CE) (Hetian 2004: 150-51).

it would be too expensive to get wool from Shanxi and Shaanxi provinces, cotton from Henan, and workers from Suzhou and Shanghai (Jia et al. 2009: 55). But the emperor ignored this warning and continued his project. This documentary evidence confirms two things. First, carpet-making was still carried out during the Ming Dynasty, even if it was not undertaken by workshops in the Western Regions or received via tribute. Second, it was too expensive to make carpets with raw materials and weavers from both north and south China. This suggests that carpet production was very likely reduced and even completely halted at certain times.

It is not until the Qing dynasty (1644-1911) and rise of a new Manchu ruling class, with their preferences for wool materials, that we begin to see new enthusiasm again in carpet production. The Palace Museum in Beijing currently has hundreds of pieces in storage, some of which are detailed in a recent publication (Yuan et al. 2010).⁶ Many of these carpets are labeled as made in Khotan, alongside tribute gifts from other places such as Gansu, Ningxia, Datong, Baotou, and Hebei. The German diplomat and carpet collector Han Bidder, who published the first and only scholarly book

dedicated entirely to knotted pile carpets made in Khotan (Bidder 1964), came to the conclusion that many more well-known carpets in Samarkand, Gansu, and Baotou, among other places, are merely copies or imitations of Khotan designs. According to Bidder, Khotan was the original center of carpet production, and the Tarim basin is “the oldest home of pile carpets known to us today” (11).

Design Motifs and Styles

The design motifs and styles in Taklamakan carpets before 700 CE may be classified into three categories: geometric style, dynamic or free style, and representational or figurative style.

The geometric style features the following motifs: triangle shapes and grids, diamond shapes and grids, stripes, squares, rectangles,

waving scrolls, squared scrolls, zigzags, square zigzags, waves with interlocking stripes, rosette flowers, grapes, and abstract animals. In earlier cases (700 BCE-200 CE), such as the ones from Yanghai, Yingpan, Niya, and Shanpula, the motifs are used for both the central field and its borders, while the diamond grid appears to be the most popular overall design (e.g. Figs. 8, 14). In later cases (200-400 CE), such as the ones from Yingpan, Loulan, and Shanpula, the aforementioned geometric motifs still play major roles but some of the central fields yield to a single image of a lion or a tiger. In one of the two identical carpets from Yingpan and Loulan that featured a lion in the center (see Figs. 6, 9), the lion is abstracted into squares, rectangles, and triangles, to fit the overall geometric look. Many of the geometric motifs would continue to be used for border designs throughout the history of carpet-making. Amazingly, with several interruptions, some small motifs continued to be used in Khotan’s carpet designs even into modern times. The eight-petal flower, eight-partite geometric forms, and diamonds can still be seen in the twentieth century, although in many cases the diamond has by this time become much larger, with only

one or two covering the central field and then filled with small geometric motifs.

The border designs done in this style also include a series of squared spirals (or hooks) running in a way similar to the curvilinear waving scrolls that appear in many pieces from Niya, Loulan, and early Shanpula. It is difficult to determine if this series of squared scrolls is also based on Hellenistic and Roman designs. In any case, these squared scrolls go very well with other geometric motifs from earlier eras, which suggests an intentional modification of the curvilinear waves to fit the overall geometric pattern. Not only that, but these squared hooks would also appear consistently—in place of a long series of borders—as individual elements in various designs in later Turkish carpets as well as in Khotan carpets.

The dynamic or free style features more curvilinear and irregular lines and outlines, natural shapes of leaves and vines, and naturalistic animals. Such examples are found in pieces dated to 200-400 CE from Loulan, Yingpan, and Shanpula. In Stein's Loulan collection, there is a little piece that shows curved lines in blue and white next to a border with blue, yellow, and red colors (British Museum Inv. no. MAS.693; also see Spuhler 2015: 13). Although nothing specific can be determined, the way the lines are executed clearly show that they might be some free lines or lines of some organic motifs. The piece from Loulan-LE with a tiger's tail is represented with such vigorous movement that it also demonstrates a naturalistic manner. The floral motifs along the border in the same carpet are also treated in a curvilinear and naturalistic manner.

The larger piece from this same carpet (almost a complete one, now outside China) also shows two animals, a lion and a tiger, in their natural forms. One of the two lion pieces from Yingpan in Figure 6 shows the lion in dynamic vigor as well. In this carpet, there is an attempt to show a modeling effect by using red, pink, and yellow colors in a sequential manner. On the lower border, the paws and part of the tail intentional protrude into the border field, making the image overlapped in space. A similar kind of pictorial device often appears in the Pompeii murals. In the border design of this same carpet, the series of figure-8-, or gourd-shaped motif, is also curvilinear and naturalistic. The Shanpula piece depicting poplar tree

leaves is also done in a free style rather than a rigid geometric style (see Fig. 15a), although it is framed with a diamond grid and squares. In fact this design looks like a combination of the geometric and free styles—a style that appears in both carpet designs and decorative border designs from the Dunhuang mural paintings, including the carpet painted underneath the king of Khotan.

The representational or figurative style is defined by depictions of human and animal figures in a natural representational manner. The examples are mostly from Shanpula and dated to 400-600 CE. This group is unique from other earlier ones in that the designs are full of human figures represented in interactive narrative relationships and are executed in a naturalistic and free style.

For a quick comparison, there is only one carpet that is dated earlier than the Shanpula ones that features human figures in knotted carpet—and it is the famous carpet from Pazyryk [Fig. 26]. In it, a rider walking beside a horse and a rider riding on horseback alternate to make a border series. Though one may interpret the horseback riders as

Fig. 26. Detail of the famous carpet from Pazyryk, c. 400 BCE (Polos'mak and Barkova 2005).





Fig. 27. Detail of the carpet in Fig. 18 (photo by Qi Xiaoshan).

traveling, it does not seem intended to communicate a narrative story. Both the human and horse figures, as well as the grazing deer in the neighboring border, are executed in a geometric and patterned fashion.

In the Shanpula designs, however, a large variety of people are represented, not only in terms of age, gender, posture, and movement, but even in social status. This goes far beyond mere abstract concepts of human figures. The execution of the figures also approaches a naturalistic realism. For example, double-color contour lines of red and pink are juxtaposed next to paler pink skin color to suggest gradation of modeling for the body. A three-quarter view is adopted to show the angle of the high nose, the eye pupils are positioned impart a certain expression, and there is even an attempt to depict a tie-dyed dress decoration.

The motifs in the narrower borders in this style show typical Greco-Roman decorative motifs, the most typical of which are the waving scrolls [Fig. 27] and single-leaf vines [Fig. 38]. These two designs are commonly found on Greek vases and in Roman mosaics for walls and floors [Figs. 28, 29]. So there is no question about the origins of the design. However, since these designs were used in the Bactria and Gandhara regions for so long, they may have become typical of local Bactrian design as well [Fig. 30]. They appear mostly in the carpets from Niya, Loulan, Yingpan, and Shanpula, as well as in a large collection of knotted carpets from Bactria to be discussed below.

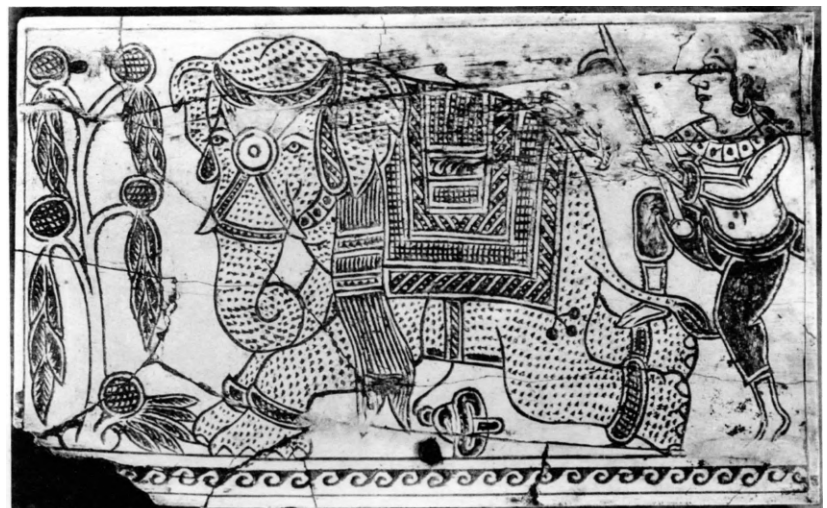


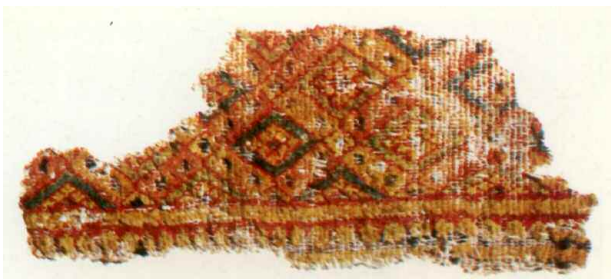
Fig. 28. Greek Red-Figure Vase, c. 350-325 BCE, Paestan, Italy (Metropolitan Museum of Art Creative Commons Zero).



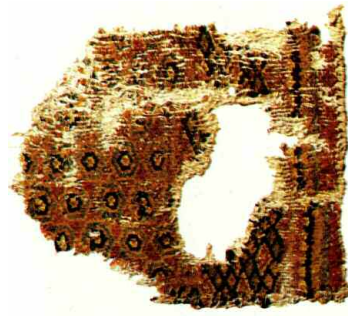
Fig. 29. Eros or Baby Dionysus, Roman mosaic, Pompeii, before 79 CE, National Archaeological Museum of Naples (author photo).

Fig. 30. Drawing of an ivory carving from Begram, Afghanistan (Hackin et al. 1954).





a. Ground weave: cotton warp and weft;
double-sided wool knots



b. Ground weave: linen warp and weft;
wool knots

Fig. 31. Carpet fragments from Fostat, Egypt, 9th c. CE (Aslanapa 1988).

This representational group of carpets also includes several new design motifs, such as Khotan-Saka script knotted through the design in four of the five carpets; the narrative story of the childhood Krishna, an avatar of Hindu God Vishnu, in the large carpets; and the winged Eros/Putti as major figures in the three smaller carpets.

Cultural Expression and Interaction

Despite their humble origins as floor coverings and sitting mats, the carpets found in the Taklamakan region are significant in their reflection of artistic ideas and aesthetic tastes from several different cultures, from the wider Taklamakan region itself to as far away as the Mediterranean regions in the distant west. They also express a willingness to borrow and integrate other peoples' ideas and methods. On the cross-roads of the Silk Road, the people of the Taklamakan oases helped spread these multicultural ideas and aesthetics in all directions. As a result, the carpets served as an important medium of cultural expression and as clear evidence of cultural interaction and integration.

Taklamakan Geometric Style

According to my analysis in the last section, the geometric style design appears to be the most consistent design in the Taklamakan oases. From the earliest samples of Yanghai circa 700 BCE to the samples of Yingpan, Loulan, Shanpula, and Kashgar up until about 400-500 CE, the geometric shapes of triangles, diamonds, hexagons, and squares are the most popular motifs used in carpet designs. Triangles and diamonds also continued to be depicted in the carpets appearing in Dunhuang murals from the 7th to 11th century CE. Because of such clustered appearances and quantities done in

the geometric style, we might refer to this as the "Taklamakan style." Once identified as a regional style, it becomes possible to further identify fragments of knotted carpets found elsewhere as similar in style to the Taklamakan carpets. These include fragments discovered in Fostat, Egypt [Fig. 31]. The Fostat discovery consists of several tens

of pieces of knotted carpets. They are divided into two major phases: those of the 9th century and those of 13th century. The samples from the earlier phase are believed to be associated with Abbasid Dynasty in Samarra, Iraq, where Turkish guards were hired, thus suggesting the incorporation of a Turkic tradition from Central Asia. The large group dated to the 13th and 14th century is categorized as Seljuk Turkish carpets (Aslanapa 1988).

Looking at the Fostat fragments of the 9th century, one does sense a strong resemblance to the Taklamakan carpets in their diamond and hexagonal grids. In each diamond or hexagon, there is a similar little flower or triangle or diamond, while the colors consist of deep brown, brown, red, dark red, blue, green, yellow, and black—the colors most often used in the Taklamakan carpets. The two samples in Fig. 31 are tied with single-warp knot, a common method already used in Yingpan, Loulan and Shanpula since at least the 2nd century CE. One of the two [Fig. 31a] also has a knotted pile on the back side, another common practice found in Loulan and Shanpula. Intriguingly, however, these two pieces make use of a different material for the warp and weft yarn—linen and cotton instead of wool. The the warps, wefts, and knotted threads of Taklamakan carpets were all made of wool clear up to the 20th century, when cotton was adopted for warps and wefts.

Also worthy of note is that seven of the twenty-nine published pieces from the second group from Fostat feature all-wool and symmetrical knotted carpets. This group, as Aslanapa (1988) concludes, is Seljuk Turkish, and utilizes mostly geometric motifs for its design. This, too, strongly echoes the Taklamakan geometric style, even though the pat-

terns are more complex than those in the Taklamakan.

The Taklamakan geometric style could have migrated in two directions: eastward toward Dunhuang in China and westward toward Western Asia and Egypt. In the westward direction, it could have been carried by the nomadic peoples throughout Central and Western Asia with the rise of the Seljuk Empire in the 11th and 12th centuries, or with the waves of Turkic migration, under Mongol pressure or alliances, that reached all the way to the western tip of Asia from the 13th century on. The geometric style would be adopted as a signature cultural motif of various Turkic groups and later further encouraged by the Muslim preference for geometric and floral patterns instead of human figures. Among these groups, the Azerbaijani and Turkish Turks would become the major successor and innovators of the Taklamakan geometric style. Meanwhile, the style still continued to be used both in the Taklamakan and northeast Asia, as seen in the Yuan and Ming dynasty paintings.

Although geometric in appearance, the Pazyryk carpet stands alone. Though its dominant overall design is the square grid, the triangles, diamonds, and other geometric shapes common in the Taklamakan do not appear. With its horseback riders, deer, gryphon, and four-petal leaf motif, it demonstrates some connection with both Scythian-Saka traditions and Assyrian-Persian-Hellenistic decorative motifs. And yet the same motifs of horseback riders, men walking alongside horses, grazing deer with vertical antlers and decorative motifs on their bodies, and mythical creatures like gryphons all appear in the flat woven textiles (or tapestries) discovered in Shanpula/Khotan and dated to between the 2nd century BCE to 2nd century CE. Likewise, the four-petal leaf motif can be found in wood and clay carvings from Niya and Loulan. Therefore, the design motifs in the Pazyryk carpet are still related in one way or another to the Taklamakan oases.

Persian Element

In both the geometric and free styles, the depiction of the lion is notable for its frequent appearances and its occupation of the large central field in composition. The inclusion of the motif might be an inspiration from Assyrian and Persian art directly, or through Hellenistic Bactrian and Buddhist art

indirectly. The lion is also a common motif in Roman paintings and mosaics. Despite ferocious and aggressive expression of the beast in Assyrian-Persian art and Greco-Roman art, the lions in the carpets of geometric style are depicted in a more tame, crouched posture, and appear more decorative. Those depicted in the free style, while still vigorous in movement, look more playful. It seems that the weavers of the carpets made a significant modification from the original model of these designs in order to make them conform to the principles of decorative art and the function of the carpets as daily household materials.

Bactrian/Hellenistic Style

The free and representational styles in the Taklamakan carpets are closely related to the art style of Bactria and Gandhara in general, and to the carpets found in recent decades in Afghanistan more specifically. Bactria, which is roughly equivalent to modern Afghanistan, where the Hellenistic influence once prevailed, developed its own art style over the centuries with a combination of motifs and styles from both the Mediterranean regions and the Indian subcontinent. The motifs of vine-leaves and running waves commonly seen in artworks from Bactria and Gandhara, for example, are clearly copies of those of the Greeks and Romans, and the human figures and narratives are very often adapted from either Buddhist or Hindu art from India. However, in Bactria and Gandhara, the two types of border designs are used so frequently, and blend so harmoniously with typical Indian motifs and subjects, that they truly become a local or regional style of its own—Bactrian style.

But Hellenistic cultures brought more than just the actual design motifs to Central Asia. Some concepts and techniques of art-making also became a new norm in Bactria and Gandhara. The most important impact in art would be the practice of realistic or naturalistic representation of human figures, animals, and plants, which comprise the foundation of Greek and Roman art. Along with this practice, the art of Bactria and Gandhara would also incorporate the attempt to represent natural body movements and postures for human figures, the modeling technique to create three-dimensional effects, and the tendency to show a three-quarter view of a human face.

In sum, the Taklamakan carpets that showcase the representational style seem to share their ideas with those of Bactria. The looted group from Shanpula, especially, looks closely related to the Bactrian findings; so close, in fact, that they were probably even made from the same blueprints or in the same workshops. As a result, it is important to provide a short discussion, of the carpets discovered in recent years in Afghanistan, for the sake of a simple comparison.

Afghan Carpets in the Kuwait Collection

Thanks to Frederick Spuhler and the Dar al Athar al-Islamiyyah organization in Kuwait, a large group of 2nd-6th century CE carpets found in the northern mountainous region of Afghanistan over the last several decades has been made available for scholarly analysis (Spuhler 2015). These carpets, which are in relatively good condition, retain their bright beautiful colors and are decorated with various animal designs and rich border design motifs. They share many features with the Taklamakan carpets, especially those from Yingpan and Shanpula. Here we will point out just a few important features.

The Afghan carpets in the Kuwait collection are dated to around the 2nd to 6th centuries CE. All but one of the sixteen catalogued carpets are tied with asymmetrical knots; the lone exception is tied with U-shaped loop (or single-warp knot). Their design motifs include griffins, horses, stags, lions, some felines, unidentified mythical creatures, wave-

Fig. 32. Detail of a carpet fragment in the Kuwait Collection (courtesy of Gulf Museum Consultancy Company, WLL #LNS 71 R a-c v1).



scrolls, squared wave-scrolls, checker-boards, stepped triangles, flora, and vine-leaves. Some designs are clearly Sassanian in style, for example, a deer's neck tied with a *kushti* (a tag-like ribbon) floating horizontally behind the neck or holding in the mouth a horizontally floating object such as fruit, flower, or a looped ribbon [Fig. 32].

The other designs are more typically Bactrian in style and can be found in many different art forms. This Bactrian type of design shows closer connections with the textile designs in the Taklamakan. For example, all the creatures and motifs listed above also appear in the flat weaving materials (such as tapestry textiles) from Khotan/Shanpula and Zhagunluk. They also appear in the silk materials from the Turfan region and in the Buddhist art in Dunhuang, Kashmir, and Tibet. Indeed, one of the designs features two stags kneeling (Spuhler 2015: 54), which is a posture more often seen Buddhist in iconography and style than a random representation of the animals. A similar expression can be found in the Dunhuang mural paintings, while a more precise method of depicting crouched legs can also be found in Tibetan Buddhist art.

Interestingly, many of the border designs in the Afghan carpets, such as vine-leaves and checker board patterns, can be found not only in the Buddhist art of Bactria and the Gandhara region, but also in the Dunhuang murals. For instance, an exact vine-leaf pattern appears in both the Bactrian/Afghan carpet and the Dunhuang mural paintings [Figs. 34, 35, 36]. Although this kind of fancy vine-leaf pattern does not appear in the Taklamakan carpets, similar ones do appear in other art objects all over the Taklamakan oases, such as wood carving, ceramic vessels, and mural paintings.

Two of the border designs in the Afghan carpets—running wave-scrolls and series of chevrons—show

Fig. 33. Detail of the carpet in Fig. 19 (photo by Qi Xiaoshan).





Fig. 34. Detail of a carpet fragment in the Kuwait Collection (courtesy of Gulf Museum Consultancy Company, WLL #LNS 67 R a-h [d])



Fig. 35. Reconstructed painting from a Dunhuang mural (Chang 1986).

a direct relation to the carpets from Shanpula. In six or seven pieces of the Kuwait collection, the running wave scrolls appear in such a way that two colors—the color of the wave and the color of the ground—are set against each other to create two actual rows of waves interlocked with each other. This is precisely the same design that appears in many Taklamamkan carpets. In addition, in both the Afghan and Shanpula cases, the tip of each wave scroll includes a little dot in a different color. In the Kuwait collection, the combinations of the colors are as follows: yellow-red with black dot, green-red with white dot, yellow-red with green dot, black-white with red dot, and green-yellow without a dot. In the Shanpula carpets, they are blue and white with a red dot. The running chevrons as a frame band appear once in Kuwait collection (see Fig. 32), but in all three smaller Shanpula carpets [Fig. 33]. This chevron pattern is also found many times as a halo ring in the Buddhist cave mural paintings in Kizil and Turfan.

In sum, this group of Afghan carpets in the Kuwait collection shares the same tradition with that of Shanpula and other Taklamakan towns. It would be premature to pin down the production center of the carpets with this style, but it is very possible that the workshops on either side of the Pamir

Fig. 36. Mural painting in Dunhuang cave 428 (Duan 2006).



share the same blueprints yet manufactured the products individually. This would parallel similar practices in modern times, when a master workshop in Khotan would pass its blueprints on to individual weavers scattered in different villages in the desert and mountains, sometimes even to the villages as far away as Kashgar.

Greco-Roman Element

Though the Greco-Roman element is still part of the Bactrian-Hellenistic-Roman style discussed above, here we will focus on the Eros-Putti-like figures that appear in the three smaller carpets from Shanpula. In the design, the central field is occupied with two nude and winged chubby baby figures head-to-head—not face-to-face—in a fashion reminiscent of Greek Eros or Roman Putti. Eros or Putti can be found in countless Greek vase paintings and Roman stone carvings such as sarcophagi. Much to my surprise, I found a Greek Red-Figure painting plate [Fig. 37] in the Walters Art Museum in Baltimore that depicts the nude and winged Eros offering something to an altar-like object. Its design fits not only the image of the Eros figure but also the combination of the figure and decorative motifs surrounding the main figure: the single-leaf vine and a short horizontal bar of waving scrolls under the main figure,

Fig. 37. Red-Figure Plate with Eros as a youth making an offering, c. 340-320 BCE (Walters Art Museum Creative Commons Zero).



Fig. 38. The Putti figure in the carpet from Fig. 19 (photo by Qi Xiaoshan).

just like the combination of the two in the three carpets [Fig. 38].

However, it might not be so wise to suggest that a Greek model could be transported directly to the Taklamakan desert over a time of seven or eight hundred years. Similar figures also appear in Buddhist and Hindu art in India and Bactria. It must have been through some syncretized process in Bactria and Gandhara all the way down to central and south India that such typical and popular Greco-Roman figures would become popular figures in the art works of Central Asia and South Asia, and eventually China.

As early as the second century BCE to the second century CE, the stone sculptural works on the Great Stupa at Sanchi already showed pairs of nude and winged chubby figures flying over a Bodhi tree or a stupa. A couple of centuries later in the Ajanta caves, more such figures were carved and painted. For example, the capitals of the columns on the façade of Ajanta Cave 2 contain pairs of the so-called flying celestials above a statue of Buddha [Fig. 39]. They are nude, chubby, and holding a long ribbon; their legs are turning backwards as if floating in the air; and on their backs are flying rib-

Fig. 39. Putti in Ajanta Cave 2, 2nd c. BCE-5th c. CE (author photo)





Fig. 40. Putti holding a wreath over a statue of the Buddha. Painting on niche, ca. 3rd c. CE, Hadda, Afghanistan (Guimet Museum, inv. nos. MG21810, 19157).

bons that look like wings to suggest the act of flying. These Ajanta Putti appear to be portrayed in the same way as those on the carpets, with the same gestures, same kind of ribbons, and same intention of exposing their little genitals.

In a Buddhist niche discovered in Afghanistan, we also find a pair of Putti—nude, chubby, and winged—holding a wreath together, both painted over a statue of Buddha. They look more Greco-Roman in style and painting technique [Fig. 40].

In the Taklamakan desert, such winged chubby, sometimes nude, figures are found as well in the Buddhist mural paintings in Miran [Fig. 41] discovered by Stein. They are also found on a ossuary box discovered by the Otani expeditions, which includes a precisely painted nude winged Putti painted in the Roman style, similar to the symbolic paintings with which Roman sarcophagi were decorated. Last but not least, these figures also appear

Fig. 41. Putti in the murals from Miran, ca. 4th-5th c. CE (Qi and Wang 2008).



Fig. 42. Putti in a fine woolen dress on Yingpan Man, ca. 5th-6th c. CE (Qi and Wang 2008).

on a beautiful fine woolen dress worn by the so-called Yingpan Man from Yingpan. Here the woven designs on the tunic dress featured paired Putti holding up swords among trees [Fig. 42], and the coffin which encased the Yingpan Man was covered with a carpet featuring the geometric lion in Figure 5. A similar piece of cloth made of fine wool was also discovered, and it features winged Putti catching or playing with butterflies [Fig. 43].

Fig. 43. Putti woven in fine wool, Yingpan, ca. 5th-6th c. CE (Qi and Wang 2008).





Fig. 44. Detail of the carpet in Fig. 18 (photo by Qi Xiaoshan)

To conclude, it seems that the models for the Putti figures in the carpets represent a syncretic image from Bactrian, with nude chubby body and wings from the Greco-Roman type and backward-turning legs and long ribbons in the Indian fashion. These motifs were already popular in both the Buddhist and non-Buddhist art of the Taklamakan desert during the time when the carpets under analysis were made.

Indian Element

Besides the three small carpets featuring Putti figures in a Buddhist or Hindu manner, the two larger carpets from Shanpula show a narrative design with human figures dressed in Indian dresses such as dhoti or seated in the royal posture *lalitāsana*. In my previous studies (Zhang 2010, 2011), I identified the narrative as belonging to the Krishna childhood stories. The small blue figure, Krishna, is presented not only in his typical dark blue color, but also holding up a butter ball and Mount Govardhan and being accompanied with flute-playing and dancing girls performing the Lila Dance—all scenes popularly seen in Hindu art since the sixth and seventh centuries CE all way down to modern times [Figs. 44, 45, 46] (see also Banerjee 1978). Several ladies wear dresses identical to that of Yashoda [Fig. 47], the adopted mother of Krishna, on the fifth-century high-relief sculptures in the Dashavatara (Vishnu) Temple in Deogarh. The



Fig. 45. Krishna Lifting Mount Govardhan, 5th-6th c. CE. Mathura Museum (author photo).

Fig. 46. Krishna dance with young damsels, 1760-65 (P. Banerjee 1978).



Fig. 47. Exchange of the babies, with Yashoda on the right. Dashavatara Temple, Deogarh, ca. 5th-6th c. CE (author photo).



scenes are related to several well-known episodes in the Krishna story, including the Prophecy of Kamsa, the Butter Thief, Holding up Mount Govardhan, Naming Puja, and the Lila Dance.

All five carpets of the group from Shanpula have broader borders that are full of complex motifs. Only some vague animal shapes can be drawn out, such as birds, serpents, and possibly camels, cows, and elephants (Zhang 2012). This group of carpets was very likely made for patrons who were familiar with the Hindu stories and iconography, suggesting that there may have been a Hindu community in the Khotan area.

Khotanese Scripts

The appearance of Khotanese script in four carpets from Shanpula strongly suggests that this group of carpets belonged to local Khotanese purchasers. As discussed above, one of the two large carpets has an inscription in Brahmi script that is woven into the carpet in blue. Though not all the words have been deciphered, three of them seem to be a dedication to a god or mortal.

According to experts on Khotanese writing, the script on the carpets is a Brahmi script that was standardized in India during the Gupta dynasty (320-550 CE). The adoption of this script in Khotan not only gives us a relative time range for the production of the carpets, but also demonstrates strong influences from the Gupta dynasty in India and Central Asia. The Taklamakan oases must have significant political and cultural contact with the Guptas. Further evidence of their relationship can be found in the more than two thousand Khotanese texts, both religious and secular, that were discovered by scholars in Khotan and Dunhuang during the 20th and 21st centuries.

In the final analysis, having established the presence of Hindu stories, Buddhist or Hindu imagery, Bactrian motifs and style, and local Khotanese language, we must address one of the most obvious questions: Who made these carpets? The evidence presented in this article suggests that while the carpets could have been made in either Khotan or Bactria, they were made specifically for Khotanese patrons. These patrons may have included a small Hindu community who spoke or read Khotanese. Nevertheless, in light of Khotan's long history of

carpet-making, the large quantity of carpets and weft-beaters unearthed in the Khotan region, the documentation of business transactions mentioning famous *Khotani* carpets, the woven inscriptions of the Khotanese language, and Khotan's longstanding trade relationship with Bactria and further west, it seems much more likely that these carpets were made in the oasis of Khotan itself.

ABOUT THE AUTHOR

Zhang He 张禾 is Professor of Art History at William Paterson University in New Jersey. She was born in Urumqi and grew up in Khotan, Xinjiang, China. As a "re-educated youth" she went to a farm deep in the Taklamakan Desert before having a chance to go to Xinjiang University to study English language and literature. She has master's degrees in art history from the Academy of Arts of China in Beijing and the University of Cincinnati, and a Ph.D. in art history (pre-Columbian art) from the University of Texas at Austin. She teaches and publishes in English and Chinese on pre-Columbian art, Asian art, and the art of the Silk Road. E-mail: <ZhangH@wpunj.edu>.

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ENDNOTES

¹ Spuhler (2015) also uses the term “U-shape loop knotting” to describe this method, which is also a single-warp knot, but likely simpler without even a loop, i.e., only laid on a single warp in an upside-down U-shape.

² Three of the eight fragments from Niya were excavated by Stein and are now stored in the British Museum and the Victoria and Albert Museum. Chinese archaeologists found one in the 1950s at Karadun, a site west of Niya, where Stein had also found some carpet fragments. Another five were excavated by a Sino-Japanese team in the 1990s. The British Museum also holds one fragment found by Stein at Loulan.

³ For a more in-depth study of the terminology examined in this article, see Zhang 2015 and Zhang 2018a.

⁴ Jia Yingyi, who participated in the excavation of the Yang-

hai site and studied the textiles found there, told me that she used the most conservative date (i.e., the most recent date) for dating the knotted carpets from the tombs of the second phase, which are dated from the tenth to eighth century BCE. The carpet fragments fall throughout the time range.

⁵ There might be some looted pieces uncovered in recent decades from Qinghai, Ningxia, and Inner Mongolia that date to the Western Xia 西夏 (1038-1227) and Jin 金 (1115-1234) dynasties.

⁶ Thanks to Mr. Michael Franses, founder of Hali magazine, who persisted on gaining a look at the carpets hidden in storage for decades, the Palace Museum now has a place to display the royal carpets.