

TEXTILES FROM THE SILK ROAD

INTERCULTURAL EXCHANGES AMONG NOMADS,
TRADERS, AND AGRICULTURALISTS

BY ANGELA SHENG

SILK WAS ONE OF the most luxurious commodities traded along the many routes of the Silk Road. But one should not assume that only silks were traded, or that silks were the most important of all exchanged goods. Since the late 19th century, archaeologists have unearthed textile fragments made of other fibers such as wool, cotton, and hemp from sites around the Taklamakan Desert in Central Asia. In this article, different types of cloth found in Central Asia will be described and illustrated by photographs of artifacts from *Secrets of the Silk Road*.

The first evidence for weaving silk appears 5,000 to 7,000 years ago in China. Any evidence of silk outside China proper at this time would strongly suggest that the non-Chinese traded with the Chinese for this much sought-after textile. Chinese silks were prized in ancient Rome, which led to the forging of a trade route between the East and West. Whereas scholars have amply documented the complex long- and short-distance trade between China and the Mediterranean world and between China and Korea and Japan, few have examined the contemporaneous exchange of goods to the north and south, such as between the pastoral nomads, who roamed seasonally across the pastures to the north of ancient Iran and China, and the sedentary agriculturalists in China. The extensive representation of nomadic legacies in *Secrets of the Silk Road*—in the form of practical as well as extraordinary wool textiles—addresses this imbalance.

A fragment of a tapestry shows a centaur blowing a horn and a warrior carrying a spear. See pages 38-39.



1



READING CULTURE IN TEXTILES

Textile patterns attract the eye, and textile textures invite the hand. Textiles can further reveal much about their makers, traders, and users. For example, a specific kind of fiber would suggest the maker's way of life. Pastoral nomads sheared wool off domesticated sheep that required large pastures. Sedentary agriculturalists reeled silk off silkworms that necessitated the planting of the mulberry for feeding the silkworms. Each type of textile construction required different kinds of tools, some portable such as a **back-strap loom**, others less so, such as a **treadle loom**. Design and ornamentation revealed the source of inspiration for textile-makers: stylized flora and fauna or imagery with figures suggest myths and narratives, perhaps seen on other objects transported by traders from faraway places. The study of cloth manufacturing leads us to understand how various peoples—nomads, traders, and agriculturalists—contributed to the development of textile art and technology.

A glossary of terms shown in **bold** is provided to help you understand words like warp and weft: the language of textile production. Also, objects are not shown to scale.

2



WOOLEN FINDS

Textile historian Elizabeth Barber dates the domestication of sheep at 7000 BCE, or perhaps as early as 10,000 BCE. In ancient times, woolen fibers were short, scaly, and much rougher than they are today. Normally, short woolen fibers would require twisting and spinning into long, continuous yarn before they could be woven into textiles. The scaly surfaces of early wool fibers, however, allowed textiles to be manufactured without weaving. The fibers interlocked when felted or compressed by the combined application of damp heat and kneading pressure. The scaly surfaces of these fibers also meant that a felted textile contained a myriad of tiny air pockets between the kinks of the fiber. These air pockets retained body heat when the wool mass was made into clothing and worn in bitterly cold winters.

3



THE LANGUAGE OF TEXTILE PRODUCTION: A GLOSSARY OF TERMS

BACK-STRAP LOOM

Any loom, often requiring the weaver to be seated on a platform or the ground, with a strap behind the weaver's back so that the weaver uses his or her body as weight to maintain the stretched warp taut for weaving. The warp ends are attached to the strap at one end and at the other end, to a fixed pole or stick.

BROCADING

To weave with a brocading weft, a supplementary weft introduced to a ground weave.

COMPLEX PATTERN LOOM

Any loom that is equipped with shafts and patterning rods for the repetition of patterns in both the warp and weft.

DOUBLE-WEAVE, TABBY-BASED

A weave in which either the warp or the weft is composed of two series and the binding structure is the tabby; better known as double-faced weave.

FELTED WOOL

Wool compressed by heat and moisture to form an interlocked surface.

KNOTTED PILE WEAVE

A weave that is made with supplementary weft yarns wrapped around the warp ends; the wrapped yarns are then cut to make a "knotted" pile standing above the surface of a ground weave.

TABBY GROUND WEAVE

The structure of the textile is tabby, the basic binding system based on a unit of two warp ends and two weft picks in which each warp end passes over one and under one weft pick.

TAPESTRY WEAVE

A weave of only one warp and one weft but composed of threads of different colors that do not pass from selvage to

selvage but are carried back and forth in small areas, one color at a time (by means of a shuttle), interweaving with the warp of that colored area only. The binding is usually tabby and weft-faced (where you do not see the warp).

TREADLE LOOM

Any loom with a treadle, or foot pedal, for the raising and lowering of a shaft holding warp ends by the seated weaver. The number of foot pedals would correspond to the number of shafts.

WARP

The longitudinal threads of a textile, stretched between the beams on a loom.

WARP-FACED COMPOUND TABBY

A warp-faced weave with complementary warps of two or more series (usually of different colors for patterning purposes) and one weft. The ground binding weave is in the tabby.

WARP-FACED COMPOUND TWILL

Same as above except the ground binding weave is in the twill. Also known as **samitum**.

WEFT

Yarn drawn through the warp ends by means of a shuttle.

WEFT BEATER

A sword beater or a comb beater to beat the weft densely so that the weft picks are even and the textile compact.

WEFT-FACED COMPOUND TABBY

A weft-faced weave with complementary wefts in two or more series, usually of different colors for patterning purposes and a main warp and a binding warp. The ground binding weave is in the tabby. Also known as **taqueté**.

4



5



FELTED WOOL

Felted wool was used to make clothing and furnishings, such as hats, capes, carpets, and even saddle blankets for both functional and aesthetic purposes. This example of a short conical hat (1) dates to *ca.* 1800–1500 BCE. It is made of very dense felt in its original off-white hue, and is conspicuously stitched with a red cord going around the hat several times as if marking a pathway. The hat was further adorned with feathers and two weasel pelts. A red cord attached to the rim of the hat afforded the wearer a chin strap. Similar red wool cords are found on other objects from the same time period. Here you see a red cord used to string a jade bead as a bracelet (2).

Pastoral nomads used felt headgear to mark distinct social status, and many hats, as shown here in the Xinjiang Museum, have been recovered from burials (3). This tall, peaked hat (32.7 cm) (4) was excavated in 1985 from Tomb No. 5 at Zaghunluq, Chärchän, an oasis on the Chärchän River to the south of the Taklamakan Desert. Dated to *ca.* 800 BCE, it is made of two thick brown felt pieces sewn with buff stitching. To stiffen the peak and prevent it from collapsing, the tip was stuffed with tufts of felt. The use of buff yarn (natural color faded over time) for both functional and decorative stitching shows that the maker of this unusual hat was aware of aesthetic needs (form and color) while frugal with resources. Note that the peak curls backward in contrast to the forward curl of the peaked hat worn on the bronze figurine of a kneeling warrior (5) from a tomb dated to *ca.* 500 BCE in Xinyuan county of Ili Vally—a mountain valley to the northwest of the Taklamakan Desert.

The peaked brown felt hat is only one of ten hats associated with the famous mummy known as “Chärchän Man” from Tomb No. 2 at Zaghunluq, Chärchän (see page 28 in this issue). He was buried in a wool trouser suit with pale red piping. His legs and feet were wrapped in hanks of combed wool (in primary colors: red, yellow, and blue) underneath white deerskin boots. Elizabeth Barber speculates that felting might have been discovered when a man, wearing hanks of wool such as these, inadvertently compressed the wool inside his boots; sweat given off as he moved would have fused the fibers creating felt.

A type of felt similar to that used for Chärchän Man’s leggings was made into a blue bonnet with red edging for

6



7



a 3-month-old infant found in Tomb No. 1 at Zaghunluq, Chärchän (see page 28 in this issue). Similar textiles were found on both the man and the infant, including the twisted red and blue wool cord tied over the clothing and around the arms of the man and around the small shroud of the infant.

Larger felt textiles—such as carpets and saddle blankets—allowed space for more intricate designs. An outstanding example (6) (not in exhibition) is a felt saddle from Kurgan (burial mound) No. 1 at Pazyryk in the Altai Mountains of Siberia, which dates to the second half of the 4th century BCE. It features a crested griffin, horned feline heads, and a goat or ram intertwined in transformative combat. Such animal designs as nomadic expressions were more commonly found in metal ornaments, like this gold plaque with a tiger design (7).

Pastoral nomads created their own textile patterns as well as adapting complex motifs from others. The peripatetic lifestyle of the nomads ensured widespread transmission of motifs, resulting in many local variations. One example of the sharing of designs is found on a wooden container, carved with quadrupeds, that dates to the 5th century BCE (8). Rows of triangles at the top and bottom of the vessel recall the design of the crown worn by a seated female figure (goddess?) in the earliest pictorial felt carpet, also from Pazyryk, Kurgan No. 5 (9) (not in exhibition). Anne Farkas and others have already traced various motifs on this large carpet (measuring 4.5 by 6.5 m) to ancient Iranian designs, notably those seen at Persepolis, such as the throne of the goddess on the felt carpet which recalls a carved stone relief of Persian King Darius' throne. Such similarities reveal the contact between pastoral nomads in the north with the neighboring centralized empire to the south—a pattern also found in the nomads' trade with or raiding of the Chinese for silk, described below.

WOVEN WOOL

The woolen cloak from Small River Cemetery 5 (Xiaohe) (10), dated to 1800–1500 BCE, is woven in the simplest plain weave of **tabby ground**; it features horizontal bands achieved by inserting a darker yarn through as **weft** at

8



9



10



11



12



13



regular intervals—a simple method of ornamentation that shows an acute sense of aesthetics.

While plain wool garments were more common (11), dyed textiles were also sewn together to form bold patterns, as on the skirted dress (12) from Tomb No. 55 at Zaghunluq. Both garments date to the 5th to 3rd century BCE.

More elaborate designs were woven using the **knotted pile** and **tapestry weaves**. In 1984 a woolen saddle blanket, measuring 76 by 74 cm, was unearthed from Horse Pit No. 2, Cemetery 1, at Shanpula (Sampul) near Khotan on the southern route (13). This blanket has regularly patterned leaves in several colors, knotted as pile over a plain **tabby ground weave**. Dated to the 1st or 2nd century BCE, the leaves seem of local design. They foreshadow a popular Sogdian (from ancient Iran) and more evolved silk design of later times: the brocaded tree-leaf. Fragments of the Sogdian design, discussed in more detail below, were discovered in Astana tombs near Turfan, dated to 551 CE (14).

Pictorial representations were also woven as **tapestry**, a method that afforded maximum flexibility to the weaver in making motifs with wefts of different colors. An interesting example is the contemporaneous remains of trousers showing a human-headed horse moving through a field of stylized flowers, and a larger warrior with a spear (15). The trousers were created from a large wall hanging with a celebratory theme. Although the human-headed horse might have been inspired by the mythological Centaur of Hellenistic origin, Elfriede Knauer indicated that the warrior was Parthian, based on the animal-headed weapons tucked into his belt (not shown on the section in the exhibition). This tapestry fragment was unearthed from Shanpula, Tomb No. 2, near the Horse Pit tomb where the saddle blanket was found.

The pastoral nomads and settlers who inhabited the oases around the Taklamakan Desert most often wove tapestries in narrow bands that they used to embellish clothing and accessories. Many such fragments came to light in Shanpula, broadly dated from 100 BCE to 300 CE. The exhibition includes an example of stylized flora in a tapestry weave as the central decoration of a cosmetic bag with strap (16). The bag contained a bronze mirror, an iron clasp, red yarn, a bag of rouge, and hair when it was

unearthed in 1995 from Tomb No. 5 of Cemetery 1 at Niyä on the southern route. The strap clearly made it portable, essential for a lady on the move.

Lastly, spectacular wool garments were found on Yingpan Man (see cover and page 30 in this issue). He was unearthed in 1995 from Tomb No. 15 near Yingpan, south of Korla to the north of the Taklamakan Desert. He was approximately 30 years old and was buried supine in a wooden coffin that was painted with flowers on the outside and covered with a woolen pile carpet with designs of lions. Inside the coffin, the man's head rested on a silk pillow in the shape of two back-to-back roosters, metonymical of the rooster's crowing at dawn to imply the re-awakening after death. His face was covered with a painted mask embellished with gold leaf. His body was clothed in a silk robe and embroidered wool trousers underneath a woolen robe of exceptional artistic and technical competence. On his feet he wore felt boots with silk insteps also embellished with gold leaf. Miniature silk funerary garments, the purpose of which is unknown, were placed at his waist and on his left side.

Judging by his exotic burial dress and the square of brocaded silk with the word *shou*, or longevity, placed by his head, he may have been a rich merchant familiar with Chinese customs. In addition, the Sasanian cut-glass bowl buried with him would indicate that he traded with partners from farther west.

The embroidered patterns on his brown woolen trousers show arrays of stylized flora: four directionally oriented long petals in red and green separated by four smaller sprigs in buff (faded) surrounded by large dots forming a diamond. When examined closely, the slight irregularities of the shapes and stitching, though still remarkable, would suggest either the handiwork of a group or an amateur effort. It contrasts sharply with the professionalism of the red and yellow woolen robe worn as an overcoat, clearly the product of an accomplished workshop.

The robe shows spectacular motifs of paired bulls, goats, and human figures interspersed with fruit-bearing pomegranate trees in yellow on a red ground. Cut as a caftan with crossed lapels, but closed on the right in a Chinese style, it features naked males with muscular bodies and prominent genitalia, some wearing a fluttering scarf. Each male figure

14



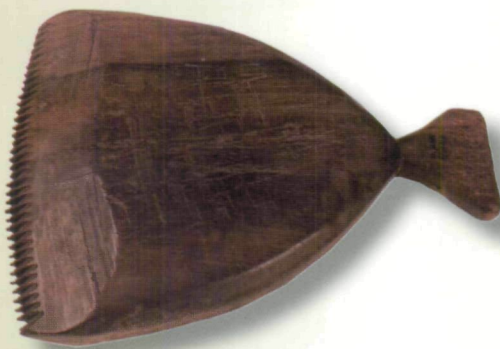
15



16



17



18



has curly hair and big eyes above a high nose—definitely not of Chinese ethnicity. Emma Bunker has identified the conventionalized poses of these *putti* as derived from Late Antique motifs inherited from earlier Hellenistic and Roman times. Such designs on silver cups or shields traveled from Roman-Western to Parthian-Eastern lands. The bulls and goats are also portrayed in typical Near Eastern pose: standing on their hind legs with their forefeet lifted in the air and their heads turned backwards. Elfreide Knauer points out that the bulls are encircled with garlands, indicating they were to be sacrificed.

Based on the adaptation of similar motifs on Late Antique (3rd to 7th century) metalware, Emma Bunker suggests that this woolen robe was woven locally near Yingpan. The structure is a **double-weave (tabby-based)**, woven with two sets of **weft**, one in yellow and the other in red. The pattern repeat consists of six alternating rows of animals and figures in the **weft** and in the **warp**, the reverse of each combination of an animal, half of a tree, and a figure. Both the structure and the pattern repeat indicate technological mastery of a **complex pattern loom**. The tight weave could have been enhanced with the **weft beater** (17), where the teeth of the comb would have been inserted among the warp threads so as to press the weft down.

The motifs closely resemble those found on a woolen textile fragment, also unearthed from Xinjiang, with a dendro-calibrated C-14 date of 430–631 CE; naked and winged figures chase butterflies amid scrolled vines (18) (not in exhibition). Even the structure of the textile is similar: **weft-faced compound tabby**. Thus, the Yingpan woolen robe can probably be dated to a similar time period, from the mid-5th to the mid-7th century. This coincides with the radical developments in silk weaving at precisely the same time, as evidenced by silk finds from the Astana tombs of Turfan, to which we now turn.

HIGHLIGHTS OF THE SILK FINDS

The discovery of artificially cut silkworm cocoons (*Bombyx mori*) dated to the Neolithic Yangshao Culture in China traces the awareness of silk as a textile fiber back to at least 5000–3000 BCE. Textile finds from Chu

Tomb No. 1 (340–278 BCE) of Jiangling at Mashan in Hubei reveal a technical mastery of **brocading** silk with pictorial patterns in the warp (**warp-faced compound tabby**) by weavers in royal workshops. This technique persisted, yielding textiles of many motifs. The motif of dogwood blossoms on a face cover (19) probably originated in central China, where burial finds include textiles with exquisite designs. Auspicious wishes for longevity and progeny were soon added in Chinese characters, such as “May this one-of-a-kind *jin* silk bring the parents generation after generation of descendants” (20). Fragments of such exotic brocaded silks have surfaced far from China, attesting to their broad appeal and bearing witness to the efforts of the Han court to appease marauding nomads. Such treasured silks were made into mouth covers and gloves.

Similarly, auspicious words also appeared on shoes (21): “Wealth and prosperity suitable for a prince; may heaven grant longevity.” These words were densely woven in thick silk warps on narrow strips. The strips were then sewn together as the shoe-face. The round-toe style was Han Chinese, in contrast to the upturned-toe style of distinct Turkish influence fashionable in the later Tang dynasty.

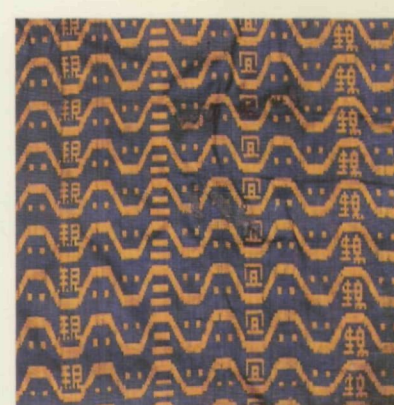
During the 4th or 5th century, northerners of nomadic ancestry fled westward from the ravages of war in China to Turfan, an oasis on the northern route. Simultaneously, Sogdians also moved eastward from their homeland in search of long-distance trade. I have argued elsewhere that exceptional circumstances brought Chinese and Sogdian weavers to live and work together in Turfan. Experimentation in weaving workshops led to new designs and new weaving techniques, as evidenced by cloth made by both groups.

For example, the brocaded robe with small blue and gold checks (22) was woven in the traditional Chinese weave of warp-faced compound tabby, unknown to the Sogdians. This robe was unearthed in 1995 from Tomb No. 3 in Cemetery No. 1 of Niyā on the southern route. The checkered pattern cannot be traced to any Chinese antecedent; however, it can be seen on the robe worn by the historical Buddha as painted on a mural in a Kizil cave (23). Note that the robe is cut in a non-Chinese style, with narrow cuffs and a wide skirt, that is more convenient for

19



20



21



22



23



24



horseback-riding than the straight Chinese cut, suited to a more sedentary lifestyle. A more obvious Central Asian motif—paired birds and rams around the tree-leaf pattern—was also woven in the same warp-faced compound tabby (24).

Although one brocaded silk might look like another, each may have been woven differently. A new weave structure emerged in the 5th century: the **warp-faced compound twill**. The astounding example in the exhibition was discovered in 1972 in Astana Tomb No. 177, belonging to the Northern Liang royal heir, Jüqū Fendai, who died in 455 CE (25). This fragment features dragons, deer, *qilin* (a type of unicorn), camels, and peacocks facing each other under arches and between columns, in red and yellow on a navy ground. This weave structure was used extensively in the later Tang Dynasty to make patterns that combined various cultural styles (26). Whereas the pearl-roundel on this fragment derived from Sasanian designs, the four-petaled flowers recall the embroidered flora on the woolen robe worn by the Yingpan Man. And the overall balanced and symmetrical placement of those two repeating motifs was grounded in Han Chinese aesthetics.

Over the next two centuries, two very complex brocaded silk weave structures were developed: the weft-faced compound tabby (*taqueté*) and the weft-faced compound twill (*samitum*). The **taqueté** is the weave structure of the spectacular red and yellow woolen robe worn by Yingpan Man. Silks woven in these new weaves often featured the Sasanian pearl-roundel circling an animal such as a bird, deer, horse, peacock, or as shown on the face cover in the exhibition, a boar's head (27). The face cover, woven in the **samitum**, was excavated from Astana Tomb No. 332 and dates to the early 7th century. Controversy exists as to where it was produced, either in Sogdiana or in Central Asia. I have argued that it is Turfan. The boar's head may have served as a metonymical device to encourage honesty in an official. In Sogdian mythology, the deity Verethraghna assumed the shape of a boar when he went to earth to punish liars. Certainly, the boar was a central motif for Sogdian rulers, the Sasanians.

Still other artifacts show improved dyeing techniques brought by traders from South Asia. This orange skirt with stylized flora was probably stencilled with wax as a dye

resist (28). Many similarly dyed thin silks have surfaced at various sites. Some show patterns tied and dyed. The dyes and dyeing methods could be replicated far more easily than complex weaving. Thus, their designs imitate the popular woven textiles.

Secrets of the Silk Road presents a wide range of textile motifs and techniques found on cloth recovered from burial sites around the Taklamakan Desert. Peoples of fundamentally different ways of life optimized their resources to create clothing and furnishings to meet their functional and aesthetic needs. Their legacies reveal the extent to which they learned from each other and thus enriched their material expressions, with far-reaching implications. 🏠

ANGELA SHENG is Associate Professor of Art History and Director Chair of The Confucius Institute for Culture, Language, and Business at McMaster University.

For Further Reading

Bunker, Emma. "Late Antique Motifs on a Textile from Xinjiang Reveal Startling Burial Beliefs." *Orientalis* 35.4 (2004):30-36.

Cammann, Schuyler. "Notes on the Origin of Chinese K'o-ssu Tapestry." *Artibus Asiae* 11 (1948):90-109.

Curtis, Vesta Sarkhosh. *Persian Myths*. London: British Museum, 1993.

Farkas, Anne. "Filippovka and the Art of the Steppes." In *The Golden Deer of Eurasia: Scythian and Sarmatian Treasures from the Russian Steppes*, edited by Joan Aruz, Anne Farkas, Andrei Alekssev, and Elena Korolkjova. New York and New Haven: Metropolitan Museum of Art and Yale University Press, 2000.

Gervers, Michael, and Veronika Gervers. "Felt-making Craftsmen of Anatolian and Iranian Plateaux." *Textile Museum Journal* 4.1 (December 1974):14-29.

Keller, Dominik, and Regula Schorta, eds. *Fabulous Creatures from the Desert Sands: Central Asian Woolen Textiles from the Second Century BC to the Second Century AD*. Riggisberg: Abegg-Stiftung, 2001.

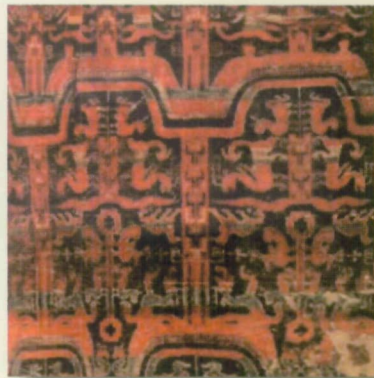
Knauer, Elfriede R. *The Camel's Load in Life and Death*. Zurich: Akanthus, 1998.

Schorta, Regula, ed. *Central Asian Textiles and Their Contexts in the Early Middle Ages*. Riggisberger Berichte 9. Riggisberg: Abegg-Stiftung, 2006.

Sheng, Angela. "Reading Costumes as 'Texts' and Decoding Ethnic Visual Culture of Southwest China." *Writing with Thread*, pp. 13-41. Honolulu: University of Hawai'i Art Gallery, 2009.

Zhao, Feng. *Treasures in Silk*. Hong Kong: The Costume Squad Ltd., 1999.

25



26



27



28



Copyright of Expedition is the property of University of Pennsylvania and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.