TEXTILE FINDS ALONG THE SILK ROAD

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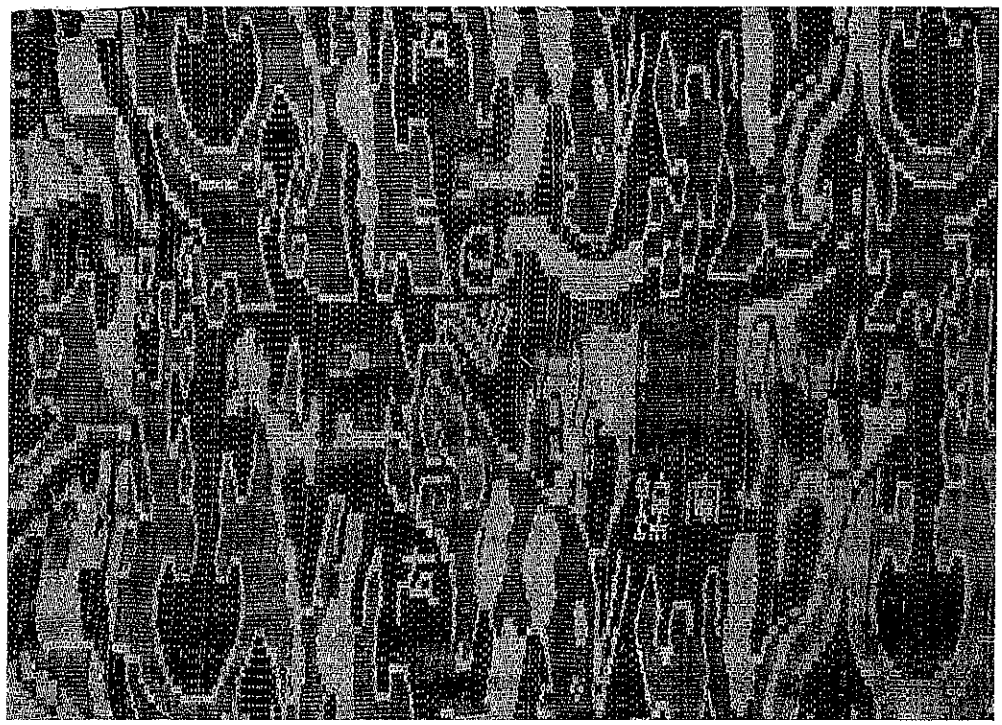

Of all the goods that were traded between China and the Mediterranean, Chinese polychrome silks (*jin*) so impressed the Western world that all routes connecting the various countries were collectively named the Silk Road. Much less well known have been other silk, wool, and cotton textiles that also were produced. However, the importance of these textiles has become clear in recent decades as archaeologists have unearthed many textile fragments from the area around the Taklamakan Desert in the Uighur Autonomous Region of Xinjiang province. Well preserved by the arid climate, these fabrics show extensive cross-cultural influences. Complementing Chinese polychrome silks, they are valuable sources for understanding how early artisans exchanged textile art and technology.

Fig. 1. Wool tapestry hanging with centaur and warrior, Khotanese-Saka culture?, ca. 200 B.C–A.D. 200, L. 116 cm., W. 48 cm., unearthed from Tomb 1 in Shanpula, Luopu County, Xinjiang Museum, inv. 84M01:C162. After Shanghai 1998, no. 65.

These excavated textiles are unique in their comprehensive range of users and producers; they were usually not made and used by people of the same status and culture. Clothing was important not only for daily life, of course, but also for burials. All four methods of decorating textiles—painting, embroidery, dyeing, and weaving—were well known along the Silk Road. Of the four, weaving was the most difficult, requiring both professional expertise and complex loom technology.

Turfan in the fifth through eighth centuries was home to two main immigrant groups, Sogdians (whose homeland of Sogdiana was in present-day Uzbekistan and Tajikistan) and Chinese. The Sogdians played a significant role in the transmission of textile designs and technology. First, as traders they transported many objects, such as Central Asian wool tapestries (fig. 1) and Kushano indigo-dyed cotton murals, as trade goods or personal possessions along the Silk Road. These goods, with exotic iconography, provided a source of new elements that could be incorporated into traditional designs, such as the cotton fragment with a design that resembles the Greek wave-crest pattern (cat. no. 2). Sometimes motifs seen in one medium were reinterpreted in another, such as in the skirt with tapestry band (cat. no. 1). Second, Sogdian artisans who settled in strategic communities along the Silk Road, especially in Turfan, worked with both local and Chinese-immigrant artisans. The development of new designs suggests that they exchanged ideas as colleagues, comparing motifs and methods of ornamentation, as can be seen in the textile fragment with a design of mythical beasts and birds, which uses a traditional Chinese weave and Indian and Central Asian motifs (cat. no. 37). For their part, the Chinese brought their technical sophistication in the making of silk fabrics.

One important choice that the weavers made was how to orient the woven pattern: either lengthwise, in the warp ends (warp-faced), or crosswise, in the weft threads that are shuttled through the warps from one side to the other (weft-faced). The characteristics of the natural fibers available to the weaver had a strong impact on this choice. In making a plain weave cloth (tabby) on a handloom, the weaver manipulates both the warp and weft threads equally. Thus, by using colorful threads judiciously, the weaver can create vertical stripes, horizontal bands, and checks. In contrast, to make isolated designs that are repeated in the fabric, the weaver must handle some threads more than others. Unless the fiber is strong enough to withstand the extra stress, it will break easily and require repairs. Not surprisingly, ancient weavers tended to choose the patterning face (warp or weft) according to the raw materials that were available to them.

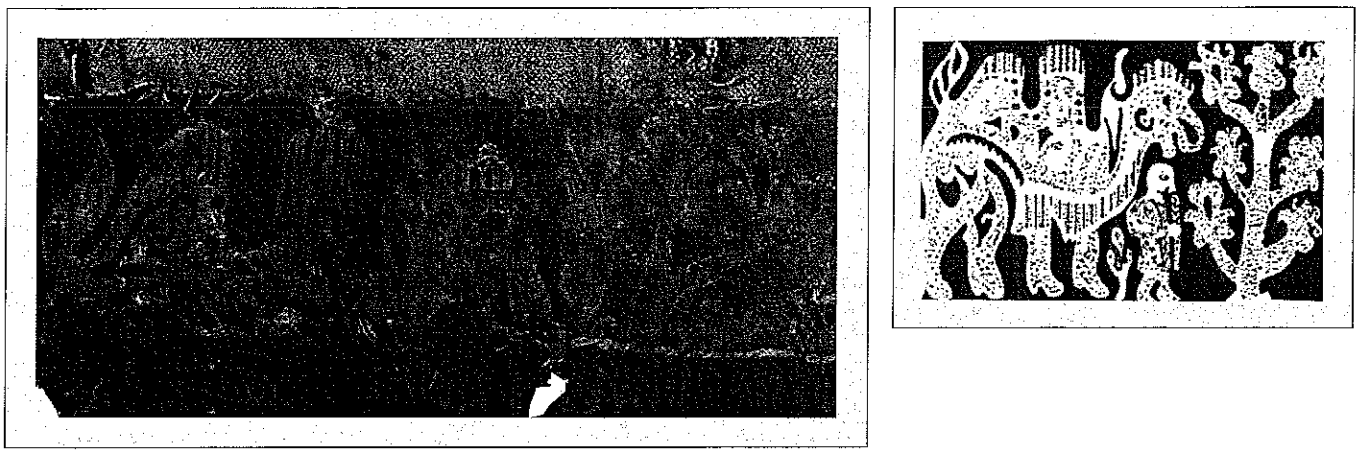

Fig. 2. Reconstructed line drawing of tapestry band with a man leading a camel to a tree. Photo courtesy of Xinjiang Institute of Archaeology.

The Chinese, who perfected the cultivation and manufacture of silk by 500 B.C., took advantage of that fiber's tensile strength and its extraordinary length to make patterns in the warp threads. The earliest examples of patterned silk are imprints found on a jade dagger and a bronze axe, both dated to the Shang dynasty (ca. sixteenth-eleventh century B.C.).[1] In both cases, the monochrome geometric motifs were hand-picked over the plain-weave ground (*qi*). By the third century B.C., intricate patterns show that weavers in the royal workshops had mastered what became the traditional Chinese polychrome silk weave (*jin*) that was exported as far west as Rome.[2]

An example of this weave, a pillowcase dated to the second or third century A.D. (cat. no. 3), was woven with five sets of warp threads, each a different color, to create the lively pattern of animals amidst clouds and mountains with auspicious Chinese characters. The patterns were repeated by the weaver manipulating rods through the warp threads by himself or with the help of an assistant.

Weavers in Central Asia and in West Asia did not have access to silk but did have abundant wool. A short fiber, wool locks easily when woven, greatly strengthening the cloth. However, wool yarns must be spun and twisted before being woven. Using these characteristics to advantage, these weavers usually made patterns with the crosswise, or weft, threads.[3]

Around the Taklamakan Desert, twills and other weft-faced wool fragments have been found, dated as early as the tenth century B.C.[4]

The more elaborate designs in wool cloth were usually woven in tapestry. On a simple loom with the warp stretched lengthwise between two beams, the weaver "colors" in a small area of the weft by taking a thread of one color, wound around a small bobbin-like shuttle, back and forth crosswise. When one area is done, more colors can be added until the desired motif is created. The designs in early wool tapestry bands were mostly simple patterns. Several examples show how this weave traveled westward to China.

A wool skirt with a tapestry band (cat. no. 1) was found in 1992 in Cemetery II at Shanpula near the ancient city of Khotan. Dated to the second century, the design features a figure leading a two-humped Bactrian camel toward a tree (fig. 2). Crudely depicted, with awkward proportions and wild exaggerations in form, the style reflects that of southern Siberian nomadic art, as well as the Hellenistic influence seen in the stone-carved procession of tribute bearers to the Iranian King Darius (522–486 B.C.) in his audience hall at Persepolis.[5]

A tapestry band found in a tomb near Loulan in 1980 and dated to the third or fourth century (cat. no. 6) reflects a similar integration of local and foreign cultures. The design incorporates the locally grown pomegranate with the wave-crest border derived from the Hellenistic-Romano decorative repertoire. Such borders commonly surround tableaux that celebrate Greek gods, especially Dionysus, in mosaics of Roman palaces and residences.[6] The detailed shading that characterizes such mosaics is simplified in the twill on either side of the band; nonetheless, the "rainbow stripes" add the illusion of depth.[7]

Several centuries later, Chinese artisans living in Turfan learned the tapestry weave from the Sogdians, but used it to weave traditional Chinese floral motifs in silk, not wool. Both the geometric design and narrow dimension of some pieces suggest that they were made at an early stage of technical experimentation. Once Chinese and Central Asian artisans mastered the technique of weaving the tapestry in silk, they produced beautiful works of flora and fauna in the tenth century.[8] This technique was refined and called *kesi* (carved silk) in the Northern Song dynasty (960–1279) because of the intricate imitations of calligraphy and paintings.

CHINESE AND SOGDIAN WEAVERS IN TURFAN

A textile fragment with a design of a duck within a pearl roundel (cat. no. 38) and another with a deer within a pearl roundel (cat. no. 39) are two examples of Turfan compound weaves. Both of these Sogdian designs are based on complex Sasanian commemorative tableaux of the royal hunt. As both pieces lack selvedges—the two edges of the fabric that confirm the direction of the weave—it is difficult to determine the exact type of the weave. Unquestionably, they were woven locally in Turfan in the early seventh century. But who made them and how?

Abundant textual and textile evidence suggests that the weavers of both cultures—Sogdian

and Chinese—worked together in government workshops.[9] Sogdian weavers began to use Chinese materials and techniques and Chinese borrowed Sogdian/Central Asian motifs.

An impetus to the development of new styles and techniques were the wealthy, expatriate Sogdian merchants, who must have turned to Sogdian craftsmen in Turfan when they commissioned new textile designs. The merchants commanded enormous resources as a result of their long-distance trade in incense, raw silk, and woven silks. They were particularly prosperous in the seventh century when Sogdian city-states, such as Bukhara and Samarkand, enjoyed much independence from their Sasanian rulers.

As these patrons demanded new textiles, Sogdian craftsmen began to experiment with weaving the traditional Chinese polychrome silk. Initially, the silks that they produced featured a typical Sogdian design, the tree-leaf.[10] Then the weavers created simple geometric patterns, such as squares and loops. After they had mastered these new techniques, they wove motifs that were symbolically more meaningful and technically more challenging, such as boar, duck, and deer.

In the seventh century Sogdians began to weave the most complex of all compound weaves, the weft-faced compound twill that usually would require a loom that was equipped with harnesses so that the repetition of patterns could be made mechanically, rather than by hand.[11] Just exactly how they did this remains a mystery. The technology may have been imported from Syria or Iran. Sogdians may have brought a version of an Iranian loom to Turfan, as their patterned textiles measured four times the width of typical Chinese silks. In any case, after Sogdians perfected designs and techniques, they transmitted them back along the Silk Road to Sogdiana. Silks attributed to Zandana in the Bukhara and archaeological finds from Moshchevaia Balka in the northern Caucasus show that Sogdian weavers produced remarkable silks with distinct Sogdian designs in the eighth and ninth centuries.[12]

The Chinese also learned from the Sogdian weavers. Artisans probably brought new ideas back from the frontier to Sichuan province, where specialized weaving workshops in Chengdu had been famous for their silk culture and patterned silks (*Shu jin*) since the Han dynasty. During the politically chaotic period known as the Northern and Southern dynasties (420–589), Central Asian traders increasingly went to Sichuan for Chinese silks, to avoid the risks associated with the northwest border.

Historical records show that a Sogdian merchant nicknamed "small-footed Hu" (*xijiao Hu*) actively traded in Sichuan in the mid-sixth century. Under King Wuling of Liang (r. 552–55), he was in charge of precious silks (and perhaps their manufacture as well). His grandson, He Chou, served the Sui court (581–618). When asked by the emperor to copy Iranian silks woven with gold threads, He Chou allegedly succeeded in producing silks that surpassed the originals.[13] Another Central Asian, Dou Shilun, Duke of Lingyang, also enjoyed renown for apparently having created Sasanian-inspired textile motifs of paired birds and rams while in charge of public works in Yizhou, Sichuan, during the early Tang dynasty in the seventh century.[14] Indeed, such designs were named Lingyang after him. Perhaps he had adapted the new weaving technology brought back by artisans from Turfan.

After the high Tang (mid-seventh to mid-eighth century), Sasanian-inspired designs, such as the paired birds encircled by a pearl roundel, went out of fashion, perhaps due to the military rebellion (755–63) led by An Lushan, a Sogdian. Instead, Chinese artisans used new patterning technology to weave the floral roundels favored at the court. Despite their capacity for making compound weaves, Chinese weavers chose to experiment with more complex single weaves (cat. no. 42). This bag, with mythical birds and butterflies around stylized flora is the only example of a further technical breakthrough, a proto-satin, a smoothly patterned silk requiring a more complex loom. Although it was found in a temple site at Sengim near Turfan and dates to the late eighth-ninth century, it could not have been locally woven. Not only was the motif totally Chinese but, in addition, Turfan had come under Uighur domination in 803.

OTHER TYPES OF TEXTILE DECORATION

Technical innovations in ornamenting textiles were not limited to weaving. Tang artisans also modified the wax-resist dyeing technique first invented in India to develope new methods of dyeing, clamp-resist dyeing (*jiaxie*) and ash-resist block-printing (*huixie banyin*). The former may be as a prototype of silk-screening.[15] The latter combines the technical knowledge of two cultures, using ash (instead of wax) to cover specific parts of the textile to resist the action of the dye, as in a cotton fragment (cat. no. 2). The use of ash was well known in central China by the sixth century when Jia Sixie published his *Important Arts for the People's Welfare* (*Qimin yaoshu*) around 533–44. This text also provides detailed instructions on how to grow two plants for obtaining the colors red and blue. The red dye used in this piece, however, was either imported from India, or more likely, seeds were imported then cultivated in Turfan, where local artisans extracted the color.[16]

Another resist-dyeing method was new to the Chinese. Tie-dyeing (*jiaoxie*) came from India. As the name suggests, selected parts of the fabric were protected from the dye by being covered and tied with leaves, bark, string, or yarn.[17] Examples have been found dating as early as the fourth and fifth centuries in Khotan and Turfan that could have been either imported or made locally.[18]

Despite its relative technical simplicity, tie dyeing failed to spread in Tang China. The clamp-resist dyeing method also disappeared after the tenth century. Perhaps Chinese artisans chose to focus on creating new weaves rather than experimenting with dyeing methods. Or, as the extraction of dye colors and dyeing grew to be a specialized occupation during the Tang, commoners who might have grown plants to sell to dye houses did not bother with the actual dyeing of cloths themselves. Instead, they decorated their personal clothing with embroidery.

The integrated community of Sogdian and Chinese changed abruptly in the eighth century when the Arabs conquered Iran. Many Sogdians escaped to Dunhuang, but these later immigrants lacked the wealth to commission new works of art as their predecessors had in Turfan and elsewhere in central China. Also, as Dunhuang was primarily a religious center, artistic activities were focused on religious art. Moreover, the decline of Sogdian wealth also

coincided with the Sogdian An Lushan's military rebellion of 755 to 763, contributing toward the Tang court's disinterest in Sasanian-inspired textile designs. After Turfan fell to the Orkhun-Uighur Khanate in 803, the Chinese sought to maintain good relations with the Uighurs. When the Tang dynasty collapsed in 906, the Chinese effectively lost control of the Tarim Basin around the Taklamakan Desert.

NOTES

1. The jade dagger is in the collection of the Palace Museum in Beijing and the bronze axe is in the collection of the Museum of Far Eastern Asian Art in Stockholm. See, respectively, Zhao 1999, 44–50, no. 01.01 and Sylwan 1937, 121, fig. 1.
2. Important examples were excavated from Tomb 1 at Mashan, Jiangling in Hubei province. See Kuhn 1995.
3. A simple brocading technique was used in and around the Alps in the Late Stone Age, around 3000 B.C. See Barber 1999, 65.
4. See Barber 1999, pl. I.1, and Desrosiers 2001.
5. For a detailed analysis, see Bunker 2001a and 2001b.
6. Kondoleon 2000; Thébert 1992.
7. Schorta 2001, 101–5.
8. Watt and Wardwell 1997, 53–63.
9. For a comprehensive account of how Sogdian and Chinese craftsmen lived and worked together in Turfan in the seventh century, see Sheng 1998. The two important works on the social history of the period are Jiang 1994 and Rong 2001.
10. Sheng 1999a.
11. A fragment in this weave was found in Turfan; it has a geometric floral design and dates to A.D. 619. Sakamoto 2000, no. 18.
12. Ierusalimskaia 1972 and Otavsky 1998, 201–6.
13. Beishi 1974, 9: 2,753–59; 2,985–87.
14. Zhang 1963, 118.
15. Wu 1973.
16. Miao 1982, 262–72.
17. Bühler 1980.
18. See Xinjiang 1972, nos. 17, 18, 47, 48, 49.

THE GLORY OF THE SILK ROAD

ART FROM ANCIENT CHINA

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