Plus Three Women and a Baby

Cherchen Man was not alone down there in his grave: three adult women shared it with him (fig. 3.1). Two of their corpses had decayed to varying degrees, but the third remained in excellent condition, clothes and all.

The Cherchen Woman, as I shall call her, must also have been imposing in life, for she too stood well over six feet tall (1.9 meters; plate 2b). She lies in the gallery with her head propped up and her knees raised, hands held across her stomach by a wrist cord braided of two blue, two pink, and two red yarns. Her hair of light brown shot with white she wore braided into two long plaits, to which she had added two more artificial queues. One plait has a red woolen yarn braided in with one of its strands, while in two others the hairdresser had added red wool only for the last four inches, folding the thread so that half went into each of two strands. The tips of the completed braids were then plaited together and tied.

Like Cherchen Man, the woman wears a dark red chin strap, which, however, had failed in its task, leaving her mouth dried wide open, her desiccated tongue filling the gap. Paint half covers her face; golden yellow spirals across the bridge.

Opposite page: Layout of intact tomb group at Cherchen, ca. 1000 B.C. Tomb 3: Grave of baby, covered by section of poplar trunk. Tomb 7: Grave of Cherchen Man, Cherchen Woman, and two other women, showing disposition of bodies at bottom of shaft. Dotted line indicates outline of channel under tomb floor (see fig. 2.14). (A) sheep’s head; (B) horse’s skull and horse foreleg stuffed with reeds; (C) large stick. (After Kamberi.)
of her nose and a large red triangle with more yellow spirals inside it on each cheek (plate 3a). She too has tufts of dark red yarn slipped through the lobes of her ears.

They match her dress: a calf-length robe of dark red, trimmed over the structural seams and around the neck with a slim pea green cord stitched down with little groups of alternating black and white threads. The material of her gown, densely woven in long-hop twill (fig. 2.13c), is of wool like all the other fabrics, yet with an extra sheen to it. Perhaps, Irene Good surmised, mohair or even crude silk had been mixed in with the sheep’s wool. But as the woman’s showcase remained sealed while we were there, we had no way of knowing. The sleeves, simple tubes sewn to the armholes in the body of the garment, reach down to the wearer’s wrists, but the space under each armpit was left open to the breezes.1 At the bottom of the dress, startlingly coarse stitches of brown yarn hold the hem in place. Below this, one can see the lady’s knee-high boots of soft white deerskin and, here and there, glimpses of the felt padding inside them—yellowish woven felt with a bit of blue showing.

This woman had lain crosswise in the tomb, just beyond the man’s head (fig. 3.1). At his feet lay two more women, one of whom time had reduced to little more than a skeleton. The other (plate 3b), although disintegrated in the middle like the Egyptian mummies, was still for the most part well preserved. One could still see her face, with high-bridged nose and mouth gaping wide, and she still wore tall white deerskin boots and a dark red dress with wrist-length sleeves like the first woman’s. Over part of her lay a big cloth with bold red and white interlocking swirls looking like a dozen pinwheels set off all at once on the Fourth of July. Neither of these ladies resides in the public gallery, but a similar swirled cloth is on display (fig. 3.2). Originally it had been dyed a vivid turmeric yellow, faded now from sitting under the gallery window but still bright on the underside. After dyeing, the design of red and blue interlocking spirals had been painted onto the woven wool. Painting fabric is a rare technique in the ancient world and is another indicator of the versatility of the clothmakers of ancient Cherchen.

The spiral patterns on these cloths hold interesting clues because of their relationship to a major form of textile art found in Central Asia today. The

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1 A sleeved coat with similar openings under the arms was found in Egypt in a grave dating to the sixth or seventh century A.D., where it belonged to a Sassanian or Parthian (Iranian) riding outfit. Underarm openings seem also to have survived into this century in a number of folk costumes (ranging from Macedonia to Iran), all of which could lay claim to Iranian or Turkic influence or origin. In some cases the slit was demonstrably used as a way for the arm to bypass the sleeve sometimes—in hot weather or for special jobs.
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**Figure 3.2**

Yellow woolen weft-faced cloth painted with red and blue spirals, from Tomb 2 at Cherchen, 1000 B.C. Compare cloth in plate 5b.

Cherchen spirals don't look like tidy little Aegean or Near Eastern spirals, which typically come in rows. Instead they sprawl all over the surface in waves, interlocking in all directions. They imply an origin in feltwork, even though the few ancient pieces of true felt we saw happened to be plain, and not from this quadruple burial.

The nomadic herders of Eurasia, as we said, have relied upon felt for the past several millennia as their most important construction material. William of Rubruck, a Franciscan monk from Flanders who set out on a Christian mission to the Mongols in 1253, observed this custom among his hosts: "With the coarse [wool] they make felt to cover their dwellings and coffers and also for making bedding. . . . From felt they make saddle pads, saddle cloths and rain cloaks, which means they use a great deal of wool." In addition, because nomadic herders move constantly, they carry few large objects. Whatever art they use to embellish their lives must ride piggyback on the necessities. Thus they have become masters at decoratively sewing their felt. In describing the
Mongol felt tents, or yurts, William of Rubruck says: “Before the doorway they also hang felt worked in multicoloured designs; they sew coloured felt onto the [piece that forms the basic hanging], making vines and trees, birds and animals.”

Because of its matted structure, however, felt has a peculiar property: wherever you sew it along a straight line, the felt is likely to tear, just as a paper towel tears off along the line of perforation. The solution? Sew interlocking circles and spirals. Then the lines of sewing reinforce one another. So nomadic art of the steppes characteristically winds and curls (fig. 3.3) even when it has been transferred to wood carving, as on the base of the spindle found at Cherchen (fig. 3.4), or to appliqués on woven cloth (where the curls are unnecessary), which we saw everywhere in both Chinese and Russian Turkestan (fig. 3.5).

One of the most charming pieces of clothing from this tomb probably belonged to one of the three women: a cobalt blue shawl woven in a loose and gauzy plain weave with two slim cherry red stripes through it (plate 4a). Along the two sides the brown side selvedges have been turned and hemmed prettily with long white stitches, once again looking like the dashed white lines on a road. At both ends the weaver wove a handsome band ribbed with alternating bars of cherry and blue, then braided the blue warp ends into fringes tied off with overhand knots. One could wear such a wrap to a soirée today without feeling ashamed.

Why were these three women buried with the man? The mind runs immediately to the ancient Indo-Iranian custom of satte (satt), whereby the society required a man’s wife to accompany him to the grave if he died before she did—a deed usually accomplished by her climbing onto his funeral pyre. But these bodies were not cremated, and no visible signs of violent death have survived the millennia. Of course they could have taken poison, but they might have died simultaneously by accident, for instance in an epidemic or other sudden catastrophe. (I recall noticing in Jacksonville, Oregon, an old tombstone of a family of five, all with the same date of death. It read: “Massacred by the Modoc Indians.” That sort of thing can happen.) New excavations in progress at Zaghunluq show that some later tombs were reopened many times to place more burials in the chamber, being constructed with an entry corridor for the purpose.

2 The bars of alternating color, a favorite ancient pattern because it is so simple to weave, result from alternating rows of cherry and blue weft in plain weave. The weft is packed in so tightly that the warp and the weft below it can’t be seen, producing a ribbed or corduroy-looking band in which the ribs stand out as alternating bars of color: one blue, the next cherry red, and so on. If we had a red and a blue spider weaving side by side, the red spider would always hop over the even warp stems (covering them with her red weft) and under the odd ones, whereas the blue spider would always do just the opposite, as they wove alternate rows. Thus even stems would get covered only with red and odd stems only with blue.
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**FIGURE 3.3**

Appliquéd felt ornamentation on a felt boot from the burial in Kurgan 2 at Pazyryk, in the Altai Mountains north of Xinjiang, ca. 500 B.C. Textiles there were preserved by permafrost. Note the similarity of the spiral pattern in the felt to the painted spirals from Cherchen in fig. 3.2 and plate 3b. (After Rudenko.)

**FIGURE 3.4**

Wooden spindle found in Tomb 2 at Cherchen, with spirals carved on its whorl.

**FIGURE 3.5**

Inside a Kazakh yurt in the Nan Shan (Southern Mountains) south of Urumchi, June 1995. Some of the hangings and both caps are covered with curly decoration typical of traditional feltwork, although these pieces have factory-made woven cloth as a base.
But such is not the case here. We will need to dig up many more graves of this early culture to discover whether simultaneous multiple burials were a habit or a random occurrence.

A few feet south of the mouth of the large tomb, near the horse head and foreleg (fig. 3.1, top left), the excavators found another grave, one added shortly after the principal burial. Because the little grave lay slightly above the mouth of the large tomb, the archaeologists had in fact found it first and named it Tomb 1, the grave of the four adults being Tomb 2. A smooth, curved slab of wood gave first notice of its presence. Underneath the slab, a small secondary pit held a tiny, perfectly preserved baby (plates 4b, 5a).

The infant, probably less than three months old, lay on a blanket of white felt, with a second, even whiter blanket of long-hope twill (fig. 2.13c) folded over some raw wool and placed like a pillow under its head. A pair of unusual gifts lay with the child: a small cow's horn cup and what may be the world's earliest preserved nursing bottle, fashioned, nipple and all, from the udder of a sheep (see plate 5a, to left). The baby could suck milk from the teat when the bag had been filled and tied shut at the other end. The curved planks of poplar wood (hollowed from a section of trunk) and a thick layer of reed mats covered the little burial in its shallow oval pit. Two feet away, in another hole, lay a sheep's head.

Two small bluish stones still close the infant's eyes, and a wee tuft of orange wool protrudes from each nostril (a means, known in other parts of the world, of wicking away any decomposition fluids that might come out through that orifice). Time and the desert have so perfectly preserved the face that its little ski-jump nose is intact, the tiny eyebrows still arch neatly above the blue eyestones, and wisps of pale brown hair peek out onto the forehead from below the cap. Over the baby's head someone had carefully patted a bright blue bonnet of combed and barely felted wool with an edging of bright red in the same material to frame the face. This unique headgear earned the infant our nickname of the Blue Bonnet Baby, to distinguish it in the gallery from a much earlier child's mummy wrapped in beige and brown (see Chapter 4).

The rest of the infant's body was neatly wrapped in a purply-red-brown shroud or baby blanket identical in color to Cherchen Man's suit, the whole bound up by several turns of a twisted red and blue cord exactly like the one holding the man's hands in place. The cloth of the blanket, however, differed from that of Cherchen Man's suit by a subtle but handsome texture stripe. Both cloths consist entirely of plain-woven woolen thread of a single color and weight, but after each group of twenty-five to thirty rows, the maker of the baby's shroud added three or four rows of the same yarn that had, however, been overspun (fig. 3.6). The special yarn twisted into gnarls in the cloth, giv-
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**FIGURE 3.6**
Detail of the Cherchen baby's shroud, showing narrow texture stripes of overspun yarn woven in at regular intervals. Overspun thread is made by twisting the fibers so much that the thread wriggles up into kinks when released, instead of lying flat.

...ing a completely different texture to the thin stripes containing it. The trick is clever yet simple, making the most of very little—a trait we saw often among the mummies' possessions.

Not only is the dyed thread of the shroud identical to the man's clothing, but the bonnet appears to have been made from the same supplies of blue and red combed but unspun wool used for the man's leggings and the binding cords of both mummies. The similarities in these various materials make one suspect that the Blue Bonnet Baby was the man's own child, dressed from the same storehouse of supplies and dying soon after him. Indeed the whole group of finds suggests that one of the three women was the infant's mother and the nursing bottle a desperate but doomed stratagem by the survivors to keep the little fel-
low alive after her death. We take sterilized baby-formula and boilable glass bottles for granted today, but not so long ago, and in undeveloped countries even now, babies deprived of mother’s milk routinely die from germs in the substitute milk supply unless milk is provided by a wet nurse, another lactating woman. (Well-wishers and avid marketers who provide powdered infant formula to such countries usually don’t understand that the contaminated water used to mix with the powder dooms the child to a death probably more horrible and at least as certain as mere starvation.) The earnestness and inventive care of these prehistoric people still touch us across the millennia.

The Urumchi archaeologists worked on three other tombs at Cherchen, just a few among the hundreds in this ancient burial ground. None of the three graves was intact; the local salt diggers had come on them by accident and rummaged them thoroughly. The men later led Dolkun Kamberi and his associates to the site of their finds, a barren waste with little surface indication of the burials beneath. Nor had the bodies survived well in the disturbed graves. But some of the textiles had. With little else of human manufacture in the burials, these textiles yield the best clues we have just now to the local culture, contacts, and origins of the inhabitants of this far-flung place. So let’s have a look at some of the fabrics and at what they tell us.

Tomb 3 produced two spectacular examples of a kind of cloth not seen before in ancient finds, though it proved to have interesting connections. Great lengths and widths of fabric had been made up laboriously by sewing together flat plaited bands, each only a centimeter wide—rather less than half an inch (Plate 6, Fig. 3.7). In one “patchwork” the best-preserved bands measured 1.5 cm long (roughly 5 1/2 feet), while in the second at least thirty-seven bands were sewn side by side. Some bands were monochrome, in bright shades of turmeric yellow, red, maroon, or blue; others contained multicolored patterns. Typically the cloths began with a few plain braids of different colors—say, yellow, red, yellow—then a patterned one, then several more plain ones of whatever colors the makers liked, another fancy one, and so on. The patterned ones took far more time to make, of course, so spreading out the “expensive” ones maximized their effect, as when people decorate their kitchens today with a few hand-painted tiles scattered among many plain ones. The designs included lozenges and triangles alternating in color like a harlequin’s suit, some with decorative tufts at regular intervals where changing colors were tied on and off (Fig. 3.7), and a particularly complex pattern that looked like little double axes laid end to end (Fig. 3.8).

Huge cloths made up from narrow bands seemed, on the face of it, preposterously labor-intensive. That’s like planting a lawn one seed at a time. Why not set up a single warp and then weave a lot of stripes on it, plain or fancy? But
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FIGURE 3.7
Patterns on narrow plaited woolen bands found in Tomb 3 at Cherchen, 1st millennium B.C. In the lowest patterned band the ends of the different colored threads were left to hang out in little decorative tufts. (Photo I. Good.)

FIGURE 3.8
Design resembling double-bladed axes laid on their sides, from a plaited woolen band found at Cherchen, 1st millennium B.C.

as I thought about the culture as a whole, a different picture began to emerge.

These people made their textiles from sheep's wool. Someone had to tend
those sheep, spending long and largely idle days and nights out in the meadows
wandering about with them. Weaving on a loom requires many hours working
in one place, and a large loom is too heavy and awkward to haul about easily,
especially when a cloth is in progress. But band weaving is quite portable. Some
cultures use a frame, but in most you just loop the far end of your long, skinny
warp around a tree or your own big toe, pull back on the near end with your
in an ancient style to this day, and one might think the reason why this is so is that the women spinning on the wheel were originally herd- ers. You spin a rapid rhythm with your single hand, and you quickly sew up the ends of the threads with the other hand. That reasoning also explains why the women are so effective at their work.

From a distance, the effect of the basketworks is seen as silks seen in Persia today in the bazaar, which is a favorite of both Turcic and the women of the Tarim Basin.

Researching how these basketworks were created by ancient peoples, I found that the most common methods were to use simple three-strand plaitwork, sometimes with a double strand laid in double. The plaitwork was used in basketry and basket weaving, with one of the patterns used being the plaited design of the Persians.

Persian painting (19th century) of a young man wearing a coat of traditional striped silk that looks similar to the banded cloths of the early Tarim Basin (see fig. 3.8 and plate 6). (Courtesy of F. Eittinhausen.)

Hand to create the necessary tension, and start weaving. If you have to stop and move, you just roll it up, unthick the far end, and go. In short, anyone could weave or plait bands while herding sheep. Documentary films from 1985 show seminomadic women in the highlands of Bosnia walking slowly among the boulders, great black sheepskin capes over their shoulders, singing at intervals.

Technically, transhumant. That is, they spend the winter in permanent houses in the lower valleys, with their sheep, then herd the flocks each summer up to the mountains, where they move from one temporary camp to another as the sheep graze.
in an ancient style that carries great distances. That way both sheep and family know where the shepherdesses are. All the while their hands keep busy, one woman spinning onto a spindle from a distaff full of wool, the other knitting socks with her ball of yarn tucked under her arm. One has a sense of glimpsing back into a lifestyle of the Bronze Age. The pace is slow, but nothing is wasted, including time.

So even though a cloth of plaited bands consumed more labor than a woven one, making it this way may have constituted the best overall use of time among herders. You spin and plait your wool while on the move most of the year, then quickly sew up the bands into larger cloths during the short sedentary season. That reasoning also suggests that herding was a major occupation among these people.

From a distance these banded cloths look remarkably like the typical striped silks seen in Persian paintings of millennia later (fig. 3.9) and still available today in the bazaars of Istanbul and Ankara. This elegant striped cloth, a favorite of both Turks and Persians, may well have developed out of the humble prehistoric band textiles of Central Asia.

Researching how the strips themselves were made, I found that the flat bands were created by a widespread method called oblique plaiting (fig. 3.10), related to simple three-strand braiding but done with many more threads. The bands of the plaitwork fabrics contained anywhere from ten to forty threads, sometimes laid in double, whereas some pieces of plain red plaiting from later sites in the Tarim Basin, nearer 500 B.C., measured six to eight inches wide and must

**Figure 3.10**
Design of plaited woolen band from Cherchen, with diagram showing oblique angle both of the pattern threads and of the hidden threads that bind them together.
have required managing several hundred threads at once—probably not a job
to do while herding sheep.  

I also kept an eye out for how Cherchen Man’s peculiar round belt cord
might have been produced—without luck until I happened to spend a weekend
with a friend in Wales. Susan Wadlow and I met as children, and whenever I
can, I visit her in the sheep-grazing borderlands above Shrewsbury, where the
well-known medieval mystery series about Brother Cadfael is set. This area has
specialized in textile production for at least a thousand years, and Susan knows
much about aspects of cloth unfamiliar to me, such as lacemaking, which she
teaches. Together we have solved a number of textile puzzles over the years.

My photographs of Cherchen Man’s belt reminded Susan of a Japanese cord-
making technique called kumihimo, and she fetched the stand she had made for
herself when learning to produce it. A kumihimo stand (fig. 3.11) consists of a
flat, tablelike wooden disk, about eight inches across, raised on four tall legs and
with a two-inch circular hole in the middle. In use, it looks like a spaghetti-
eating monster, with long strings all around disappearing into the circular
mouth, for the cord forms down through the hole. A weight fastened to its start-
ing end pulls the new cord ever downward, while the strings that go into its
making radiate from the hole, cross the flat surface of the disk, and hang down
over the outer edge. Each length of yarn to be used is wound around a spool-
shaped weight to give countertension, making it easier to manage the whole
process. Depending on the cord’s pattern and how thick you want it to be, you
may have anywhere from eight to a couple of dozen threads, each wound on its
own spool weight. To form the new cord, you simply grab two weights that are
opposite each other on the stand and interchange their places, and you keep
doing this with the other pairs of weights until they have all shifted; then you
start over. The process is easy—and mesmerizing. The number, positions, and
colors of threads, the order in which you move the pairs of weights, and
whether they pass to the right or left of each other, together determine the pat-
terns.

Looking at the cord half formed on Susan’s stand, I agreed with her: the
basic structure matched the Cherchen belt cord. Only the pattern and thickness
differed. We began to search through her kumihimo books, and eventually,
at a craft fair in California, I located the right design. To obtain the sequence

4 The patterns of alternating triangles proved to be a function of how the colored threads,
moving across the plaitwork at an angle, would show on the surface for a ways, then turn a
corner and run along completely hidden for an equal distance. By careful selection of the order
and number of contrastively colored threads, the ancient artisans worked out a variety of geo-
metric designs.
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**Figure 3.11**

Wooden stand for making traditional Japanese *kumihimo* cords. The round cord forms
down through the hole in the center, while the threads from which it is being made
hang out over the outer rim of the stand, wound onto and weighted by heavy spools.
Japanese spools are typically of wood with heavy metal cores; those in the photo are
exact replicas of clay spool weights from prehistoric Greece, which weigh the same
amount as the Japanese ones and were probably used similarly.

I had recorded for Cherchen Man's belt, I needed 24 threads in five colors.

Another detail struck me as I surveyed Susan's *kumihimo* stand: I had seen
small, spool-shaped weights like that before. Not in Chinese Turkestan, for al-
most no early tools have been unearthed there yet. Virtually no grave gifts ex-
cept cloth accompany the dead, and the archaeologists haven't begun to search
out and excavate ancient house sites. I had seen them, I realized, in Greece,
where spool-shaped objects turn up all over Bronze Age and even Neolithic
sites.¹ Excavators in Greece had repeatedly asked me what the objects were for, since they occurred with other textile implements. It turns out they are just the right size and weight for doing this sort of plaiting.

Their presence suggests, then, that not only the early inhabitants of the Tarim Basin but also those of prehistoric Greece sat around plaiting something akin to kumihimo. It is frustrating that in Europe we have textile tools everywhere, but virtually no textiles preserved to prove the point, whereas in Central Asia we have loads of textiles but no tools! How can we compare data, then, to know who got what from whom?

And what about the Japanese? Did they receive the method from farther west long ago or invent it on their own? Certainly we have no evidence that anyone from so far east had trekked to Central Asia yet. The Japanese archipelago lies nearly three thousand miles from Cherchen and the Tarim Basin. Even the Chinese didn't get to Inner Asia for another millennium, and China lies directly between Japan and the Tarim. So if any influence in this matter traveled to or from Japan, it was later and headed east.

As for possible influence on plaiting methods between the Tarim Basin and Europe, again it must have moved from west to east, if it existed, because many of the Aegean sites with these spool weights go back long before 2000 B.C.—that is, well before anybody had settled in the Tarim Basin. The first permanent settlers in the desert basins appear to have arrived just about 2000 B.C. The Cherchen culture, which left us the round cords, didn't flourish until about 1000 B.C., a thousand years later.⁸

Tomb 4 produced at least thirteen cloths, mostly of unclear use. Some were simply swatches of plain dark red wool in gauzy plain weave, with and without denser stripes of the same color or with stripes in a much brighter red. Others, always dark red, had probably come from garments, since they retained the characteristic piping, although we could no longer say what garments. The tomb also contained a dark red onion dome hat (like that in fig. 2.7) done in spiral nalbinding and an open-fronted white jacket with one sleeve oddly several inches shorter than the other. Did the owner have a stunted left arm? In any case, someone had carefully mended some frayed threads on the sleeve by tying their loose ends together.

Tomb 4 also contained large banded cloths. One of these (plate 3b) had been

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¹ In the Aegean the Bronze Age runs from 3000 to 1200 B.C., the Neolithic from about 6000 to 3000 B.C.

² Quite a number of different types of plaiting, not just kumihimo cords and obliquely plaited bands, survived from the Cherchen graves. A particularly common cord consisted of a thick yarn of white wool covered by a "skin" obliquely plaited from alternating pairs of fine red and blue, then red and yellow (or white) threads.
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and obliquely plaited. They consisted of a thick pair of fine red

sewn together not of half-inch-wide plaiting like the others, but of seven-inch-wide strips of cloth woven in an unusual weave, half-basket twill (fig. 3.12b). Red and yellow stripes alternated, except where a short stretch of yellow had been added to a red one to fill out the needed length. Clearly the culture did not set a high value on symmetry. The piece must have formed the skirt of a large robe or dress, for the ends of the strips were sewn together into a circle over six feet (two meters) around, and near the top of what's left were marks where the material had been habitually gathered—presumably around the waist of the wearer. A thick plait of red, white, and blue edged the bottom.

We know little about the occupant of Tomb 4, not even his or her sex. Local
FIGURE 3.13

Twill tapestry of interlocked red and yellow spirals, from a disturbed tomb at Cherchen, early to mid-1st millennium B.C. (Photo I. Good.)

diggers had ransacked the tomb, destroying its structure and chucking things out in all directions. But the owner had good taste, for it also contained some far more intricate pieces of weaving than anything our team had seen up to this point—in particular, three elegant pieces of tapestry. One was a shred with interlocking red and yellow angular spirals (spirals again!), edged with a red, white, and blue braid (fig. 3.13). Another swatch, mainly white, had a band of zigzags colorfully executed in blue, light red, yellow, maroon, and peach.

The very fact of finding tapestry here startled us, since the Egyptians learned to negotiate this fancy technique only about 1500 B.C., after they had been weaving for three thousand years, importing the idea from their Syrian neighbors. How, we wondered, did tapestry get as far east as the eastern Tarim Basin so fast?

But maybe it wasn't quite so fast as it seemed at first glance. The radiocarbon dates of 1000 B.C. for the Cherchen burials were taken exclusively from the undisturbed tombs of Cherchen Man and his family, so this disturbed grave may have been later by several centuries, for all we know. New excavations of more than a hundred tombs at this graveyard done in late 1996, not yet published,
In many fabrics there are about as many threads per centimeter in one direction as in the other (balanced weave), as in the lower part of diagram a. Without changing from plain weave, one can also pack the weft threads much closer together, as in the upper part of a. This produces a weft-faced weave, so called because we see mostly weft and not much warp. If one does this trick using a weft yarn that is much fatter than the warp yarn, as in b, the weft will virtually hide the warp. Tapestry uses this ability to hide the warp, so that different colors of weft alone can be manipulated to make designs, as in c.

show that the Cherchen cemetery up on the salt flat remained in use into the early centuries A.D. On internal grounds, a date of 500 B.C. for the tapestries would feel more comfortable to me. The presence of the peculiar purply-red-brown fabric, however, indicates that Tomb 4 belonged to a direct continuation and elaboration of Cherchen Man’s culture. A strange detail of the tapestry confirms this continuity of tradition.

Tapestry depends upon tamping down the weft so tightly that it covers the warp (fig. 3.14b). That is, here our spider lays down plump rows of her silken weft so close together that you can’t see the grass stems of the warp anymore. (The weave itself is normally just plain weave.) Since the warp doesn’t show, changing the color of the weft alone during weaving will produce solid fields of color usable to produce designs—simple geometric ones, like the Cherchen pieces, or entire scenes of people, animals, landscapes, and so forth, as in the huge and famous Gobelin tapestries created for the French royalty. (Ironically, the famed Bayeux Tapestry depicting the Norman takeover of England in A.D. 1066 is not a true tapestry since the successive scenes are entirely embroidered onto the surface of plain cloth, rather than woven in.) The underlying technique of packing the weft to hide the warp, known as weft-facing, had probably been invented in the Near East as a response to trying to use wool for weaving, back around 4000 B.C. when woolly sheep first became available. The same impetus had apparently led to the invention of twill in Anatolia about the same time.

Although sheep had been among the first animals domesticated, around 8000 B.C. in the Near East, it took four thousand years of inbreeding to come up with usably woolly ones. Before that, sheep were kept for their meat. See Chapter 7.
Why these changes in weaves when wool arrived? The only fibers that people had before that—namely, plant stem fibers like linen and hemp (used since 25,000 B.C. at least)—don’t stretch, whereas wool fibers can stretch tremendously (just like the hair from your own head: try pulling on both ends of one hair). When you pull tight the warp threads on the loom so you can weave the weft in among them, plant fibers stay put but wool keeps stretching. And it may eventually snap as you continue to punish it by heating the rows of weft thread in. Spacing the warp widely and then covering it, as in typical weft-faced weaves (fig. 3.14), protects the warp from wear; similarly the pairing of warp threads in twill (fig. 3.12a) cuts in half the strain during weaving. In short, both twill and tapestry developed in response to the peculiarities of sheep’s wool, and all three—the two new weaves and the wool itself—developed far to the west of Central Asia and long before the graves of Cherchen.

The red and yellow spiral tapestry startled us, then, in not quite conforming to the way the rest of the world made tapestry. True, the weft covered the warp as it should, but looking closely, we saw that the weave wasn’t the expected plain weave. These people had used their own peculiar long-hop twill (fig. 2.13c) to make their tapestry! Normal twill, which jumps only two threads, won’t cover the warp, but by long-jumping over three and four warp threads at a time, as they had here, the weavers could easily make the weft cover the warp to produce a solid field of color. Such a substitution of technique suggests that these people had learned to make tapestry just by looking at pieces imported from the Near East, rather than by having been taught how to make it by other weavers. The weavers of Cherchen, like its tailors and hatmakers, were an inventive lot.

And nowhere more so than in the other tapestry piece from Tomb 4, a spectacular turquoise blue shirt or chemise with a stepped collar, broad and flat like that of a sailor suit, and a strip of polychrome tapestry setting off the bright red cuffs and hem (plate 7).

At a distance the collar seemed a lighter shade of turquoise than the body, although up close the weft seemed identical. We discovered that the makers had invented a weaver’s equivalent of the old jeweler’s trick of mounting tinfoil behind a gem to reflect the light through it more brightly. In this case, although the warp inside the main cloth was dark brown, within the collar it was peach pink, and despite the tight packing of the weft in the long-hop twill, the warp still peeked out from underneath just enough to alter the hue. This trick made the unique stepped shape of the broad collar stand out all the more.

The construction of the collar itself was not only inventive but a skillful tour de force. It lies flat across shoulders, chest, and back (woven with the warp running from one shoulder to the other), but its outer edge decreases by five square
steps as it goes, so that it forms a giant stepped cross. Another stepped patch was sewn over the main cloth under each arm. Yet there are no raw or sewn edges: the steps were sculpted on the loom—a tremendously time-consuming task.  

The polychrome areas of tapestry, again in long-hop twill and differing between hem and cuff, were the work of experts. Near the bottom of the chemise is a three-step jagged “lightning” pattern (of red, brown, yellow, and blue), whereas near the cuff of the inset sleeve (plate 7b) we found spirals alternating with jagged lightning shapes. People who don’t have television and movies to entertain them may have a lot of time on their hands to create ornate things.

My favorite textile is a row of sassy-looking Argali sheep with big curving horns and large brown or bright blue eyes (plate 8a). Some of the sheep are white, some tan, and some red-brown, on a dark brown background, all perching above a red border and below a row of “hourglasses.” They are done in brocade technique—that is, by covering the basic weft (that holds the cloth together) with extra weft threads in other colors to make the design. The Argali (commonly known by the Mongol word for “ram”; zoologists call it Ovis ammon) is the wild sheep of the area and the largest of all wild sheep, standing some four feet high at the shoulder and bearing impressive curly horns. I have not been able to find that it ever has blue eyes, and I wonder whether the weaver got that idea from the people of Cherchen. After all, someone had gone to the trouble of finding blue stones—something of a rarity—to place over the infant’s eyes, and a remarkable number of the non-Chinese people in the Tarim Basin today have blue eyes.

This brocade was the only depiction of real life among all the Cherchen textiles, an attribute suggesting that it is a late piece. On the other hand, the simple brocade technique used is attested (in and around the Alps) as far back as 3000 B.C., the Late Stone Age.

Of the various remaining Cherchen textiles, three other pieces showed us something completely new. One was a grungy, rumpled scrap of dark brown twill with the remains of chain-stitched embroidery, the pattern of which was not readily distinguishable. In the ancient Near East embroidery was relatively late, developing only after millennia of decorating cloth with strictly woven designs. Apparently it was not an immediately obvious thing to do to cloth, al-

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8The turquoise weft forms a closed selvedge at the bottom of each step as well as along the slit of the neck hole, and the peach-colored warp turns back into the shed at the side of each step—at both ends. But you can’t weave thread into a shed that has already been closed! Unfortunately we did not have time to solve the riddle to our satisfaction, but my best guess is that at the finishing end they had worked the warp ends back into the cloth with a needle, doing it so carefully that you couldn’t readily detect the difference.
though embroidery was starting to spread out of Mesopotamia and Syria by the time of Tutankhamon, ca. 1350 B.C. Embroidery seems to have started in China too by that time, chain stitch becoming a favorite Chinese stitch.

The second informative piece was a white cloth decorated with a simple but elegant pattern of little squares stacked and nested to make polychrome lozenges (plate 8b). At first glance it appeared to have an ancient mord, but the two edges joined by the stitching turned out to be closed selvedges, not torn edges. Someone had deliberately woven the pattern in such a way that the interiors of the lozenges would match up perfectly when seamed together—a feat that takes careful planning.

The third piece consisted of a strip of tapestry showing an interlocked scroll pattern in red, white, and blue that zigzags across the fabric (plate 10a). Its edge was sewn to a broad strip of red twill, with strips of green twill, brown plaiting, and dark yellow twill successively beyond that.

One detail in particular caught Irene Good’s eye. A small section of the red scrolls in the tapestry consisted of a slightly paler and much silkier fiber than the rest. She eventually determined that it was cashmere, the fine hair of a type of goat named after its home in Kashmir, just north of India. This could account for the extra sheen Irene had noticed in the Cherchen Woman’s handsome red dress. It also indicates that these people kept (or had access to) goats from the south as well as sheep from the west.

What caught my eye was its similarity, red twill sidebar and all, to some cloth found nearly seventy years ago at Pazyryk.

Pazyryk lies five hundred miles due north of Cherchen in the Altai Mountains, right where the steppe or grassland belt pinches to a narrow waist between western Asia (Siberia) and eastern Asia (Mongolia) as the steppe zone passes through the one range of mountains that severely obstructs its east-west sweep (map 2,9). In a small Altai side valley now called Pazyryk, nomadic herders of twenty-five hundred years ago laid their dead to rest in a group of kurgans, or burial mounds, some big and some small. Not long after, opportunists passing by noticed these conspicuous monuments, dug down into them from top center, and robbed the central burial chambers of whatever they viewed as valuable, objects of precious metal in particular.

High and northernly, however, Pazyryk lies in an area subject to subsurface permafrost. In some cases a few feet of groundwater had already seeped into the tombs and frozen so hard that the robbers could cut only the top half of the contents; the rest was stuck fast in the ice. And the conical holes that they dug fanned so much additional rain and snow straight into the interiors that everything else was soon encased in permanent ice as well.

Until 1929, when a Russian archaeologist named Sergei Rudenko came along with hot water, C group, he loosened bones over a campfire. Since had preserved of the dead, lying

The inner chamber of Lincoln’s hut, had been of the winter dwel
developed castles of the warmers. But they stood in, and dug them into the ice. Apparently they tore off as a row of wide strips of tapestry patterned in the same pattern as the dress, and the zigzagging a lie in the Cherchen.

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Beyond that, simply 85 Q Z town of Cherchen Chinese name.
with hot water. Opening first one, then another of the largest kurgans in the group, he loosened the contents a bit at a time with buckets of water heated over a campfire. Slow though it was, the work was well worth the effort, for the ice had preserved wood, leather, textiles, and even the ornately tattooed skins of the dead, lying in their hollowed log coffins.

The inner chamber of Kurgan 2, built up of notched logs like Abraham Lincoln’s hut, had been hung with great lengths of cloth, presumably in imitation of the winter dwellings of the nomadic herders who built the tombs. (As in medieval castles of northern Europe, where huge tapestries adorned the walls, the hangings would trap the drafty breezes and keep the rooms a good deal warmer.) But this was one of the tombs already half filled with ice when the robbers dug in, and the bottoms of the hangings were already frozen several feet into the ice. Apparently the intruders viewed this heavy cloth as valuable, for they tore off as much as they could get at. The rest remained for us. It consists of wide strips of red woolen twill alternating with equal-sized strips of tapestry patterned in red, white, and blue interlocking scrolls. In short, it bears the same pattern as the Cherchen tapestry, with the difference that the little scrolls and the zigzagging of the color fields were woven at right angles to the way they lie in the Cherchen piece.

So great are the similarities (not just of the tapestries but also of sewing them to strips of plain twill) that one has to believe the two textiles belong to the same date as well as to the same tradition. Tree rings show that the five great kurgans of Pazeryk were built within fifty years of each other, probably between about 450 and 430 B.C. That suggests a similar date for the scrolled tapestry and the grave it came from at Cherchen. But exactly where these scroll-patterned tapestries originate is not yet known. There is much still to learn.

In all our days in Ürümqi we never glimpsed the inside of the storeroom, so I had no idea at the time what percentage of the Cherchen finds we looked at or whether our sample was representative. The armloads kept coming as long as we had time to work. Later Dolkun Kamberi told me that we had seen maybe a fifth of the Cherchen material and that he had tried to see to it that we could inspect representatives of all the most interesting types of cloth. Undoubtedly, therefore, much plain stuff was passed over, but even so, these ancient people clearly dressed in a remarkably colorful way. The reopening of the Cherchen excavations in 1996 apparently has brought many more boxloads of colorful cloth to the museum.

Beyond that, we had little context for most of what we saw. The labels read simply 87 Q Z, meaning they had come from the 1987 excavations near the town of Cherchen—written Qiemo if you transliterate into Roman script the Chinese name of the place—at the little site called Zaghumluq. (I never asked
Lack of context: scientific digging of any sort on the contents were robbing tombs. During our trip we visited a tomb in Turfan, where nearby the Urumchi archaeologists were digging the remains of a colony (see map 10.2). And a team of old bones had no imagination. An archaelogist accosted eight feet into one and gently dug out the tombs to determine the graves. As time passed, the team had found dozens of grave goods: twenty or thirty and more. We found real treasures.

Whether they found as valuable enough to the archaeologists, but the being ransacked by predatory looters. In the cultural context, the history was lost forever. For understandable and solid reasons than little bits of the past are condemn...
Lack of context destroys much of the historical value of an object. Unscientific digging of archaeological sites has long been a problem worldwide, wherever the contents have been perceived as having value. (At Pazyryk intruders were robbing tombs by 400 B.C.; in Egypt the process had begun by 2500 B.C.) During our trip we visited a somewhat later cemetery site, dating to about 500 B.C., where nearby villagers had looted many of the remaining graves the minute the Ürümchi archaeologists left for the season. The place looked like the warren of a colony of ground squirrels: mounds and holes everywhere (fig. 3.15; map 10.2). And all about lay finger and leg bones, a jaw here, a pate there—old bones had no value to the robbers, so they chucked them everywhere. The archaeologist accompanying us, who had dug the site originally, climbed down eight feet into one of the pits where you could see more bones protruding and gently dug out the long hair and netted cap of the woman who had once occupied the grave. As he handed things up, we bagged them, and he told us that his team had found one gold earring and two gold beads in this cemetery, while excavating a dozen graves. On the strength of that, the locals had spaded up twenty or thirty more, and might have dug all the way to Ürümchi if they had found real treasure.

Whether they found any more gold, and whether they viewed anything else as valuable enough to keep or sell, we'll never know. Almost every site that archaeologists begin to dig, not just in China but the world over, runs the risk of being ransacked while the scientists aren't looking. But without the human cultural context, the central value of all the material—gold and bones alike—is lost forever. For understanding human history ultimately carries far more value than little bits of shiny metal. As Santayana said, those who do not know their past are condemned to relive it... unimproved.