

THE REVOLUTIONARY WEAVING INVENTIONS OF THE EARLY HORIZON

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Although the evidence for Chavin being the single most influential art style in ancient Peruvian pre-history has long been apparent (Willey, 1951), the transmitting mechanisms and the full cultural dimensions of that pan-Peruvian influence have remained elusive. Because of the complex demonic imagery of this Chavin art style, it is assumed that it represents powerful religious art, and it has been possible to plot out broadly its evolution over time (Rowe, 1962). The recent excavations at coastal sites such as Garagay (Ravines, 1975) and Huaca de los Reyes (Moseley and Watanabe, 1974), revealing vast temple complexes decorated with Chavin art, strengthen the impression that Chavin art and religion were carried forth and administered by something more than a small band of artist priests.

A review of the technical aspects of Chavin textiles also sheds quite a new light on the problem. This review, based upon the author's analysis of Initial Period textiles (Conklin, 1975b) and of Chavin textiles (Conklin, 1971) as well as other published and unpublished data, indicates an astonishing range of new techniques and materials first utilized as carriers of the Chavin designs. In fact, a set of inventions was promulgated whose influence obliterated most of the older textile traditions in the coastal areas, and which became the foundation for later Peruvian textile evolution. The drama of this revolution is greatly enhanced by our knowledge of the strength and importance of the pre-Chavin coastal weaving traditions (Moseley, 1975). Within the context of its time, Chavin, in addition to its famous art and religion, must be considered as a "high-tech" culture, with the geographic distribution and administrative organization of that technology, as implied by the term. During the Early Horizon, Peru must indeed have been "Chavin Country."

The Chavin technical inventions cover all aspects of textile production: fiber materials and textile structures, both primary and decorative. New materials include the creation of textile paints, the first extensive use of camelid hair in textiles,¹ the first use of Furcraea sp., and the first dyes for camelid hair. In textile structures, inventions include the first use of supplemental discontinuous elements and the first use of textiles as a surface for painted designs. In order to sense fully the revolutionary nature of these inventions, it is necessary to review briefly the characteristics of textiles in the final phase of the Initial Period.

Textiles from Pampa Gramalote illustrate typical Initial Period characteristics. Although not many groups of Initial Period textiles have been recorded, those known are quite consistent (for a discussion and bibliography, see Conklin, 1975b). Fig. 1 illustrates a portion of a textile from Pampa Gramalote dating from about 1350 B.C. which has both weaving and twining. It is a non-loom made product,

with ribbing created by the alternation of weaving and twining. All known late Initial Period textiles are entirely of cotton (but see note 1), and the patterning is formed by manipulation of the structural elements of the weave. That is, the decoration, if any, is formed by adjustment of structural weft and warp rather than by adding anything new which is specifically and exclusively devoted to decoration or design. In general, the art style of all Initial Period and earlier textiles can be called "structuralism."

The Initial Period textile shown in fig. 2 illustrates an even more common type, with the main body of the textile created by spaced-weft twining with warp-wise brown and white stripes. The warp ends of the textile are reinforced by compact twining. Fig. 3 illustrates similar compact twining in another Initial Period textile. In this case, the compact twining is patterned utilizing brown and white sets of cotton weft. Initial Period textiles have a certain functional purity, a kind of moral utilitarianism like Shaker furniture or early modern architecture. With the introduction of the Chavin textiles, such structuralism went into eclipse, surfacing only rarely in utilitarian textiles. After the Early Horizon, twining (the most characteristic and elegant textile technique of pre-ceramic times and the Initial Period) was relegated to fencing and roof matting.

Textile Painting

The most familiar of the Chavin inventions is the direct painting of designs on textiles (see fig. 4 for an example from the south coast). All-over coloring was occasionally used in Initial Period textiles, but no examples of painted designs have been reported. The paired facing jaguars in fig. 4 were part of a large painted textile which had a circular composition with many pairs of facing jaguars. This circular composition of jaguars seems conceptually similar to the carved stone jaguar design around the circular plaza at Chavin (Lumbreras, 1977). The painted jaguars are stylistically very close to one of the carved stone jaguars found at the site (Lumbreras, 1974, fig. 59).

The impact of these textiles on Peruvian art history is evident in terms of iconography (Cordy-Collins, 1976), but the impact was also technical. Painted textiles with apparently the same painting technique, and on plain weave, continue through prehistoric Peruvian culture. As an example of the consistency of the technology, the designs indicate that painted textiles are characteristically hung with the warp horizontal (Bird, 1973), as were the Chavin prototypes.

Neither the painting instruments nor the paints of these Chavin designed textiles are yet understood, nor are they for later painted Peruvian textiles. The painting solution must be liquid enough to flow smoothly and cover evenly but not so liquid as to penetrate by absorption through to the back of the textile. The subtle nature of the textile preparation and paint mixing can be perceived by considering the European artists' oil paint and canvas traditions.

It is important to visualize the size of these first painted textiles. Cordy-Collins, in her survey of the Chavin painted textiles, has pioneered in suggested reconstructions of the original designs from the remaining fragments (Cordy-Collins, 1976, pp. 184, 187, figs. 117-118). Fig. 6, a reconstruction which differs somewhat from hers, has been made from one of the Chavin fragments (figs. 4-5). The reconstruction indicates a total textile at least 9 feet high by more than 12 feet long, covered with powerful Chavin images. The combination of size and visual demonry could hardly form a greater contrast with the characteristic coastal Initial Period towel-sized textiles.

These enormous painted textiles were too fragile to have existed out-of-doors for long, since the paints are not sun resistant. They are too large to be garments, and show no evidence of ever having been mummy wrappings. They could have been used as exterior wall hangings for ceremonial occasions. The horizontal warp suggests that the textiles may have been designed to be held by the ends with vertical poles, like a giant loom, or perhaps they traveled as a horizontal banner. These images of use, however, betray our own cultural preconceptions concerning the uses of textiles. The demonic imagery of the Chavin textiles may perform a role closer to that of cave painting than to our own essentially decorative perceptions of use.

Weaving Technology

An extremely interesting aspect of Chavin weaving technology is the standardized loom width (fig. 6). Seemingly, most Chavin textiles have a loom width of about 33 cm., modestly wider than the widest loom width (24 cm.) found in the Initial Period textiles of Pampa Gramalote. Producing textiles in quantity (24 m. in fig. 6) and with standardization, implies an organized, group effort production.

It is also possible that Chavin textiles may represent the first use of the loom, with previous Initial Period plain weaves having been created by needle and thread or bobbin. The argument cannot really be settled by examination of the textiles, because the textile structure is the same whether needle- or loom-made. The argument concerning the displacement of twining by weaving, using an "economy of labor" theory, runs that once the heddle was invented the increase in productivity would be so great that twining, necessarily a slow hand-work process, would not survive for long as a technique for basic fabrics. Twining continues, however, on the coast through to the end of the Initial Period. The Chavin textiles, significantly, include no twining whatsoever. Chavin textiles certainly exploit the quantitative advantages of heddle production, but we cannot necessarily identify them with the first use of the loom.

Element wrapping

Chavin textiles broke new barriers in the qualitative direction also; that is, in elaborate, time-consuming, hand techniques. A fragment of textile attached to a Chavin carved calabash utilizes a previously unrecorded textile construction (fig. 7). The calabash

(Crescentia sp., botanical identification by J. Bird) reportedly was found with a group of Chavin carved wooden spoons and sticks, resembling modern shaman implements (Sharon, 1972), in a grave in the Chancay Valley. Examination indicates that in places two layers of the textile, which was apparently folded, adhere to the calabash.

The carving on the calabash (fig. 8) contains two similar figures, perhaps relating to the dualism of the Tello Obelisk. The two image design invites comparison with the carved gourd found in the same cemetery with Chavin textiles at Supe (Willey and Corbett, 1954, pp. 73-74 and pl. XI, a-d). Part of one of the calabash figures is covered by the textile. The carving has been performed by an incision technique, not by pyroengraving. The figures represented cannot be readily identified, although faces and flowing manes are present, as shown in the developed drawing.

The textile fragment contains four colors; black, yellow, and two shades of red. The pattern (fig. 9), although too fragmentary to permit full identification, nevertheless has formal characteristics identical to other Chavin textiles with structured designs; for example, the modular color bands and the stepped diagonals. The presence of the plus sign is also coherent with conventions of Chavin art.

The fibers of the calabash textile are unusual. The core of the thread used in the textile has been identified as Furcraea sp. (by J. Bird), a plant resembling the century plant. This core of the thread is entirely wrapped with camelid hair.

The textile structure, however, is the most unusual aspect of the fragment. Basically the textile is a form of single-element construction which we can call knotted looping and in which the knot used is the cow hitch (figs. 10-11). The knot itself has been previously recorded as a pre-ceramic textile structure at Aspero and elsewhere.² The color pattern was formed by wrapping the Furcraea core thread with colored camelid hair in a sequence of color sections. This color-coded thread was then utilized in the construction of the textile with the various colored stripes and patterns appearing as the construction proceeded. The process has some similarities to ikat, in that the warp is pre-patterned before weaving. A name for the construction would then be pattern-wrapped knotted looping.

This fragment represents the earliest known use of both Furcraea and, much more importantly, of camelid hair in Peruvian textiles (but see note 1). Furcraea is found in Paracas cord and slings, but was only rarely used later (Towle, 1961, pp. 32-33), and the elaborate textile structure itself is never seen again. But this first systematic and extensive use of camelid hair, and the first use of dyes on that camelid hair to create a brilliantly colored textile design opened the future for the use of colored camelid hair in Paracas and other later fancy Peruvian textiles.

Although the carving on the calabash and the design on the textile are both stylistically identifiable as late Chavin, they also differ from each other greatly. The highly curvilinear carving on the

calabash relates to the use of a hand-held tool at work on a round object. The rectilinear design of the textile reflects the structured mathematical nature of the textile construction process. Their proven contemporaneity serves as a warning of the hazards of correlating art style sequences in differing media.

The wrapped-element construction of the calabash fragment is closely related to the wrapped-warp construction in other Chavin textiles, as in the full-face Chavin image of fig. 12 (Conklin, 1971, p. 15). The wrapping of the warp is of colored cotton on an uncolored cotton core. Although the wrapping is in two colors, yellow and rose, the differing colors always occur in separate sections of the design, not on the same thread as in the calabash textile. Thus the calabash textile would seem to be more advanced technologically, and thus possibly, but not necessarily, somewhat later.

Another technique of element-wrapping occurs in the full-face south coast textile of fig. 12, and illustrates the geographic spread of these Chavin textile inventions. This technique involves the creation of stepped diagonals in the design by constructing a row of colored cotton balls, each made by wrapping cotton around a group of warps (fig. 13). The technique is also found in Cupisnique textile fragments from the Chicama Valley on the north coast of Peru (fig. 14). This identical technology occurring apparently simultaneously at such distant points is strong evidence for the extensive nature of the "high-tech" Chavin cultural wave.

A comparison of the thread wrapping used in north coast Chavin textiles with the thread wrapping used in the south coast reveals a similar story (cf. figs. 15 and 16). There are no regional distinctions in these techniques or in their associated art styles such as are characteristically found in ceramics. Indeed, the purest expression of the "horizon" concept may be found in these textiles, and the Chavin cultural expansion can now be defined in terms of textile technology. The division between structuralism and supplementalism in decorated textile construction defines that expansion precisely.

Discontinuous weft

Still another form of Chavin "supplementalism" occurs in the textile illustrated in fig. 12; that is, discontinuous weft, the concept which made tapestry possible (Conklin, 1975a). In fig. 16, which is a detail from the textile illustrated in fig. 12, the horizontal bands of the design are created by colored cotton threads which are interlaced with the warp and are discontinuous and purely supplemental. That is, they do not go from edge to edge of the textile and have no structural value. They are used purely for design purposes. This represents the earliest recorded use of discontinuous weft.

True tapestry seems to have evolved quickly from (or with) the weft bands of the Chavin textiles. The fish (?) (fig. 17) has

wrapped-warp construction and the associated techniques of fig. 12. The ground weft is continuous. Fig. 18, a profile bird, would appear to be one of the earliest examples of the first real tapestry. The bird appears against a plain weave background. The colors and materials are identical to those used in the warp-wrap textiles; that is, all cotton, in rose and yellow, the Chavin colors. However, the background weft itself is now also discontinuous. All the good and bad qualities of tapestry construction are apparent: clear strong color definition, but weak non-practical construction. Slit tapestry is invented. Art triumphs.

The technical difference between the ground weave with modular band construction (fig. 19) and tapestry (fig. 20) lies in the fact that the ground weft of fig. 19 is merely pushed aside to make room for the colored bands; but in the bird textile (fig. 20), the ground weft is turned back, becomes discontinuous and thus by definition becomes tapestry (Emery, 1966, p. 78).

An additional example which illustrates the geographic distribution of these Chavin techniques is the bird profile in tapestry, excavated by Willey and Corbett at Supe on the central coast (fig. 21, and compare Willey and Corbett, 1954, pp. 104-109 and pls. XXIII-XXIV). The structure is entirely of cotton, with brown outlining, much of which has disintegrated.

Missing, however, from the Chavin repertoire of tapestry techniques is weft interlocking,³ the technique used in all later highland tapestry of the southern sierra.

Fig. 22 illustrates a Paracas-style tapestry fragment which has edge-to-edge use of camelid hair weft, a greatly enlarged palette of dyes, and no ground weft at all. The design, which still shows Chavin art-style influence, relates closely to the ceramics of Ocucaje 8 (L.E. Dawson, personal communication).⁴ Because this textile has direct counterparts in local ceramics from the Callango Basin, and because this design style and technique have not been found in excavated textiles from other coastal areas, it is considered to be, without doubt, locally made. This reserves the term "Chavin textile" for those textiles whose designs relate to the designs from the site of Chavin whose designs have no local ceramic precedents, whose techniques have a wide geographic distribution. They are, in a word, "floaters."

Double cloth

Still another Chavin textile precedent may be represented by fig. 23, a band from the south coast. The Chavin iconography here is clear, but the technique is double cloth, with one set of elements camelid hair dyed red, and the other set of natural cotton. The use of dyed camelid hair in Chavin textiles, and its association with advanced weaving techniques such as this double cloth and the wrapped looping of the calabash textile, suggest that wool occurred late in the sequence of the south coast Chavin textiles. Fig. 23 certainly must be considered among the earliest Peruvian double cloths. For an example of an apparently slightly later south coast double cloth, see Gayton, 1961, fig. 1.

The Yauca textile recorded by Gayton is entirely of wool and stylistically relates closely to the ceramics of Ocucaje 8 (Dawson, personal communication). The evolution of double cloth from all-cotton precedents of Chavin designs in double cloth have not been recorded outside of the south coast.

Conclusions

To summarize: looping, wrapping, discontinuous weft, tapestry, possibly double cloth, Furcraea, camelid hair, textile painting, and camelid hair dyeing — the long list of structures, materials, and techniques introduced with Chavin iconography, together with the disappearance of the existing twining traditions, certainly seem to justify the use of the word "revolutionary" for the effect on Peruvian weaving history. A wave of advanced technology accompanied the art style as it spread through the coastal areas of Peru. All fancy Peruvian textiles thereafter used discontinuous and supplemental techniques. For a review of the effects on north coast weaving, see Conklin, 1975a.

Considering the larger questions raised by the Chavin textiles, we could well ask where and under what circumstances were they created and exactly what kind of society distributed such complex "high-tech" cultural products. The textiles, which of course are only a small part of the evidence of the culture, could have emanated from a single source, or they could have been created in the many dispersed localities whose weaving traditions had been transformed by a cultural "wave." The extraordinary coherence of the technical evidence, particularly the design, techniques and materials of the all cotton tapestries and the all-cotton wrapped-warp textiles, favors a highly unified source. Of course the prime candidate for a single source is the site of Chavin itself. However, that simple answer seems unlikely, because cotton cannot be grown locally, and because no spindle whorls have been reported from the excavations (Tello, 1960; Lumbreras, 1977). The closest positive evidence would be Tello's report concerning his discovery of some ring stones in the course of his excavations at the site, which he postulated were loom weights which had been used on vertical looms (Tello, 1960, p. 305). A production center at Chavin, relying entirely on imported cotton could be postulated.

A single coastal location could be considered. One of the Supe Chavin textiles (Willey and Corbett, 1954, pp. 19, 69, 112) came from an infant burial which had many associated artifacts, including one spindle whorl, black with red painted bands. Cotton could certainly have been grown and the textiles woven within any one of the coastal valleys, but none has other evidence to indicate such a single creative artistic center.

The camelid hair which would be thought of as being native to the Chavin region, and the presence of which amongst the textiles would be thought of as reinforcing the arguments for a highland source, seems to have been introduced to the south coast only in small quantities and perhaps somewhat after the cotton Chavin textiles. And on the central coast, camelid hair has not been found used extensively in the

Chavin textiles. On the north coast, camelid hair was not used in the production of locally made textiles for many hundreds of years after the primary Chavin impact (Conklin, 1975a).

All of the materials associated with the calabash textile, however, could have come from highland Chavin, since both calabash (Towle, 1961, p. 88) and Furcraea could be grown locally, as well as the camelid hair.

No simple answer is apparent to the question concerning the source and distribution of the textiles. The answer may well lie in some form of highland-coastal interaction, some large-scale form of Murra's "verticality" (Murra, 1968), with highland art and lowland cotton combining with religion and technology to form these influential textiles. The islandlike pattern of Chavin sites along the coast of Peru seems congruent with the concept of colonies. The direction of the answer may lie in considering Chavin coastal colonies which maintained close artistic contact with their highland home but created the textiles on the coast. Or possibly in the case of the painted textiles, the process was more complex and involved weaving the fabrics on the coast, sending them to the sierra for painting, whence they were then redistributed.

However, without fully understanding the nature of the source and the nature of the exchange systems involved (Morris, 1978), we can demonstrate with certainty the impact of Chavin on the art history of Peru and also the impact of the weaving inventions on textile technology. But the impact was also, no doubt, deeply cultural.

Art, through the use of painting and supplemental materials, became a kind of "add-on." Adding paint to the surface of canvas to create art is common for us; but to the Initial Period people, the art was in the making of the canvas. It must have been a shock.

In the painted textiles, the painting is, of course, separated in time from the weaving of the textile, and no doubt performed by different people. Art thus became a separable entity and activity, detachable from form and function. And art seems to have become a cultural artifact, rather than a personal one. Invention, ignoring necessity, is put to the service of art.

And the result, up and down the coast of Peru, was a real revolution, not only in weaving fundamentals, and in the imagery of religion, but, it seems likely, in the deepest values and beliefs of the culture. The spin offs were, after all, pretty impressive — Paracas, Nasca, Moche.

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NOTES

¹Robert Feldman reports (in a personal communication) that amongst the hundreds of cotton textiles found at Aspero he has found a thread of wool (camelid hair) in a fragment of a twined textile. Also Engel (1963,

p. 25) reports that amongst the many hundreds of cotton and bast textiles found in Asia, "One looped bag, made of animal fiber, and other fragments...show...that wool [animal fiber] was spun, twined, looped, and dyed a deep red. Possibly vicuñas or alpacas...but we suspect...the fur of foxes, felines, and other wild animals...." Engel also suggests that human hair was occasionally, though rarely, used in the Asia textile fragments. These isolated preceramic experiments, though, seem not to have been followed up.

²Robert Feldman, personal communication.

³The reader of Lila O'Neale's report on the Supe Chavin textiles (Willey and Corbett, 1954, pp. 84-130) could be easily misled into believing that she reports that weft interlocking is found in those textiles. A careful re-examination of the textiles by this author indicates that there is in fact no weft interlocking in the textiles. The confusion is in terminology. O'Neale uses the term "weft interlocking on key warp," and other terms, for a textile structure which in modern terminology (Emery, 1966) is called dovetailing. The illustrative diagrams (Willey and Corbett, 1954, p. 90) are, however, correct graphic descriptions of the structures found in the textiles.

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KEY TO ILLUSTRATIONS

All photographs, except fig. 22, and all drawings are by the author. Unless noted otherwise the warp direction is vertical.

Plate I

Fig. 1. Portion of one of the complex twined and woven textiles from Pampa Gramalote. Area shown, 2.5 x 2.5 cm. H6168A-2-5, 2 of 2, #3c. (Conklin, 1975b, fig. 5)

Fig. 2. Twined textile with warp-wise striping from Pampa Gramalote. 44 x 84 cm. H6168B-1-60 #10. (Conklin, 1975b, fig. 2)

Fig. 3. Plain weave with compact patterned twining from Pampa Gramalote. Area shown, 2.5 x 2.5 cm. H6168B-3-77. (Detail of Conklin, 1975b, fig. 6)

Plate II

Fig. 4. Facing profile felines. Painted with resist patterning on cotton plain weave. Carhua? 51 x 34 cm. Private collection. Warp is horizontal.

Fig. 5. Detail of fig. 4. Area shown, 15 x 15 cm. Warp is horizontal.

Fig. 6. Reconstruction based upon the fragment illustrated in fig. 4. Warp is horizontal.

Plate III

- Fig. 7. Carved calabash with textile fragment adhering. Chancay? 10 x 8 cm. Private collection.
- Fig. 8. Developed reconstruction drawing of carved design on calabash.
- Fig. 9. Reconstruction drawing of design on calabash textile fragment. Single element direction is horizontal.
- Fig. 10. Detail of calabash textile fragment. Single element direction is horizontal.
- Fig. 11. Diagram of the structure of the calabash textile fragment showing color patterned wrapping on knotted looping construction.

Plate IV

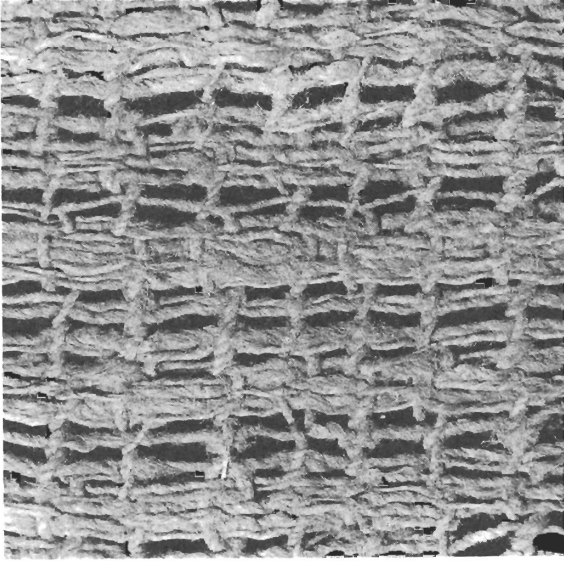
- Fig. 12. Textile fragment with frontal Chavin image. Wrapped warp and supplemental weft construction. Carhua? 30 x 74 cm. Textile Museum 1977.35.3. (Conklin, 1971, fig. 1)
- Fig. 13. Detail of south coast Chavin textile (fig. 12) showing wrapped cotton balls forming design diagonals. Area shown 4 x 4 cm.
- Fig. 14. Detail of north coast Chavin textile showing wrapped cotton balls forming design diagonals. Cupisnique levels of deposits near the Huaca Prieta. Area shown, 11 x 11 cm. American Museum of Natural History, 41.2/3493.
- Fig. 15. Detail of south coast Chavin textile (fig. 12) showing wrapped warp construction. Area shown, 4 x 4 cm.
- Fig. 16. Detail of north coast Chavin textile showing wrapped warp construction. Cupisnique levels of deposits near the Huaca Prieta. Area shown, 11 x 11 cm. American Museum of Natural History, 41.2/3670 ab.

Plate V

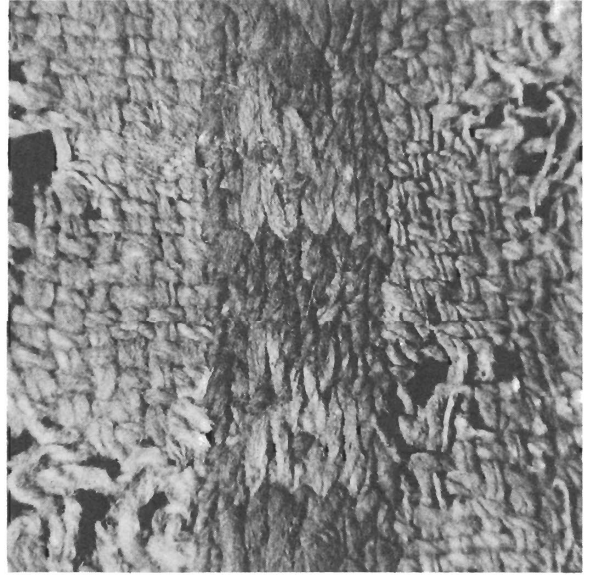
- Fig. 17. Textile fragment with Chavin mythical fish (?) image. Wrapped warp and supplemental weft construction. Carhua? Figure only, 20 x 10 cm. Private collection.
- Fig. 18. Textile fragment with Chavin bird image. Slit tapestry set in a plain weave ground. Carhua? Figure only, 9 x 5 cm. Private collection. (Conklin, 1975a, fig. 6)
- Fig. 19. Detail of fig. 17 showing wrapped warp and supplemental weft construction.
- Fig. 20. Detail of fig. 18 showing slit tapestry with discontinuous ground weave.

Plate VI

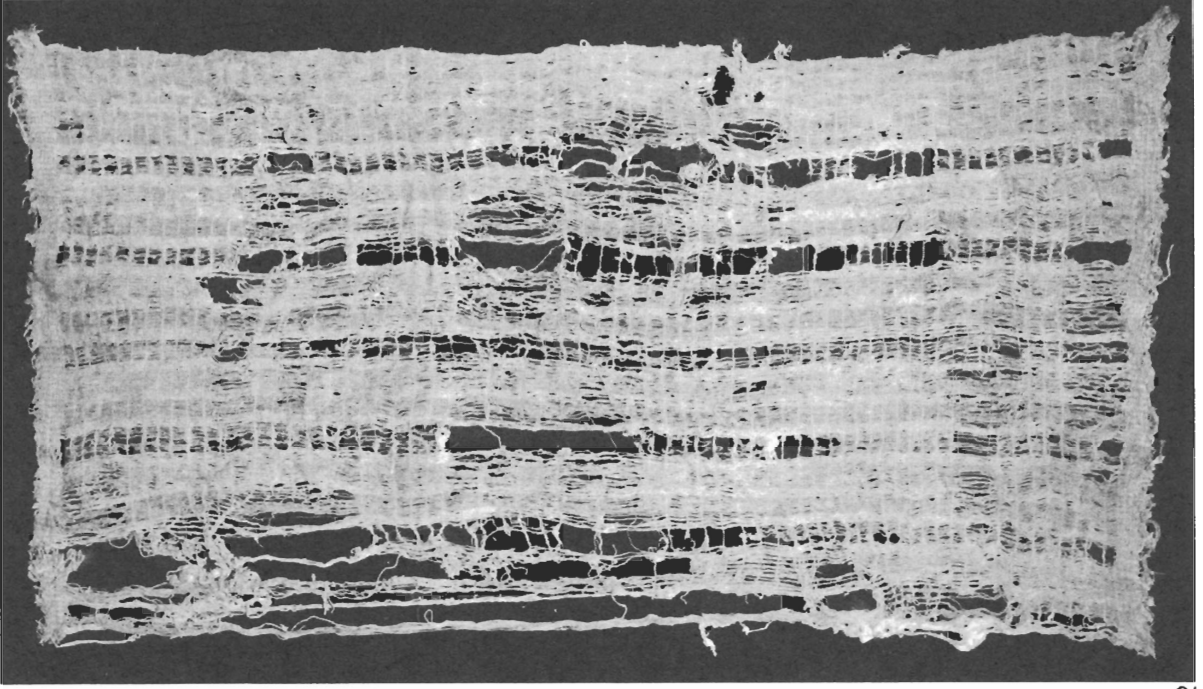
- Fig. 21. Central coast Chavin tapestry fragment, "condor-feline." Supe, Lighthouse Site, pit III, no. 803b. Figure only, 25.5 x 17.5 cm. American Museum of Natural History, 41.2/5517. (Conklin, 1971, fig. 5; Willey and Corbett, 1954, pl. XXIV)
- Fig. 22. Textile fragment showing frontal and profile feline images. Slit tapestry construction, camelid hair weft, cotton warp. Callango? Private collection. Photo by J. B. Bird.
- Fig. 23. Band of double cloth with Chavin profile faces. Camelid hair and cotton. South coast? 15.4 x 2.0 cm. American Museum of Natural History, 41.2/7384. Warp is horizontal.



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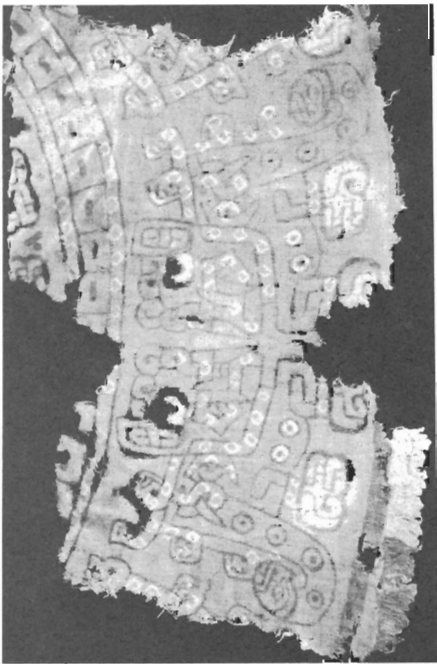


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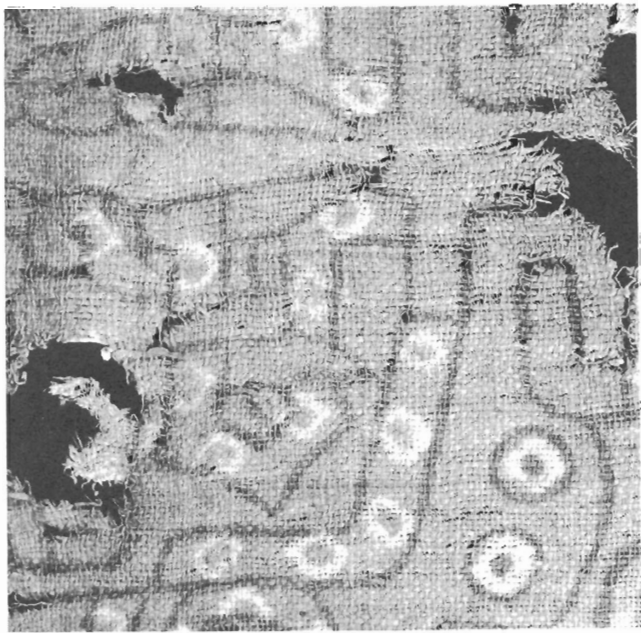


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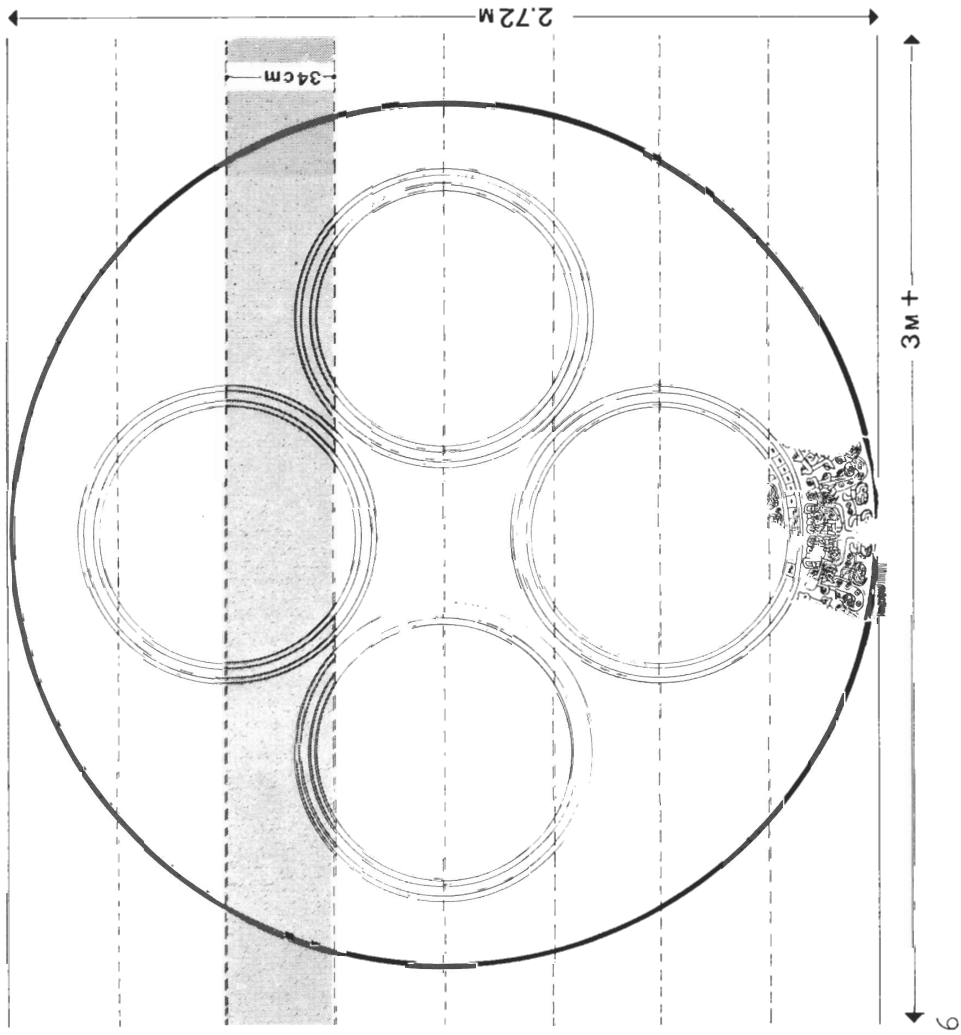
Plate I. Initial Period textiles. See Key to Illustrations.



4

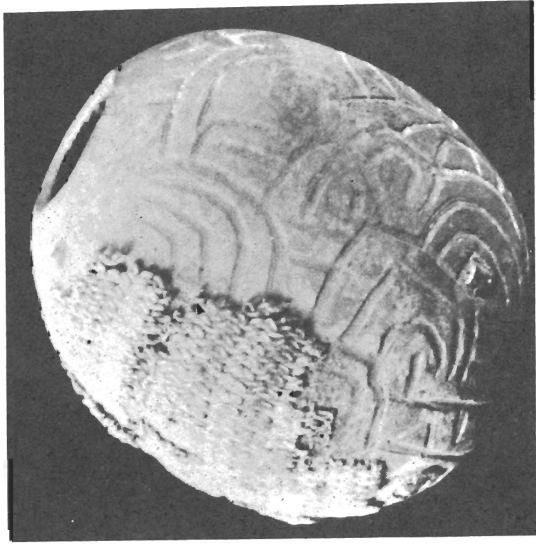


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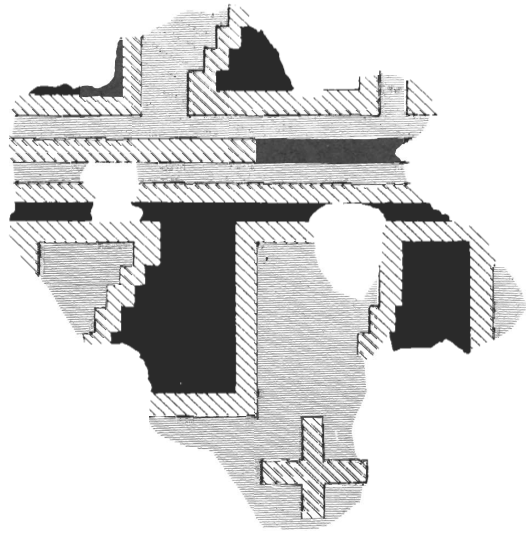


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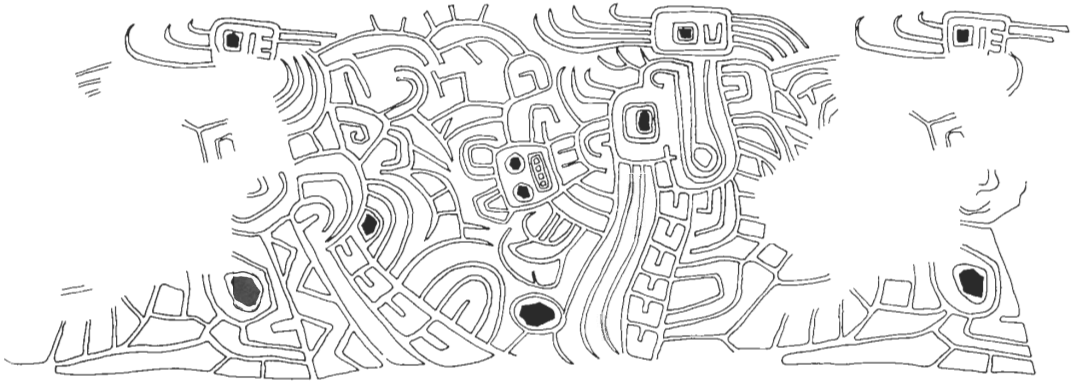
Plate II. Figs. 4-5, textile fragment and detail of same; fig. 6, reconstruction of entire painted Chavin textile based on fig. 4. See Key to Illustrations.



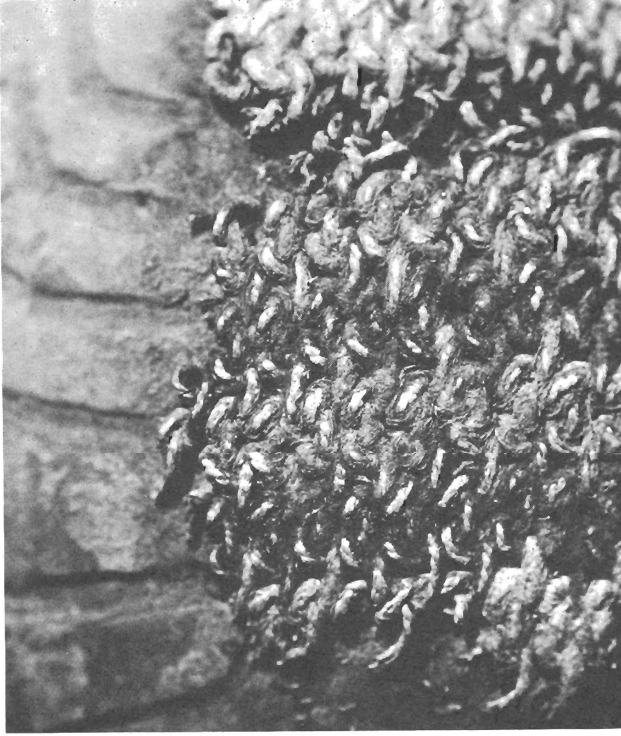
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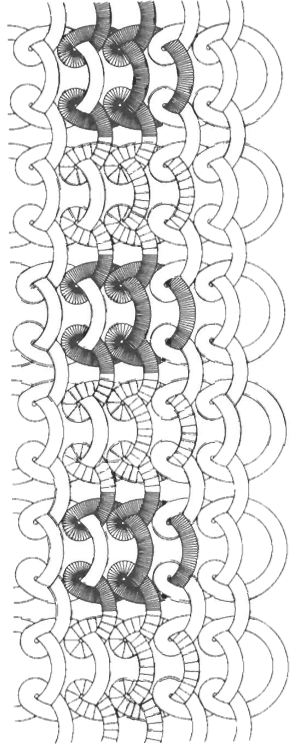
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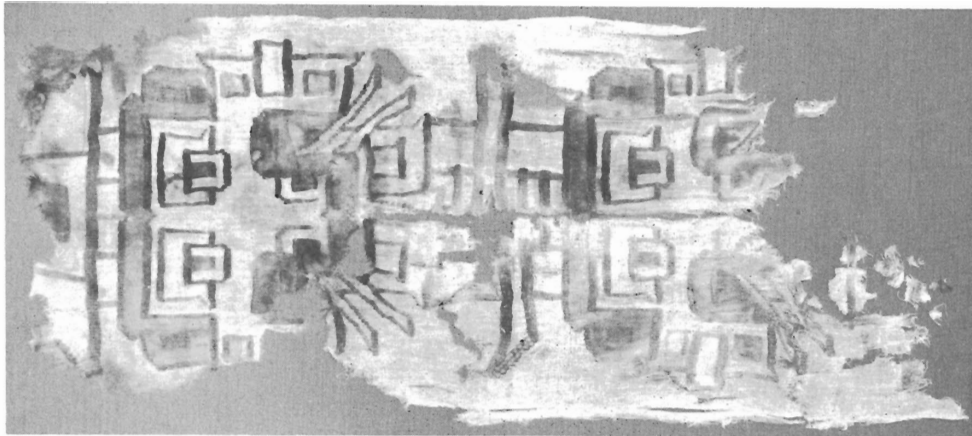


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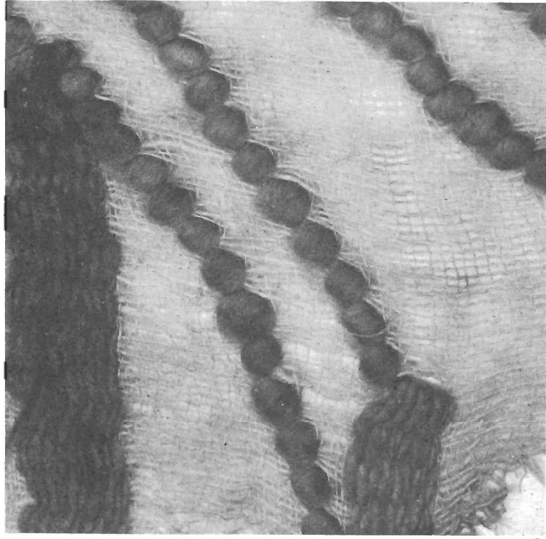


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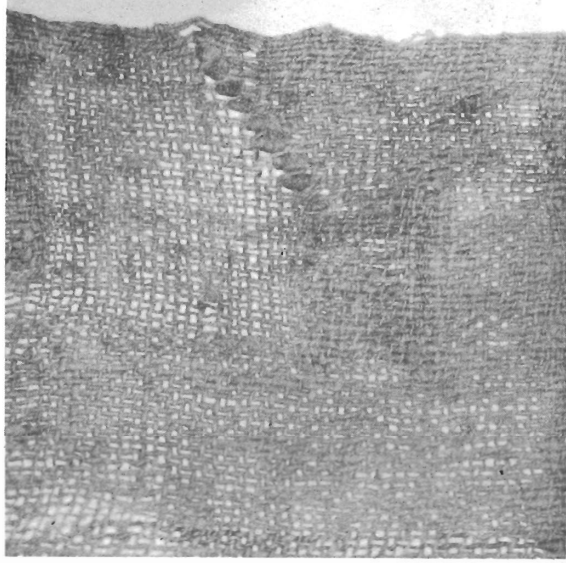
Plate III. Carved calabash and adhering textile with designs and details. See Key to Illustrations.



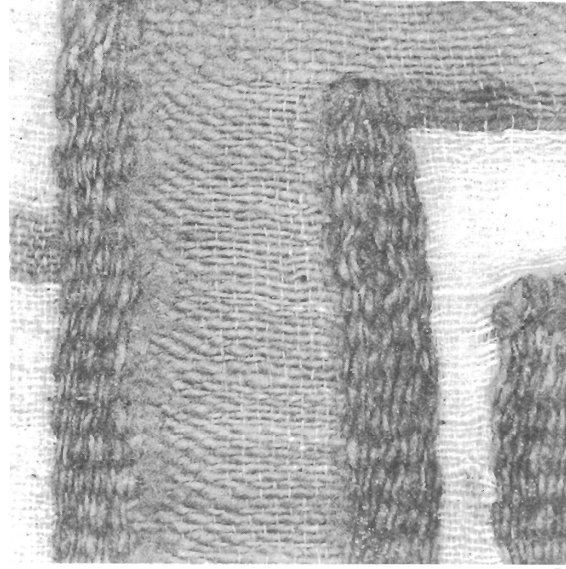
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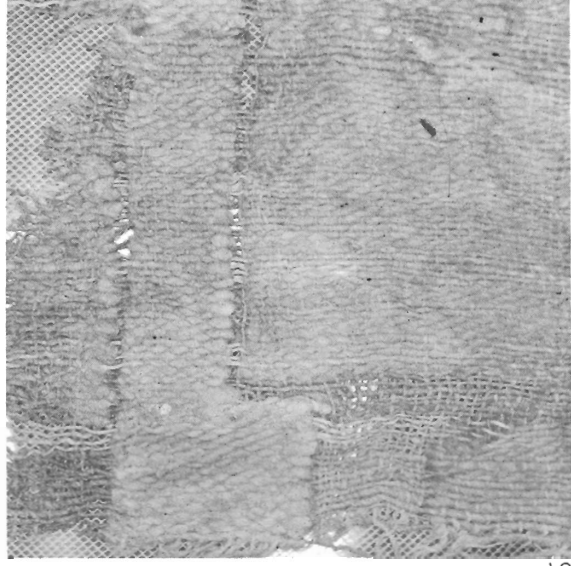
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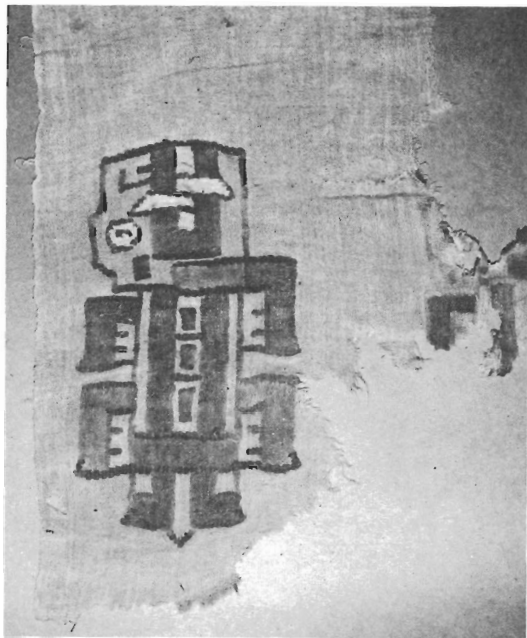


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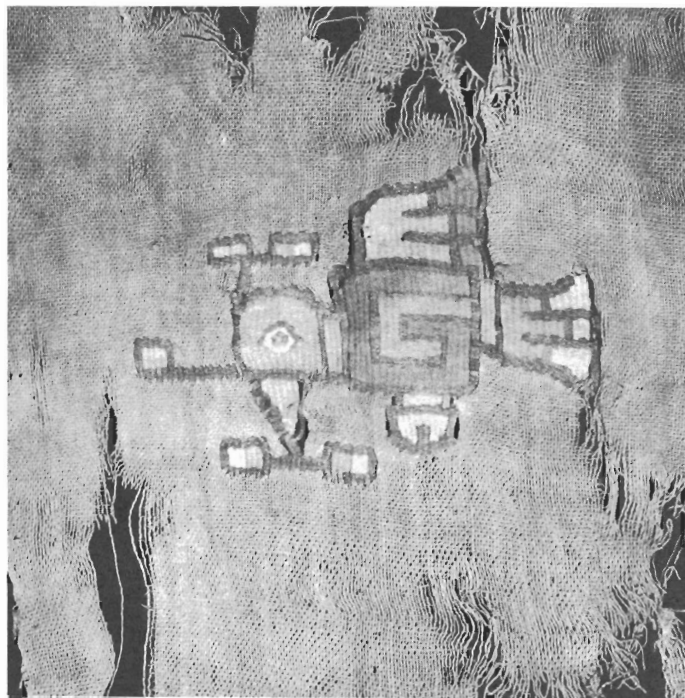


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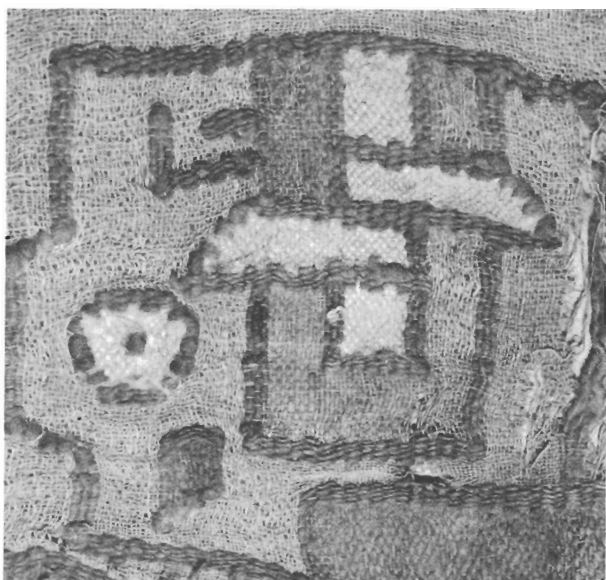
Plate IV. Use of wrapping in design formation. Figs. 12-13, 15, south coast textile and details; figs. 14, 16, north coast specimens. See Key to Illustrations.



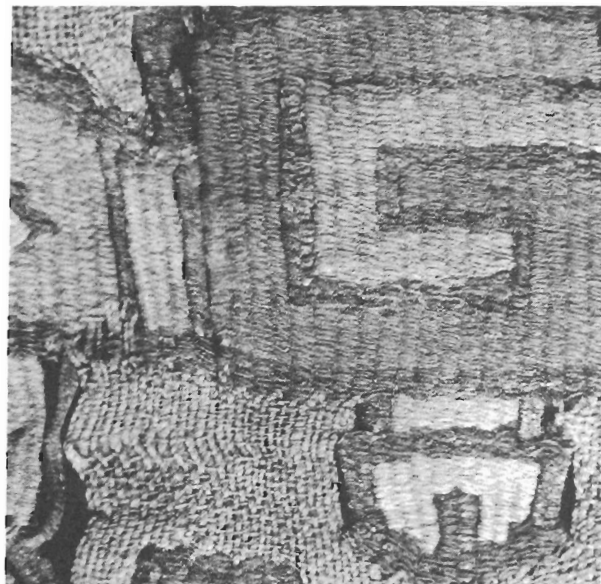
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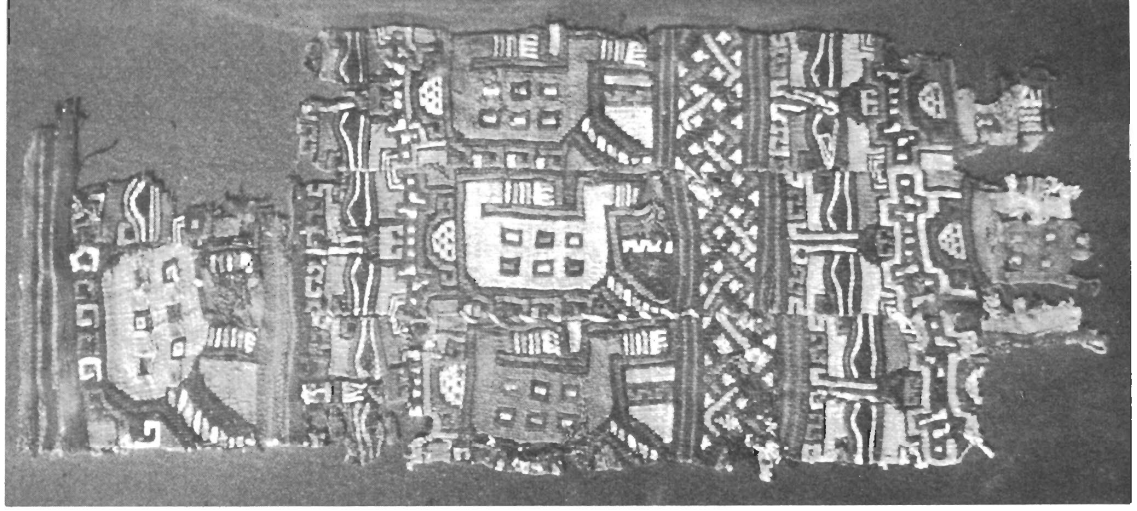


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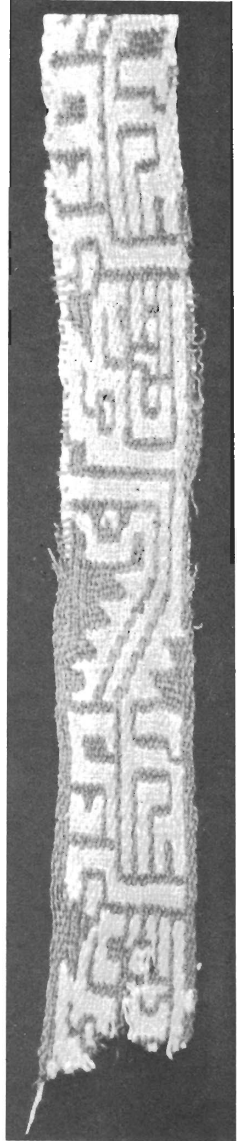
Plate V. Figs. 17, 19, textile with wrapped warp and supplemental weft construction; figs. 18, 20, slit tapestry. See Key to Illustrations.



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Plate VI. Figs. 21-22, tapestry fragments; fig. 23, double cloth. See Key to Illustrations.