THE DEVELOPMENT OF PRE-HISPANIC ART FORMS IN PERU: SEEN AS AN OUTGROWTH OF TEXTILE TECHNIQUES AND THEIR INFLUENCE UPON ART FORMS AND DEPICTION OF SYMBOLS

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A Thesis Submitted for the Degree of PhD at the University of St Andrews

1988

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The Development of Pre-Hispanic Geometric Art Forms in Perú, Seen as an Outgrowth of Textile Techniques and their Influence Upon Art Forms and Depiction of Symbols.

A dissertation presented in application for the Degree of Ph.D. in the University of St. Andrews by W. Iain Mackay
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Abstract

Pre-Hispanic geometric art forms in Peru and the Andean Area are taken to be an outgrowth of textile techniques. Textiles and fibre arts predate ceramics by several millennia in the Central Andean Area. The artist who created these textiles developed an art style which was to go largely unaltered until the arrival of the Spaniards. The foundations of the Andean art form date to the Pre-ceramic. The restrictive, rather inflexible nature of the warp and the weft of the cloth (the geometric grid) was to influence the methods of representation that were to follow. Geometric designs were well suited to fit into the rigid framework. A series of conventions were developed for the representation of symbols.

With the development of ceramics, there was leeway for a new style to come into being. However, this was not to be the case. The potter borrowed extensively from the weaving tradition and its associated styles (only in Moche times did the potter make a break the highly geometric style developed centuries before, and even then this break with tradition was a short lived one).

The pre-Columbian artist often portrayed birds, cats, fish and reptiles. Many of these designs were used frequently and repeatedly throughout the centuries, but none, I would maintain, was represented as frequently as the double-headed serpent, and with so few variants. Andean art is a truly distinctive art form; very different from European art, and through its geometricity it conveyed and still conveys a totally different approach to nature and the world surrounding Andean man.
Dedicated to my dear parents, William M. and Catherine Mackay
"...of making many books there is no end; and much study is a weariness of the flesh."

Ecclesiastes 12:12

"My days are swifter than a weaver's shuttle, and are spent without hope."

Job 7:6
"The effort you make in overcoming that difficulty is like the effort of weaving a tapestry. Every truth is a thread which you weave into your own tapestry."

"Surely the Truth has been woven only once, and by one Weaver."

"You are the weaver. At the moment, your tapestry is small. It looks different from that of other weavers, but only the design is different. All the designs are woven on one fabric. Every person is a weaver and every person uses the universal fabric to create their own unique tapestry."

From "The Weaver and the Abbey."

by Michael Brown.
Acknowledgements

Numerous people made this study possible. My interest in pre-Hispanic Perú was kindled and stimulated by my parents to whom I extend my sincere appreciation. While at school, my history and art teachers, Sr. César Gutierrez Muñoz, Sr. Mariano Lint, Dr. Rondinel and Sr. Max Espinoza were very supportive of my inclinations towards historical studies. Sr. Gutierrez, who as my history teacher and later as the head of the Archivo Nacional, Lima was to help me find my way through the bureaucracy and was to assist me in establishing many useful contacts.

Towards the conclusion of my studies for my M.A. General (Hons.) Degree in Archaeology at Edinburgh, I found my interest in archaeological textiles supported by Mrs. Thea Gabra-Sanders and Mr. A. Macleod. Both were to point me in the direction of literature relevant to understanding textile techniques. The photomicrographs that appear are courtesy of Mrs. Thea Gabra-Sanders and are ©. I am also grateful for the analysis supplied for the Chachapoyas samples.

I am indebted to Sr. Daniel Guerrero who very generously made available a large collection of textiles and gave me much advice. I must also express my thanks for the interest, support and advice that Dra. Mercedes Cárdenas, of the Instituto Riva Agüero gave me, likewise, Dr. Jimenez Borja, Dr. Karen Stothert, Srita. Elvira Luza, Dr. Luis Guillermo Lumbreras, Dr. Silva Santistéban, Sr. V. M. Olivera and Sr. Iván Hinojosa. I am grateful also to Dr. Kauffmann Dolg for inviting me to take part on his survey of the Chachapoyas region in Northern Perú. I wish to thank Dr. Alan Fraser and his family and Sr. Félix Calle and his family for their hospitality and generously whilst I was carrying out my research. I also wish to apologise for being very inconsiderate on many an occasion. My thanks also to the many Peruvian friends who took a personal interest in my research.
I would like to make known my gratitude to Mrs. Lois Katz, Curator of the Sackler Collection, New York for the opportunities provided to look at the material in the A. Sackler Collection, and above all for sending me indispensable publications, unobtainable here in the United Kingdom. A word of thanks also to Dale Idiens of the Royal Scottish Museum, Edinburgh; Penny Bateman of the Museum of Mankind and Dra. Rosa M. Martini, of the Museu Téxtil d'Indumenera. Collacció Rocamora, Barcelona.

Gratitude and respect are given to Professor Douglas J. Gifford and Hazel Gifford for their unending patience, tolerance, when faced with my inconsistencies; interest and for giving me the opportunity to carry out research in the field I had selected. My thanks to Leslie Hoggarth for teaching me Quechua, and getting me interested in the Quechua people and their past. Many thanks also Professor Paterson and Mrs. A. Jackson, to Mr. Donald G. Mackay and his family for making their darkroom available and Miss Laura Simon for her help with the proof-reading, Mr. R. G. Roy and Mr. A. Ali for helping me with the word processing.

Finally, I would like to acknowledge the financial support I have received from the University of St. Andrews through a University of St. Andrews Research Scholarship, The Carnegie Trust, The Richard Newitt Fund and the Sir Richard Stapley Fund. I am grateful to the University staff, the people of St. Andrews and the many friends who have taken an interest and supported me throughout my four years of study here.
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Introduction

The multidisciplined study of the Andean peoples, the unfolding of Peruvian prehistory, have many facets which have been, are being and will continue to be slotted together. The need for detailed studies, particularly in the field of archaeology and associated disciplines such as anthropology and ethnology, is essential in view of the fact that we do not have access to written records.

The development of New World archaeology initially followed the methods and the standards set by the Old World archaeologists. As time has progressed new or different approaches and techniques have been applied in the interpretation of New World prehistory, particularly so in the cases of South and Central America. Here the archaeologist, anthropologist and historian can often work together to build up an accurate picture of the past. The archaeologist has to deal with a material culture which is very different from that of Europe (and very often preserved in much greater detail).
The anthropologist and the ethnologist are often dealing with the vestiges of once-important cultures and traditions, and their research often helps to shed light on prehistoric life, both in its details and the general structure of societies. This information in turn can be verified by the historians who are using the chronicles and archival material. The other discipline that can and is frequently consulted is that of linguistics or often more specifically, ethnolinguistics. We are primarily concerned with looking at the archaeological evidence and interpreting a specific aspect of it.

The majority of this evidence is from the west coast of the Andean area. This is an area which in almost all its length is a waste, desert area of generally non-arable land which is bisected or divided up by a series of rivers flowing down from the Andes to the Pacific. It was along these rivers that large settlements developed. The evidence to be studied is largely from ancient cemeteries and burial grounds or in some more limited instances, from abandoned settlement sites.
The highland area was also extensively populated, yet the variety of material evidence does not exist to the same degree in this area as it is found in coastal areas. This also happens to be the case in the high jungle and jungle regions, where the preservation of organic materials is often at its poorest. The jungle areas still remain to be explored and studied in more detail. The bulk of extant textiles have been found associated with other grave goods at cemeteries and burial grounds throughout the coastal areas. Textiles were undoubtedly important and essential grave goods from earliest times onwards. They were used mainly in the preparation of the bodies of the deceased for mummification, and as in the case of some Paracas fardos or mummies, they could be wrapped by layers and layers of elaborately and finely worked cloth as well as some simple and plain weave fabrics. In some cases the burials were simple, but the tradition of fardos was a widespread one dating back to Pre-ceramic times and continuing on until the Inca period; a tradition known and used from coast to highlands to high jungle (this tradition would probably become impracticable in the lowland jungle regions).

The use of textiles in these fardos must have been significant, and probably reflects the importance of textiles in the prehispanic societies.
This tradition was brought to an abrupt close when the Spaniards arrived with their traditions, and when they saw the great labour force involved in the manufacture of fabrics, they soon came to the conclusion that this labour force could be harnessed for their benefit and purposes.

After the Conquest of the Incas and the subjugation of other groups, the production of their arts and crafts was no longer required or encouraged. Instead this labour force had its activities diverted towards other activities of a more productive and beneficial nature to its new lords, the Spaniards. Nonetheless, in spite of several centuries of domination, the Andean weaving tradition still retains certain distinctive traits or characteristics inherited from pre-Hispanic times, which are also to be found in other art forms to a lesser degree.

There is much data available on textiles, and while many samples are known and passing comment is often been made about the geometric form, no attempt has been made to assess the beginning of this tradition, and to follow it through the succeeding periods and to compare the developments in this field with developments in other media. We shall be able to see
how the geometric tradition developed, follow its influence and ramifications in other media and appreciate the interplay between design concepts, materials, technical restrictions, artistic prowess and the visual expression of beliefs.

In tracing the origins of art styles and traditions, emphasis must be put on presenting an understanding of the creators and those who inherited the geometric form. In following these developments the study of, both the designs and the techniques used in their execution, will bring about a greater knowledge of chronological sequences. That is, the study of these textiles and associated arts will be an aid to the completion of a comprehensive understanding of Peruvian prehistory. Textiles rarely occur elsewhere on the archaeological record on the same scale as they do in the case of Peru. They can be used in a similar way as the pottery record is used in many parts of the world to build up chronological sequences. Additionally, they, in some cases give us clues as to how certain beliefs were developed, giving insight into certain symbolic values in contemporary lore.
The objectives of this study are several. However one of the foremost I feel, should be an attempt to promote a greater interest in the great forgotten continent of South America and its peoples, who can be understood best by looking at their past. There are many who assiduously study Old World history and prehistory, yet ignore what was going on in the Americas, Asia and the Pacific area. A second major objective is that of looking at Andean Prehistory as a continuum. Many, myself included tend to seek and concentrate on particular periods of prehistory or certain regions or very detailed studies of some aspect of the ancient civilizations. Rather, our approach should be that of using all this information collected and presenting it as something that the interested reader can understand as a whole, as a process, a process which is still continuing today. This study may appear to contradict what I have just stated. It is in fact an attempt to put my own research and the available information in context.

The selection of textiles described and illustrated represents as wide a selection as was possible at the time the research was being carried out. I regard the textiles as being representative of the major periods. It
will be noted that for certain periods the information is sparser. This is particularly so in the case of the Pre-ceramic period, where illustrative material is scant. This was in part due to the fact that this area has only been researched relatively recently and studied in detail. The Pre-ceramic was only recognized as such some forty years ago through detailed excavations along the Peruvian coast.

The collections in Europe obviously do not cover this period, mainly because they were gathered together prior to the enforcement of stricter regulations controlling the exit of the countries' heritage. Only in the United States of America are there some collections with a limited selection of Pre-ceramic and Early Horizon materials. The textiles have been stored in the countries where they were found, and in some cases they have become virtually inaccessible to the individual wishing to study them. Fortunately, the excavators, in some cases, have supplied detailed accounts of their findings which allow us to build up a better picture of what was happening then.
The reader may notice some gaps which remain to be filled, particularly in the details of the earlier periods of prehistory. I have therefore depended largely on the descriptive and illustrative material provided by the excavators of sites of these periods. There are also a number of illustrations and descriptions of these pieces without known provenance. In many cases these pieces have been ascribed dates and a probable source on stylistic grounds and more occasionally, on the basis of technical information, where possible samples with a known site and provenance and probable date have been selected. Obviously, as archaeology and its relevance and application to the understanding of prehistory and history are worked out; of a lot more general nature progresses, there may be changes in the interpretation of Andean chronology which may ultimately disprove the ideas put forward.
Textile technology

Amongst the diverse occupations, whether at a domestic or at an institutionalized level, the production of foodstuffs, building programmes, potting and weaving, all required an enormous proportion of Andean man's time and dedication. Weaving or in more general terms, textile production must have required a greater time and energy output than any of the occupations cited above. Textile production required a whole series of stages which are not always immediately apparent or obvious when studying a textile sample.

Each of these stages is labour-intensive, requiring considerable background knowledge and experience both on an individual and on a collective level. For the weaver it was a prerequisite, to understand the whole manufacturing process; from spinning to the final product, the textile or garment itself. This can be amply demonstrated in the samples to be analysed later. This technical and artistic capability is acclaimed worldwide for the consistent qualities of the products (particularly so in the case of the Paracas textiles which are world-renowned.)

Coastal families and communities cultivated their own cotton and acquired some wool from other areas by trade. Thus, in the coastal areas the process of making a garment and manufacturing textiles was controlled at an early stage (through domesticating and managing the cotton plant) and in the highlands camelid husbandry developed (mainly llama and alpaca). Presumably during the following periods interregional exchange

Figures and plates are indicated in text in square brackets [ ].
networks were set up. Enough cloth was woven to satisfy immediate personal needs, and a bit over. A large proportion of the textiles indicates a high degree of specialization in weaving techniques and technology at the different stages of the manufacturing process.

a. Materials

The prime and outstanding requirement for covering, and dealing with, the needs of a growing population in terms of textiles, as we see in Peruvian prehistory, was that of supplying a sufficient quantity of basic materials. Calculations have been made as to the quantity of materials needed for a square yard of ordinary cotton plain weave textile with ten warps and ten wefts per square inch. The results published by Gayton are quite surprising, as we shall see. The simple calculation involved indicates that within the square yard of constructed fabric there will be at least 360 yards of warp crossed by 360 yards of weft; that is to say, a grand total of 720 yards of thread. If a more complicated weave was used such as double-weave, much more thread would be required.

Gayton continues with her calculations, which become more and more astonishing for if, as she points out, each family had five pieces of cloth of this type, and the village population was a small one of approximately twenty families, a total of 72,000 yards, or near enough 41 miles of yarn

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would be needed for the simplest, crudest and roughest piece of work.²

Primary materials available in the Andean area can be subdivided into bast and agave fibres, at least two types of cotton, brown and white, and the wool of the auchenia or camelids such as the llama (glama), alpaca and the finer silkier wool from the vicuña and the guanaco. In exceptional cases human or animal hairs were used in the construction of the fabric and there are a few instances of gold and silver threads being used in Inca times.

Cotton

Initially, only cotton (Gossypium peruvianum and G. hirsutum and in northern Perú G. Raimondii) ³ was used and it remained the preferred medium throughout pre-Hispanic times until the downfall of the Incas and post-Conquest times. At Huaca Prieta on the north coast of Perú at the site of excavation 3. a textile sample was found (Cat no.41.2/1716). On it was a stylized male condor in profile and repeated in a pattern stripe. The design was executed entirely in cotton. The technique used was a twined transposed warp construction in blue against natural cream-coloured cotton. [1a & b]

The date suggested for the deposit where this textile and other

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² Ibid, 272.
1a. Stylized avian creature (condor with serpent?). From Huaca Prieta. Cat No 41.2/1716. In blue and white twining.

1b. Twined transported warp construction. Isometric drawing.
samples were found is around B. C. 1950 Since some of the textile fragments were found in a level above some gourds [96a] which were dated somewhat earlier than the date referred to previously, the piece mentioned earlier may be a fairly late example of this type of work. Nevertheless, these textiles were made long before the appearance of pottery on the Northern Coast of Perú (Junius Bird, 1963).  

Thus we have some proof concerning the early usage of cotton on the north coast. Since Bird's work on Huaca Prieta, Chicama, much work has been carried out in northern Perú and it would seem that even prior to the pieces found at this site, the use of cotton only was widespread, at least in coastal areas; for example at Asia on the south coast. Initially cotton was used and cultivated mainly in coastal areas. The use of wools gradually gained acceptance in coastal areas as its different qualities were discovered. The two materials form a substantial part of the body of archaeological evidence and help clarify the contacts and the exchange systems established between the highlands and coastal lowlands.

Cotton was used for weaving at a very early stage, that is to say, in Pre-ceramic times. Yet with time the dominant position of cotton was


reduced as the use of wool increased.

Cotton which is generally 25 microns in diameter and usually has a staple of approximately 2-4 cms. in length can take up to 250 twists per inch (10 twists per mm.) enabling an extremely fine and also particularly strong thread to be spun.\(^6\) The fibres were twisted by hand without the aid of a western style spindle or the spindle rotated by a flywheel. Yarn manufacture was usually even and very tightly twisted, perhaps excessively so in some cases resulting in overtwisting (this feature was also exploited in the case of fine gauze weaves). Yarns could be used singly or in various joined strands, depending on what use they were going to be put to. Double-ply and two-ply yarns were preferred to the single-ply yarns since this last must have been considered to be rather weak for the construction of quality garments.

Crawford is cited by Harcourt as saying that the fineness of Peruvian single ply cottons didn't exceed No. 250 or 210,000 yards to the English pound (211,000 mts. to 500 grms.)\(^7\) A fineness of No. 300 was attained, that is 168,000 yards to the English pound (169,250 mts. to 500 grms.): An exceptionally fine example of a textile from the south coast of Peru, reflecting spinning capabilities (that is to say, the choice of cotton,

spinning and plying) is displayed in the Museo Larco Herrera, Pueblo Libre, Lima, and is regarded as being one of the finest hand-made fabrics in the world.

A brief glance at the Electron Scanning Micrographs makes us realize why such pieces as the one housed in the Herrera collection, were possible. Here, the cotton structure shown is roughly circular in section; a long cylinder tapering very slightly from root to tip. It encloses within a complex structure which takes the shape of a crimped spiral, which runs at an angle of 30°. The cotton staple is generally 25 microns in diameter and the staple is 3/4 to 1 1/2 inches long. (2-4 cms.) As can be appreciated in the micrograph there are usually ridges or striations which run parallel and lengthwise along the fibre.

Peruvian native pigmented cotton (*Gossypium barbadense*) grows in the natural colours: white, beige, brown, grey and a light shade of purple, and was cultivated widely in the northern area early on in Peruvian prehistory. These colours or cotton hues are still identified today by farmers and weavers in the northern coastal area of Perú, in Muchic as *imiko*, light brown; *bombasin* and *catil*, brown; and *fifo* or *kumbino* is grey or mauve.⁸

Cotton is drought-resistant, and an ideal plant for the coastal areas of the Andean Zone, which are largely dependent on water derived from

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Sample from Huaycan Tambo.
2b. S.E.M. Cotton fibres at X 1000 mag. showing characteristic structure.
2c. S.E.M. Cotton yarn at X 100 mag. showing S-spin and light spin.
the highland zones during the rainy season. There are some areas in the highlands where cotton can grow; generally interandean valleys anywhere up to 1,900 mts. above sea level. Indeed, there is a valley in the Department of Amazonas, Province of Chachapoyas in northern Perú named Utkubamba. *Utku* in Quechua means cotton, and *bamba* or *pampa* is a valley or relatively flat area.\(^9\)

The wide geographical area in which cotton was and is cultivated is largely due to its robust nature, drought-resistant qualities, climatic versatility and low susceptibility to disease and attacks by insects particularly the *arrebiatado* (*Dysederus peruvianus*).\(^{10}\) An additional factor in the selection of this plant for its cultivation was its adaptability and ability to survive saline and arid conditions.

**Vegetable Fibres Other Than Cotton.**

In addition to cotton other vegetable fibres were known and used. While cotton was commonly used in the coastal areas, fibres such as bast,

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10 J. M. Vreeland, Jr. "La paleotecnología en el desarrollo agrario." *América Indígena* 2. 46 (2)1986: 289-90. See also fig.10 in the same article, which illustrates an Insect known as *maríquita* depicted on a tapestry weave piece from the Jequetepeque Valley, from the L. Rázuri Collection.
possibly *asclepias*,\textsuperscript{11} were used and in some cases blended or plied in with cotton. Linen and silk were unknown. However, bast was used widely and through several periods. Its use was restricted to the construction of a limited range of special products such as fine hair nets, and particularly for artifacts that were to be subject to high tension and stresses, such as cordage for binding purposes.\textsuperscript{[3a]} Bast was rarely used for cloth.\textsuperscript{12}

Other fibres known and used worldwide were used on a much more limited and regional basis, for example hemp, flax, jute, kenaf, ramie, sisal and the abaca (some of these identifications need to be confirmed). The last mentioned is a bast plant from Central America, which like other bastis is obtained from stems or stalks of dicotyledenous plants. Bird has suggested the use of bast fibres from *fourcroya* leaves for the Andean Area in goods such as cords and rope, and sedges and reeds for matting, twining and cloth bags.\textsuperscript{13} The use of these fibres and the manufacture of woven goods generally antedates textiles. This is an area that merits a full study of its own.

These woven goods are more accurately described by the use of the term "off-loom textile products." It is commonly accepted that off-loom

\textsuperscript{11} Ibid., 307:10.


3a. S.E.M. Bast fibre (possibly agave) from Macas, Canta.

3b. S.E.M. Cotton fabric in 1 X 1 weave (S-spun) from Huaycan Tambo.
textile production in Perú predated both ceramics and certainly the loom by approximately two millenia. During the Pre-ceramic Period the Andean craftsman experimented with methods of manual construction techniques; firstly using bast fibres (B.C. 3600-2500) and then later using cotton (B.C. 2500-1800). The characteristics of bast and similar fibres can be distinguished easily from cotton, and were obviously distinguished in prehistoric times by the use they were put to; and mainly by the fact that they were smoother fibres with fewer fissures or longitudinal striations. In section the fibres are normally polygonal and not oval or round as in the case of cotton. Diameters are more varied than those of cotton, rarely exceeding 11 microns at the lower end of the scale and 25 at the upper, although in the cases of ramie and hemp .50 microns is possible. The fibre strands range from 40 to 80 cms. in length which helps explain their use and popularity as cordage material throughout the millenia. Bast fibers were used in some of the earliest examples of fishing lines found in non-agricultural pre-ceramic fishing communities in north Chile. The same fibers were used in Inca times, centuries later for tying and binding mummy bundles. ([3a]From Macas, Canta from a looted tomb dating to around the Late Intermediate to Inca period)

Wools

Having made mention of the characteristics of cotton and similar vegetable fibres, a brief comparison will be made by including information on the wools available in pre-Hispanic times. The only wools available in pre-Columbian times were those of the camelid family, such as the llama and the alpaca. The sheep was introduced after the Spanish
conquest. There are unsubstantiated reports of the use of bat wool. However this suggestion is regarded as being highly unlikely due to the fact that the wool staple is too short to spin.

We shall concentrate on the qualities of the wool from the Auchenia genus, which includes four species of animals in the llama family, all related to the llama. The four are; the alpaca (Lama pacos), llama (Lama glama), vicuña (Vicugna vicugna) and the guanaco (Lama guanicae). Each species has a series of subdivisions too numerous to describe here. However the wools from the four main groups present certain common structural characteristics. It is worth pointing out that the vicuña has the finest wool of the four mentioned. We must be careful about generalizing about the qualities of wool, since within the fleece of any of the four, staple fibre qualities and lengths vary from wool fibres to hair fibres to the coarsest, or kemp fibres at the bottom of the scale. Photomicrographs reveal these characteristic differences: most obvious is their fishscale-like structure [4a,b & 5a,b]. These scales, when washed, tend to shrink towards the root which is believed to cause a propensity to felting that is so typical of wools. However this may not be the case since the photomicrographs do not show any direct evidence of this locking of scales in tests done on sheep wools.

15 J. A. Mason. The Ancient Civilizations of Peru: 245.
4a. S.E.M. Llama fibre.

4b. S.E.M. Alpaca fibre.
5a. S.E.M. Vicuña fibre.

5b. S.E.M. Wool, showing the scale structure of the fibre, from Carajía, Amazonas. S.E.M. photos are courtesy and © of Mrs. Thea Gabra-Sanders
Mrs. Thea Gabra Sanders 1984).

Not visible in the micrographs are the cortical cells within which there is a fibridlar structure. The scales or cuticles are on the surface of the fibre and have a fine latticed appearance, frequently seen to be bipartite or multipartite in the case of llama fibres. In the vicuña the scales project more than those of the llama.[4a &5a] The kemp fibres, particularly those of the llama are much rougher and do not take a dye so readily, likewise they tend to be more brittle, partly because the hairs are longer than those found in wool. Llama and alpaca hair have a stronger crimp than that of the vicuña. It has been suggested that the insulating qualities of these wools is heightened by the fact that they trap up to 60% air, even in the case of tightly spun yarns. Even wet or damp wool can generate heat. Small wonder therefore the use of wool became widespread, particularly in the highland zone, but also on the coast, where during the winter months the climate can be relatively cold. On the coast cotton remained as the main material for the construction of fabrics. Wool was usually used for decorative purposes. This point is particularly valid in the case of Paracas textiles.

Alpaca wool is likely to have been used more extensively than it is today. The alpaca is shorn every 2 years, which inevitably means a varying fibre width. Mable Ross\textsuperscript{17} states that in contemporary times there are two

\textsuperscript{17} Mabel Ross. The Essentials of Yarn Design for Handspinners:83 and Table 6.
well known varieties of alpaca: the *huacayo* is the commoner of the two, its wool being low lustre, low in crimping with a propensity to felting. The *suri* has no crimp, but does have a broad wave and a silky lustre. The *huacayo* and the *suri* have hairs ranging from 27-45 microns diameter and a conveniently long staple, which can reach 9 inches (22 cms.), being ideal for easy spinning. The vicuña and the guanaco have much finer hair which is usually within the 13-15 microns range, having a good lustre but a very short staple, that is, about 1-2 inches (21/2-5 cms. long).\(^1^8\)

The twisting rates in the spinning process can range from extremely loose spinning, for example 3 1/2 tpi, to much tighter spinning (ideally around 12-13 tpi) although nothing like the high degree of tpi. achieved with cotton. Wool has a greater resistance to twist. In fact, it tends to unspin slightly, particularly after overspinning. This may in part account for the practice of plying, in addition to the fact that plying strengthens the thread. The spun fibres would automatically lock in place since the spin is usually in one direction and the ply is in the opposite direction.

The choice of the llama (*L. glama*) in prehistoric times seems a logical one. Like the camel it is a burden carrier, but with a very

\(^{18}\) Ibid., 115.
restricted payload, being preferred and known for its meat and fleece. The fleece is usually a mixture of fine wool, coarser fibres and kemp of considerably variable quality. Grading of the fibres was not normally undertaken, in spite of the fact that coarser fibres account for up to 20% of the fleece.

The animals of the Auchenia family are currently associated with medium to high altitude zones in the Andes, rather than the coast and the high jungle zones. However, Melody and Izumi Shimada have provided new information and conclusions about prehistoric llama breeding in coastal areas in addition to Bird's reference to sacrificed llama burials in the Virú Valley.

The conclusion that they reach is that in the north coast of Perú llama breeding was taking place from at least the Middle Horizon (c.A.D. 600 >) and perhaps since the Early Horizon. They point to the data obtained for the north coast camelids, from the stratified deposits of Mound 2 at Huaca Lucía Cholope (La Leche Valley). This huaca is generally recognized to be an Early Horizon site. Mound 1 data, which is tied in with Early

20 J. B. Bird & W. C. Bennett Andean Culture History: 183.
Horizon occupation layers (c. B. C.1300-1200 to 700-600) and is assumed to be linked to and contemporary to Mound 2, on the basis of near identical ceramics. Similar camelid bone evidence comes from Huaca la Merced in the La Leche valley. In the Moche Valley, Huaca Herederos Chica, and the Caballo Muerto Complex are tied in with the Initial Period (B. C. 1800-1200) and the Early Horizon (B. C. 1200-400).

Following this period and in the Early Intermediate Period (400-550 A. D.) llama remains at Cerro Arena (Moche V) Puerto Moorin (Virú) and at the Pyramid of the Sun pit, Moche III and IV ceramics and camelid bones were excavated recently. At Huanchaco and Moche, the ritual use of camelids is well documented. According to Donnan and Poole: "A single L. glama breeding population consisting of separate yellow and brown wool, strains and yellow/brown hybrids is strongly suggested by the Huanchaco data."

I may be reading too much into the little information available on this find, but it would seem to me to reflect a tradition of separating white and black for ritual purposes, a tradition and custom which is still continued today amongst the contemporary Quechua. The importance of the yuraq, or white camelid at one end of the spectrum and the yana or black at the other end of the scale dominates the way the camelids are classified and described. Alqa is the word that defines the animal as having a predominance of a lighter area.

Verónica Cereceda's study on the contemporary *talegas* or sacks of Isluga (Chile), reveals that the use of black and white in woven space is highly structured. In each half of the sack, a black band contrasts with a lighter band, symbolically representing the opposition of light and dark, masculine and feminine. There is a message in this textile code, as Cereceda summarizes; "Parmi celles-ci, le noir et le blanc déterminent deux poles opposés, dont le premier signifie l'obscurité et la fermeture absolues, et le second la lumière et l'ouverture absolues. Entre ces deux extrémités, le marron représente une transition entre l'ombre et la lumière, entre la fermeture et l'ouverture." This selection of dark and white wools for ritual purposes and symbolic reasons probably also took place at Huanchaco many thousands of years earlier.

For the Middle Horizon (550-700 A.D.) ceremonial site at Pampa Grande, of the Moche V period (570-670 A.D.) high proportions of camelid bones have been excavated. Likewise, comparative material from Huaca Galindo (Moche V) in the Moche Valley has yielded information on the organic remains of domesticated llamas and highlights their use as the main meat source (presumably after fish). An exact assessment of their utility in terms of their wool is more difficult to determine. In the following

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24 Ibid. 1023.
chapter we shall be able to trace through the successive periods; the growth patterns in terms of wool usage and follow its impact or design, particularly during the Paracas phases.

There is, however, direct evidence of animal husbandry, the clearest evidence being a llama dung deposit approximately 20cm. thick at Galindo (llama dung was used for burning on hearths, much as it is used today in the southern highlands of Perú and northern Bolivia commonly known as takya )[6a]. Perhaps more impressive still are the dung deposits 3m. thick by 5 mts. wide at the site of Huaca del Pueblo Tumamé (Radiocarbon dates for this site are 790±70 b.p. and 900±70 b.p.) The archaeological evidence cited is largely for the northern coastal area of Perú, and based on the Shimada's25 work, but it does help visualize and emphasize the fact that the use of the Auchenla genus was not restricted solely to the highlands, which is where the highest densities are to be found, but also to the coast and also on a much more restricted basis in the high jungle zone. Take, for example the camelid bones found at Abiseo, Department of San Martín in the high jungle zone. These probably date somewhat later than the examples mentioned above, and have been positively identified as the Lama glama.26


6a Storage for llama dung deposit or takya, nr. Ulla Ulla in Northern Bolivia.

6b Typical herd of llamas and alpacas on the altiplano nr. Ulla Ulla.
While wool became increasingly popular, it was probably not as readily available as cotton. Cotton remained an important fibre throughout the Andean prehistory. It was be used for making fishing nets and lines. Wool is to be associated more with ritual or symbolic functions and its source is commonly regarded as being the highlands.

B) Weaving Configurations

Yarns, Twist, Plying and Tools.

Spun fibres play a vital part in the production of cloth. The spinner's role, while not a job that requires much concentration, is one that is vital in cloth production. The spinning of fibres cannot be overlooked. In fact in contemporary Andean Perú, Ecuador and Bolivia, of all the stages of the process of weaving the observer is more likely to see the spinning of the wool in preparation for the weaving itself than the various stages that follow this. Weaving tends to be a seasonal occupation in most areas, but spinning is an activity that can be carried out throughout the year (puskakuy or phariy)[7]. Spinning can be done by male or female although it is normally a female occupation, from the youngest to the oldest. It can be carried out for another individual (kaytuchiy), whilst walking, tending the crops or the animals or in leisure time.[11a & 11b] We can be fairly sure that weaving traditions have not changed much since the time of the Spanish Conquest.
While wool fibres can be fully prepared by various substances including animal and vegetable oils, the quality of the fibre is not considered of paramount importance during spinning. The yield of natural oils is very low, and the quality of the fibres is usually better in prehistoric times or in parallel to each other. In the case of modern spinning, the density of the staple is larger than in the case of traditional spinning.

27 Felipe Huaman Poma de Ayala, Divina Comedia, Escuela de Antropología de la Universidad Nacional de San Marcos, d'Ethnologie, 1996: 221.


7. Woman spinning using a drop spindle (without distaff) at Ingenio, Junín.
Huaman Poma,\textsuperscript{27} illustrates a mature woman spinning as she walks. She is obviously spinning wool, either llama or alpaca, since both wools have a longish staple. Cotton spinning requires more care than wool during spinning and is not usually spun using a drop spindle. The reasons for this shall be described in detail further on.

While wool fibres are generally cleaned prior to spinning they require to be fully prepared by the extraction of dirt deposits and extraneous substances including excessive grease and animal fats. Some oil or grease is not considered detrimental. The contemporary Peruvian Quechua have shown a preference for native Peruvian wool, probably due to its level of natural oils\textsuperscript{28} (personal communication with Mr. Leslie Hoggarth, 1986). This quality increases the impermeability of the finished product. The fibres are unlikely to have been carded (\textit{pillchay}) with any tools in prehistoric times. However, they had to be arranged so as to lie roughly parallel to each other, and at the same time overlapping and containing a sufficient density of fibres so as to be drawn and teased out easily during spinning. In the case of cotton this alignment of fibres was even more important than in the case of wool, due to the shortness of the fibre staple.

\textsuperscript{27} Felipe Huaman Poma de Ayala. \textit{Nueva Corónica y Buen Goberno}. Paris, Institute d'Ethnologie, 1936: 221.

The distaff.

Nowadays prepared wool is drafted onto a distaff (*miskhuy*?). Whether this was done in prehistoric times is difficult to tell. It is likely to be a tradition that was introduced on a greater scale in post-conquest times, since the distaff is a piece that is not readily recognizable in the wool-boxes or work-kits of prehispanic times, such as the two in the Royal Scottish Museum collection, Edinburgh (Nos.1902.390.1 and 1901.53) [9 & 10]. This lack of evidence of the use of the distaff may only be due to the fact that the workboxes and spinning materials are found mainly in coastal areas where cotton was used. Cotton may not have required the use of the distaff.29

Today a wooden distaff called a *kawapa* (literally: skein of wool) is used in the Dept. of Ayacucho (Chocorvos). The distaff types in this area are not Spanish in style, neither the Y shaped ones or the more elaborate *kawapa* illustrated and described by Stevenson.30 The area where I have been able to observe the greatest use of the distaff is in northern highlands of Perú, between Cajamarca and Chachapoyas. In this area the distaff is usually of the simple Spanish type [11a & 11b] consisting of a stick with the skein twisted and bound on to it. Northern areas adopted Spanish traditions more readily than the southern ones. This may account for the difference in terms of the use of the distaff.

29 See Karen Stothert. "Unwrapping an Inca Mummy Bundle." *Archaeology.* 32 (4)1979: 13. where she describes four distaffs found at Pachacamác, which had cotton wound onto them. They may be an exception to the rule.

1902.390.1.

10. Workbasket, (Chancay area?) Royal Scottish Museum No.
1901.53.
Another item of lesser importance is the weaver's paraphernalia in pre-conquest Peru. It was only used in the case of cotton, as wool was not commonly used. It acted as a support for the weft, or the filling yarn, during weaving. If the cotton did not become soiled or caught on the machinery, it was considered to be successfully woven.

The Victoria and Albert Museum gives the detailed breakdown of weaving methods in pre-conquest Peru. Captain R. J. Symonds R. N., in his book on the northern coast of Peru (1910) contains a very interesting account of the weaving process, which can be summarized as follows.

11a. Spinning using a distaff, Cajamarca. Photo Courtesy of Mr. W. M. Mackay.

11b. Spinning using a distaff, Cajamarca.
The Gourd.

Another item of lesser importance that was included amongst the weaver's paraphernalia in prehistoric times was a bowl or gourd. This bowl was only used in the case of spinning with short-staple fibres such as cotton. It acted as a support to the spindle, providing it with a smooth surface, against which it could turn. In addition its use meant that the cotton did not become soiled through contact with the ground while it was being spun.

The Victoria and Albert Museum's Brief Guide to Peruvian textiles gives the detailed breakdown of the contents of a workbasket donated by Captain R. J. Symonds R. N. which was excavated at a burial site in Casma, on the northern coast of Perú in 1888. The workbasket No T312 312/41-1910 contains a very interesting selection of the tools used in the past, which can be summarized thus; a basket, cotton bag, two balls of cotton yarn, glass beads (this identification of the materials is unlikely unless it is a burial dating to colonial times; the beads are more likely to be some sort of clear rock crystal), some beads, two clay beads (all were probably counterweights), 2 round battens (or possibly shed rods), and one flat batten, 2 brass pointed spindles, 9 plain spindles and 2 weighted ones, 2 copper needles and finally the gourd for the spindle. This

33 Ibid.
selection of instruments is representative of most archaeological work baskets throughout the centuries. It is interesting to note that a gourd is included in the selection of tools.

While the spinner can carry the drop spindle (*pusca*) around when tending the flocks, going to the market, protecting crops, when conversing with neighbours, or literally anytime, medium to fine yarns could not be spun with such flexibility and in such a wide variety of conditions. Fine quality yarn (*k'ullkuy*) demanded the use of the supported spindle method, where the operator generally sat on the ground supporting the tip of her spindle in a gourd, thus lessening the stress on the strands being spun. Cotton spinning was much more labour-intensive than wool spinning and unlikely to be a leisure occupation on the same scale as in the highland regions where wool-spinning was commonplace.

Whether the spinning was fine or coarse, it was a skill which reached a high proficiency, an aspect often overlooked when studying and analysing textiles, and particularly when emphasis is placed on the artistic qualities of a piece. In some cases, a seemingly small detail like the direction of the spin can influence the overall appearance of a piece and the clarity of the design (particularly in the case of woven samples rather than embroidered pieces). This is especially the case of gauzes where the textures could be varied by the type of spin selected. The direction of the yarn spiral can be upward to the right, that is a Z twist, or upward to the left, or S twist. In addition to the direction of the twist,
the amount of twist which has been referred to earlier is also very significant in the final appearance of a piece.

Again, in the case of gauzes, a yarn that is overtwisted curls on itself forming an almost unmanageable yarn or tight crepe. This gave ancient textiles and particularly the gauze both a degree of elasticity and a strength and resilience. Weaving this type of yarn required weaving technology which was rather different to that of weaving using a low to medium tension yarn. This type of yarn was obviously deemed suitable for gauze weaves. It could be used to make a transparent web yet at the same time have the properties of strength and flexibility. Lila O'Neale has suggested that this supertwisting of yarns- or crepe-like yarns - was also suitable as an aid in maintaining parallel positions of wefts, since the weft secured the warps by "biting" into them.\textsuperscript{34}

Spinning fibres into yarns was a practice carried out long before weaving. The use and regular construction of yarns was, therefore, well ahead of weaving techniques, just as the combustion engine was in existence prior to its application to the wheeled motorized vehicle or the aircraft.

Plying.

Techniques like plying had been developed providing the yarn with a great regularity of thickness and an even tensile strength. Plying was usually opposite to the direction of the spin, fixing and stabilizing the twist in the yarn so that any likelihood of the yarn untwisting would be prevented.

Plying became commonplace at a very early stage and is amply documented even for the Pre-ceramic Period. During this period single-ply yarns were used. Neither single-ply nor double ply yarns fall out of use throughout the rest of Peruvian prehistory. There are periods when there is a prevalence of one type of plying over the other, such as the use of single-ply yarns during the Initial Period at the sites of Las Haldas and Supe. This occurs particularly in the cases of plain weave pieces, where an even torsion was required. Combinations of single ply wefts and two ply warps are known for the Initial Period in the south coast. This preference meant that the use of plied yarns forced a straightjacket on the direction of spin employed.

On the north coast the tendency was towards "S" spinning and on the south coast there was a prevalence of "Z" spinning. The central coast was closer to the south coast in traditions, employing "Z" spinning for plain weave fabrics.[12a & 12b]. In the case of the highlands there is little evidence of the preferred spinning direction: however the results of an analysis of some textile fragments from Carajía, Chachapoyas revealed
12a. S-spun yarn and angles of twist.

12b. Z-spun yarn.
that during the Late Horizon wool fragments were invariably "Z" plied and "S" spun. Trends therefore, vary not only by the zone from which they come, but also what period and what material is employed. It would be risky, at this stage to suggest that we generalize and say that a certain spin or ply was used in such and such an area at a certain time, when there is such ample evidence of variations. It is noted, that despite the difficulty and time consuming process of plying, that it was assiduously carried out by the ancient spinner who had to double and re-spin single yarns into two or more ply yarns.

Colours and Dyeing.

Again, in terms of colour usage, there seems to be no standing practice for any particular period. During the Paracas period there is a major growth in the use of colours due largely to the availability of wool, and the ease of dyeing that the use of this material represented. In the Middle Horizon, particularly in Huari and Tiahuanaco textiles, a restraint was put on the variety of colours used, which tend to be within the following range: olive green, russet red, ochre, cream or white, sepia-black, lilac-mauve and in a few cases grey. [13a &b]

This restricted tradition is probably related and imposed by the

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colours used in weaving which limited to warm tones. Other populations, in line with other "geometric" art, whether repeated, abstract or his study on primitive art every year there is a hidden message.

The methods of dyeing were spinning, occasionally prior to when the textile was woven, ikat. Ikat is a fairly labour-intensive reservation with the cloth is not reveal the commonplace.

The large groups, mainly wools, being for a pattern or proceeding wools.

13. Tiahuanaco and Huari Tapestries. a) Museum of Mankind Study

Collection. N° 1954 WAM 5.481 &b1954 WAM 5.5.29
colours used in ceramics which have coloured slips which are *per force* limited to earth tones. Only in Coastal Huari and Huari influenced populations, is there a wider use of colours such as red, and light green. [14 a & b; 94b] Colour was an outstanding design element in Pre-ceramic art, whether repeated, alternated in blocks or used singly. Franz Boas in his study on primitive art analysed a few pieces for their colour sequence and has shown that in a seeming randomness in the examples he presents, there is a hidden order.36

The methods of dyeing were various, such as dyeing the fibres after spinning, occasionally prior to spinning, or in even more limited instances when the textile was woven, either by piece or tie-dyeing[15a & b] or *ikat*. *Ikat* is a fairly labourious method of dyeing which consists in reserving areas of a cloth by blocking them off with a resist and placing the cloth in a dye bath, subsequently removing the resist in order to reveal the design. This last mentioned type of dyeing was not commonplace.

The largest proportion of Peruvian textiles fall into three colour groups, mainly represented by the various colour strains, or camelid wools, being white, brown and sepia. These were usually used as grounds for a pattern weave. The pattern weave or in some cases, embroidery or brocading would introduce the colour into the web.

A wide variety of colours and tints were used, and a figure of over 150 has been estimated. There may be a hint of an early use of the fact that dyes can be achieved by dying raw materials. Intensity can be achieved by dyes alone or with mordants. In some cases, the ancient weaver did not have access to the same materials. Having access to the resources of natural dyes and their recipes as they are used today in some highland areas. Wool and cotton have different rates of dye absorption. Cottons do not take dyes nearly as easily as wool. The mordants used were iron, alum, and possibly urine. The use of iron oxide as a mordant, or as a colour, can often be clearly seen in the dyeing process.

A wide variety of colours and tints were used, and a figure of over 150 has been suggested.\(^{37}\) This may be a bit of an exaggeration, in view of the fact that dyes can break down (at varying rates), or variations in tonal intensity can be achieved by dyeing a piece several times. Nonetheless, the ancient weaver did have access to a wide variety of pigments and dyes, only a few which are used to this day.\(^{38}\) Ravines lists a series of natural dyes and their recipes as they are used today in some highland areas.\(^{39}\)

Wools and cottons have differing rates of dye absorption. Cottons do not take dyes nearly as easily as wool. The mordants used were iron, alum and possibly urine. The use of iron oxide as a mordant, or as a colour can often be identified today in ancient textiles by the disappearance or serious deterioration in the fabric, where the mordant or even more clearly when the colour was used.

Little is known about the dyes themselves. However, if the remaining few natural dyes used today in highland Bolivia and Perú are anything to go by we can indicate some of the possibilities: Cochineal, \textit{(Coccus}...


cacti) a parasite that lives of the well known cacti, Opuntia (tuna ) and Nopalea is known to have supplied a wide variety of tones of red and purple which at its deepest is almost black in quality. Today, the stands of tuna are not so great, although at the site of Huari near Ayacucho this plant abounds and is covered with this parasite.[16] Curiously enough this insect is found in widespread use throughout Latin America and particularly so in the case of Mexico where it is recorded by the chroniclers.41

Laurie Adelson and Arthur Tracht quote in "Aymara Weavings" that Bertonio, in his 17th century dictionary of Aymará, listed amongst other dyes, makhnu, which he described as a "cake of herbs which dyes wools red."42 This is considered to be the term which was originally used for referring to cochineal. Adelson briefly indicates that other sources for red were the chapichapi (R. microphyllum ) and arampu (Opuntia sochrensis) and for blue, indigo (anil).43

40 Ibid., 396.
43 Ibid. 45
16. *Opuntia (tuna)* stands at Huari, Ayacucho. Source area for Cochineal (*Coccus cacti*).
In northern Perú, in the Chachapoyas region pepita de nogal, or walnut (*juglans sp.*) is currently used for dyeing wools a dark brown colour. Unfortunately, the introduction of aniline dyes has meant that many traditional dyes and dyeing methods have disappeared over the past decades. This means we have scant evidence for what materials were used for making up dyes in prehispanic times. Natural undyed cotton is available in several colours. Cotton is much more difficult to dye, not surprisingly, it was used (when woven, usually in plain weave) as the monochrome base for embroidery or brocades.

The Loom and Loom Set-up.

So far, we have dealt with the various stages leading up to weaving itself. We now come to the point where we have to refer to the actual cloth-making process. That is to say, the conclusion of what is a cooperative activity; the most demanding stage both physically and technically and also the most time-consuming.

John Murra has emphasized the role weaving had in Andean culture and society. By Inca times weaving was a widespread economic

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activity involving directly or indirectly a large proportion of the population. It was as a state industry under the Incas, in much the same way as Kurt Mendelsson's study on the pyramids of Egypt tends to suggest that they were evidence of a state industry.\textsuperscript{46} Garments at this stage were being produced surplus to needs. There are constant references in the chroniclers to what seems to be a wasteful manufacture and use of garments at the time of the Incas.

Aspects of weaving, weaving technology and traditions are amply documented and in some cases, illustrated (see [17a & 17b] from Huaman Poma de Ayala)\textsuperscript{47} Today, as in the past, the weaver's part in the production of textiles is one of the best known stages of the whole manufacturing process, yet at the same time one of the most poorly understood. Complex designs were developed and carried out on very simple looms or frames, which is surprising. These looms did not incorporate foot treadles, which would have speeded up the manufacture of cloths, and generally speaking, rigid frame looms were not used. Instead, the ancient weaver depended on the variable tension of the warps when using the backstrap-loom.[17c & 17d]

The backstrap or horizontal loom allowed a wide variety of techniques

\textsuperscript{46} See Kurt Mendelson. The Riddle of the Pyramids. London, Thames and Hudson, 1974.

\textsuperscript{47} Felipe Huaman Poma de Ayala. Nueva Corónica y Buen Gobern: 215, 223, 645, 647.
17b. Frame-loom illustrated in Huaman Poma.
Loom Parts:

a - Cord
b - Heading Cord and Lashing
c + c* - End-Sticks
d - Shed Rod
e - Heddle-cross
f - Heddle
g - Sword
h - Shuttle (Bobbin with Weft)
i - Backstrap
j - Beater

Quechua (Cuzco and Altiplano)

a - waska or awantanka
b - polon
c + c* - kakinas
d - tokoroq
e - illawa (illawa kaspi)
g - kallwa
h - mine kumay
i - wakaqara
j - ruk'i or wuch'uña

17c. Backstrap-loom and parts (as used in the Andean Area)
17d. Backstrap-loom with raised heddle, ready for next pass of the shuttle with the weft.
and fabric tensions to be applied during the manufacture of the cloth, which would be next to impossible to apply when weaving with a frame loom. On the other hand, this type of work on a backstrap-loom could be very demanding physically, particularly if the warp yarns were very long. [18a & b].

In contemporary northern highland Perú, particularly in the departments of Cajamarca and Amazonas, such long looms are normally used by men for weaving what are technically simple fabrics, like plain weaves. To weave such lengths required much strength.[18b] The problem of the long loom can be partially overcome by winding the woven cloth on the lower loom bar, which is often notched to enable alterations to be made and also enable the strap to be detached with ease. Only when there is sufficient woven cloth to justify a break or a rest from work, can the cloth be rolled onto the lower bar. Women are more likely to use this type of set-up.

Another restriction commonly encountered in weaving was that of the width of the loom. The width of the cloth to be woven was dictated largely by the weaver's armlength and reach. This means that the weft width rarely exceeds or exceeded 60cm. Generally speaking woven pieces are much smaller than that. If a large article was to be manufactured, such as a poncho, manto or unku it was generally woven in two pieces and matched up later. This is quite some undertaking considering the following facts: 1) The pieces normally had selvedges built into them and
18 a) Long backstrap-loom from the Cajamarca region.

b) Long backstrap-loom from the Cajamarca region. Photo courtesy of Mr. R. Christie.
were not larger pieces which were going to be cut to size. 2) Weaving tensions would vary whilst inserting the weft, altering the density of the fabric and thus, at the same time the length of the piece. 3) Warping would have to be very precise, an exact count of the warps having to be taken prior to weaving. 4) A careful count of weft threads would also have to be kept to ensure that any weft designs or bands would match up with the designs on the matching piece when they were due to have their selvedges sewn together.

It is obvious that weaving a patterned fabric on a larger scale required a lot of planning and calculation, particularly in terms of the dimensions of the piece to be woven. In some cases the problem was solved by weaving an identical design almost simultaneously on another loom. Skinner\(^48\) has illustrated two examples from the American Museum of Natural History Collection (fig a [41.2/5482;5483]) which are a pair of looms with incomplete fabrics on them, which correspond in size, pattern and colour, and were probably intended to be sewn together upon completion of the weaving. Both looms have the same number of warps, that is to say 116 each. Warping was obviously carefully done and the

warp counted with precision. In both cases the fabrics had been commenced with 15 to 16 picks of plain weave. Interestingly enough, the weaver’s calculations could go slightly astray and amendments would be made during the weaving itself. Skinner has noted that each loom had 12 warps added to it once the weaving had begun.49 This was done, presumably to ensure the clarity of some of the elements of the design.

**Setting-up Procedures for the Backstrap and Horizontal Loom.**

Like the previous stages in the weaving process, the transfer of ordered bundles of warp yarn to the loom bars is no easy task, requiring a combination of skill, patience and time. Once again we depend on contemporary descriptions to give us clues as to how this was carried out in prehispanic times.

**Warping**

Ann P. Rowe’s study of warping and weaving techniques in the Cuzco area are most valuable.50 For northern Perú reference can be made to information made available by Mackay where warping procedures are described briefly.51 The method described is the method used in the

49 Ibid., 70; 5a & 5b.


Chachapoyas area. Comparisons can then be made with prehispanic looms, for details such as the grouping of warps, the use of the heading cord and the way the warps are bound to the loomsticks.[20] This is the case for pieces that are going to have selvedges on all four sides.

Warping is normally carried out by inserting 3 sticks in line into the ground, two in close proximity and the third at about double the length of the space between the first two. This is done in or under a sheltered area. Then the warp is wound round the sticks in a double figure of eight, or chain of three links. At each end, where the end-sticks were to go, a tie string was included. A less common method was warping onto sticks without a heading cord. In this case the textile, once it was woven, would normally be cut off the end bars of the loom. The preferred method was that of using the more labourious warping pattern, using a heading cord which was then attached to the end bars by threads or cords which were evenly spaced (generally every 4 or 6 warps)[19].

This method was probably preferred for two reasons:

Firstly; the warps were maintained in groups or units of 4 or 6 and in a strict sequence and could not get misplaced in the process of weaving. Spacing would be even.

Secondly; once the piece was woven, it was a finished piece not needing to be cut down to size. This meant it had a good finish all round the selvedges. At the time of warping there may be two warp crosses or sometimes a single one. In the case of a double-cross being included in
19. Warping being carried out. The warp cross can be seen clearly. (Cruzpata, Amazonas).

the warping, the central stick is removed and a cord inserted to hold the odd-numbered and even-numbered warps separate. It is here that the heddle will be attached, either to the even-numbered or to the odd-numbered warps.

The Heddle.

The heddle (*illawa, Lira*) is usually a long slender stick of split bamboo or wood and should be as wide if not slightly wider than the weaving width (weft pick). From this stick hang the thread loops which are linked round the separated warps of the shed. The looping on the heddle-stick itself is often bound in a more secure manner, so that the heddle stick doesn't slip out. The heddle stick may also be known as the *illawa káspi* and the thread loops simply as *illawa* in Quechua. Theoretically, the addition of the heddle can carried out before the warps are put on the loomsticks. However, it is more likely to be the case that the heddle is added once the warps are attached to the loomsticks.

The single cross warping receives much the same treatment. However the separation of the odd and even numbered warps is just a bit more complex. Warping, in contemporary times in northern highland Perú would normally be carried out by two people; one turning the yarn round the sticks and the other securing the warps at the two end sticks. If a warp band is required, its insertion has to be carried out with much care so that the points at which it is tied or knotted with the base yarn occurs at the end of the loom, that is, at the end sticks themselves rather than
in the middle of the fabric itself. Even with two people involved in setting the loom up and warping, the time involved is considerably more than that indicated for the Guatemalan loom, which according to Lila O'Neale usually takes an hour and a quarter, without interruptions. 52

The points outlined above show why the Andean method is more time consuming. The interlacing of every warp to a heading cord and then the fact that it is subsequently attached to the end sticks, is in itself a more time consuming method. This is unlike the Guatemalan loom, which would generally be simply attached to the end sticks by being wound round them directly. 53 Once the loom has been warped and the heddles have been attached, it is basically complete. [21a & b]

The Shed Rod

There are however, tools which should be added to the loom before the weaver begins work. A piece of lesser importance is the shed rod or stick which performs a complimentary function with the heddle. The shed rod, like the heddle, divides the sum total of the warps into equal parts; even-numbered warps above the rod and odd numbered warps below, or vice versa. This creates a shed which is countered by the shed created by the heddle. When the heddle is raised by the weaver, he uses the space created

53 Ibid., 45-46.
21. a) Heddle still in situ, on a loom on the Royal Scottish Museum. No. E.183. This example probably had another heddle. Note the interlocking snake design. 32 x 60 cm

b) Double heddle on Museum of Mankind example No. 1907

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between the warps by this action to send the bobbin with the weft yarn from one side of the loom to the other. The shed rod is commonly known as the *toquru* in the southern highlands, and in northern Perú as the *shongo*. Very often they are made of a fairly light material such as bamboo which tend to vary in diameter, depending on the size of the weaving. Take for example No.1907 3.1997 in the Museum of Mankind\(^5\) (see detail [21b] and photo [23]). This loom is not a large one, measuring approximately 49 X 25 cms. and therefore requires a small shed rod. (This archaeological example is from a coastal area and is thought to be from northern Perú. [Valley of Pacasmayo, La Libertad or possibly Lambayeque]). Not surprising therefore, that a slender cane or bamboo stalk has been used. In some case of contemporary looms the shed rod is wooden [22]. Also in the case of contemporary looms an instrument called the tenter can be included. I have not been able to document any cases of pre-Hispanic looms using the tenter since this can easily be removed or even fall off. This does not mean to say that it was not used. Hence, details of its function will briefly be described.

Even today the tenter’s use is not widespread. I have observed it in use in the Chachapoyas area in northern Perú, where a thin strip of wood or bamboo, slightly larger than the width of weaving (weft length) was used. \(^5\) Usually its length corresponds to the width of the fabric in construction to achieve a uniform width. It acts as a scale or reference


\(^5\) W. I. Mackay. *Textilería y tradiciones textiles en el Cantón de Cruzpata*: 4-5.
22. Shed rod on a contemporary loom from Huilloc, K'achin near Ollantaytambo, Cuzco. The weaving shown is nearing completion and immediately prior to the insertion of the weft with a needle. (Museum of Mankind).
guide at or near the edge of the recently constructed fabric and is either pinned or tied into place. The tenter is known today either by its Spanish name *tendedor*, or by the word *tumbe* in northern highland Perú.

The bobbin, unlike the tenter, is an essential piece of weaving equipment and can take several forms. It is known as *kumana* or *minekumay* in Cuzco and by a wide variety of terms in central Perú and by its Spanish name in northern Perú where it is known as the *tramero*. To match this variety of terms there are many types of bobbins. They range from slender sticks on the end of reels of thread, or in some cases sticks with notches at both ends and the yarn wrapped round them. The general absence of anything resembling bobbins in the tool boxes I have inspected would strongly suggest that the spindle used for spinning the yarn would also double as a bobbin. This may explain in part the diversity of spindles mentioned earlier. It could also help explain why detachable counterweights would be used. If the weaving was to be of various colours a selection of bobbins would be used. [24a & b]

The Batten.

The batten or sword (known as the *kallwa* throughout the Andean area) is the most valued part of the backstrap loom. It is the most appreciated piece of the weaver's selection of tools, and will often indicate, through the patina, wear marks on the tool itself, and the weaver's time and experience in weaving.[25a & b] It becomes almost equivalent of a status symbol, and usually a well earned one at that, and it can also be a heirloom. A good sword lasts a lifetime. In August 1984 I
2.5 Sword or batten probably from coastal Peru. (a) Archaeology Museum, Cambridge and (b) Royal Scottish Museum, Edinburgh [includes a needlecse].
chanced upon a weaver at an open air market in Cuzco. She was selling *fajas* and in the process of completing one. I requested to have it in its incomplete form, with all the loom attachments and parts. She agreed quite readily, but would not part with the swords, in spite of the fact that they were small pieces of wood and relatively easy to replace. Eventually she suggested that I take another rather cruder swords, of the type that also double as a shed rod. The pieces she left me with were almost new and unused.[26]

This attitude is not surprising since the artist and craftsman tends to become dependent on a carefully selected piece of hard wood, such as *chonta*, which has attained a smooth finish through much and long use. In the course of my research I have not been able to document a single case of a sword being found in situ in an archaeological loom, with the possible exception of loom № 25.11.2 in the Gothenburg Ethnography Museum[27a] and what would appear to be a reconstructed example in the Regional Museum of Ica, Perú. The battens may have been added later in the case of the second example.[56][27b] Battens are not rare in collections but they are rarely directly associated with the looms themselves. Very often they are of *chonta* (iron wood). This wood is from a palm tree that grows in the high jungle zones of the Eastern slopes of the Andes and may well have been traded into the coastal areas.

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56 See Karen E. Stothert. "Unwrapping an Inca Mummy Bundle." *Archaeology* 32 (4)1979: 8-17. The mummy described is one of a few that contained parts of a loom, including a sword.
26. Contemporary loom from Cuzco with unused battens.
The Royal Scottish Museum Collections (see below) mention a workbasket No 1001.69, 1988.312D, 40cm long, also includes curious feature and includes an edge of its surfaces (1651.203). It is photographed this indentation unless it doubled as the indentation being the point where this is unlikely in view of the small.

Battens are of varying widths, depending on the weaver's requirements to be a long, rectangular piece of edges (working edge) which tapers to a point at either end and can be shaped in section rather like an aircraft propeller blade. The blade is the thinnest one, formed and then shaped on either side by the battens made between odd and even rows of the weft; another thread or binding pass through. One part of the blade is drawn tight and the other is relaxed towards the weaver with the aid of weft yarn and alternation of warps.

What has been said applies to the backstrap or stick-loom and is generally applicable to the horizontal loom, which is also be used for weaving. The warp frame looms, which are described and

27 a) Loom in the Göteborg Ethnographical Museum (25.11.2) b) Loom in the Museo Regional de Ica (Reconstructed?).
The Royal Scottish Museum Collection in Edinburgh includes several battens, which are probably of this type of wood. Two are included in workbasket №1901.53, mentioned earlier and another batten; №1896.312D, 40±cms. long is also in the collection. A fourth one presents a curious feature and includes an elongated rectangular indentation in one of its surfaces. (1651.205, see photo [28]) I cannot explain the function of this indentation unless it doubled as a shuttle as well as being a batten, the indentation being the point where the thread could be stored, however, this is unlikely in view of the small size of the indentation.

Battens are of varying widths, lengths, thicknesses, and weights, depending on the weaver's requirements. The shape can vary, but it tends to be a long, rectangular piece of wood with either one or two straight edges (working edge) which tapers to a point at either end and tends to be shaped in section rather like an aircraft propeller blade. The working edge is the thinnest one. It is inserted and then placed on edge in the space made between odd and even warps (in the case of plain weave) to allow the weft thread or bobbin to be passed through. Once that is done, the weft is drawn tight and the batten is turned on its side and pulled back towards the weaver with a fair bit of force after each passage of weft yarn and alternation of warp-crosses using the heddle.

What has been described in this section refers to the backstrap or stick-loom and is generally applicable to the horizontal loom, which is almost identical except that it is pegged to the ground.[29] Mention should also be made of the upright and/or frame looms, which are described and
29 Horizontal loom or stake loom. Huanturá, Canchis, Cuzco. Photos courtesy of Mr. L. Hoggarth.
depicted in Huaman Poma.\textsuperscript{57}[17b] They are known to have existed in Inca times and probably in pre-Inca epochs, although there is scant direct archaeological evidence for their existence prior to the Incas. It is however, very likely that they were used in pre-Inca times since they would be ideal in many ways for the production of tapestries, just as they are today throughout the world. Tapestries could also be made on the stick-loom set up and are depicted on the flaring rim of a pottery bowl in the Museum of Mankind, London\textsuperscript{58} [30] in the Mochica style of northern coastal Peru. Larger tapestries would nevertheless, be better manufactured on a frame or upright loom.

Other types of looms were used in pre-Hispanic times and continue in use today. Generally they are very poorly documented. They tend to be frame looms, such as the "A", "X" and "V" looms, which are termed in this way because they are descriptive of the overall shape of the loom. "A" shaped looms are known from the central coastal Perú although they are not used in this area in contemporary Perú, nor are the other types mentioned earlier. However they and an oval shaped loom are still used by a number of jungle tribes in the central jungles of Peru.

\textsuperscript{57} Felipe Huaman Poma de Ayala Nueva Corónica y Buen Gobier: 647.
30. Mochica pottery bowl. (Tapestries being woven on a backstrap loom?).

31. Beater or wich’uña on a contemporary backstrap-loom from the Mantaro Basin, Junín.

(Note use of multiple battens)
O'Neale\textsuperscript{59} refers to the Rio Ucayali loom, which would seem to be the standard weaving appliance of the Amazon area; being a roughly oval loom the inner space crossed by two parallel rods. While apparently very different from the backstrap loom described earlier, it is in fact essentially the same instrument held in place at a fixed tension by a circular frame. The basic parts of any loom are relatively consistent, particularly those set up for a plain weave structure.

Relating the warp to the structure of the loom, then, we see that the warp is made the exact size required for the finished piece and the loom pieces normally conform to the width of the warp. The warp is attached to two wooden or bamboo sticks which are commonly known as loom sticks or bars. In the case of the majority of looms from the Andean area the warp is continuous, passing from one bar to another without a break, except where colour variations, such as stripes, are required.

These warps are not attached directly to the loomsticks, but rather, are doubled round a heading cord which is spirally bound to the loom stick. This heading cord is often a multiple ply cord which can become a selvedge if it is not withdrawn from the textile once it has been woven, and is to be taken off the end-beams. The shed, formed at the time of warping, has been described as the point where the warp yarns are separated in order, the shed being the space through which the weft is passed. To speed up the separation of the odd and even numbered yarns, the heddle or a set of

heddles is used. This is done by raising the heddle when required. If a particular repeated design is required, the weaver may judge it worthwhile to add several heddles to pick out the design more rapidly. At the same time as the weaver activates the heddle, by lifting it and the selected warps, he/she inserts the weft, making sure that the weft is in place against the previously woven cloth. To ensure that this takes place a camelid foot bone called the *wich'una* or *ruki* is employed.[31] This is a strong instrument which has been drawn to a point and is ideal for forcing back resilient and resistant threads. Sometimes this instrument is not used and in northern Perú its use is not commonplace.

However, as indicated earlier, an indispensible weaving item is the sword or batten. This can be used singly or in groups (less commonly in groups). Its long thin blade ensures, when pulled against the already woven fabric, that the newly inserted weft thread will not fall out. The sword will, in addition, when placed on its side, provide a channel or passage for the bobbin with the weft to pass through. One further point, not touched on earlier, is that of the removal of loom pieces, such as the shed stick, heddle and the sword, when the woven piece is almost complete.

Since fabrics normally have upper and lower selvedges which are not cut, and weaving progresses decreasing the area of unwoven warp, it becomes increasingly difficult to manipulate the shed rod, the heddle and the sword. These may be removed altogether, or in some cases substituted by smaller and more slender tools. When it is impossible to use them, a
long needle will be used to insert the remaining weft. At this stage, the contemporary weaver does not continue the design in the terminal area since it is difficult to match this section up with the part already woven. After this the textile is taken off the end beams and in many cases is ready for use. I would suggest that in pre-Hispanic times this problem was overcome in some cases, by starting weaving at both ends. A good example of this would be unprovenanced piece № X51.208 in the Musée de l'Homme in Paris. This backstrap loom is approximately 50 cm. wide by 30 cm. long with a single heddle in the middle of the piece. Work was carried out at both ends. The designs may be dated stylistically to the Early Intermediate Horizon. The method used in its construction would have some advantages over the aesthetically less pleasing blank or undecorated band at the end of a weaving. The band would develop in the centre of the piece and balance both sides of the weaving. Skinner describes and illustrates two archaeological looms housed in the American Museum of Natural History, № 41.2/5478 and 41.2/5488.60 Both have been started at both ends and left unfinished. She does not explain why this was done, although she does make the interesting suggestion that example № 41.2/5488 was woven by two different weavers.

The Pre-ceramic Period Textiles.*

The documentation for this period is constantly increasing as further sites mainly on the coast of Perú and southern Ecuador are excavated. The Pre-ceramic period has been established archaeologically and chronologically only over the past forty to fifty years and therefore the interpretation of the evidence obtained so far is somewhat variable in quality. Radiocarbon dates have been sought and obtained for a fairly large number of the sites excavated. Many of the dates have been published and made available in by Rogger Ravines and Juan José Alvarez Suri¹(1967) and by Ravines²(1982). However, a large percentage of the sites

* This period is also often described as the Aceramic or the Period of the Incipient Agriculture. While this period is essentially aceramic there are a few sites, notably so in coastal and southern Ecuador where pottery has been recovered. See F. Kauffmann Doig. Sobre el término "Precerámico" Lima, Pontificia Universidad Católica, 1969. 53-5. and also his. Manual de Arqueología Peruana. Lima, Pelsa,1982: 125-138.


excavated where textiles have been recovered reveal uneven chronological and spatial distribution, and are to be found on the coast, with the exception of the information gathered at the sites of La Galgada and Guitarrero Cave, after excavations at both sites.

The two sites are located in the North-central highlands of Perú. Evidence from Guitarrero Cave dates back as early as (Complex Ila ) B. C 8600- 8000. The evidence at this stage is largely for cordage and not for textile remains in the full sense. A total of 324 textile specimens were recovered in 1969 from the cave. From (Complex Ilb) B. C. 8000 - 7400 onwards the number of textiles steadily increases. True to Pre-ceramic traditions a large proportion of these textiles are produced by techniques that did not require the use of the loom, such as looping, knotting and twining.[33] In complex III at Guitarrero, that is to say somewhere around B. C.5780±150 warp-faced plain weave fabric was being produced, single warps and wefts were used

3 3 a) Looping  b) Knotting  c) Twining  d) Plain Weave
in the construction, the elements were usually two ply "Z" spun and "S" twist, the colours were variations of tones of brown.

While twining is a distinctive technical feature of the Pre-ceramic period, it would seem that plain weave was a logical step from this earlier process and that it did not take long for it to overtake and eventually displace twining as a textile technique. Its implementation is likely to be due to the introduction or increased usage of some sort of frame or loom on which the textile elements could be laid out prior to weaving.

Also, in the province of Ancash in North-central Perú, in the highland zone, the Pre-ceramic site of La Galgada (on the Tablachaca River) was excavated in 1978. As in the case of Huaca Prieta, Guitarrero Cave, Pampa Gramalote, Asia and several coastal sites, the La Galgada textile fragments supply additional evidence of the early development of textile manufacture and to a more limited extent, the developing artistic achievements. Cotton was the material most used in the manufacture of the textiles of this period, although reeds and plant fibres, continuing in

the tradition of mat and basketry weaving were also infrequently used.

Coastal textile examples fall into three major categories according to functional and intended usage. They also can be divided into a further three groups when seen from the technical point of view. It is very often the case, that the use the article was going to be put to, was the factor that was to determine what construction technique was going to be used.

The categories according to usage would be as follows:

a) Netting

b) Bags

c) Matting, blankets and mantas,

and according to construction techniques:

A) Looping, knotted.

B) Simple looping, unknotted

C) Twining.

An additional category would be that of plain weave, but it would seem that this was a later development in some areas, particularly on the South coast. In the highlands, the pattern would seem to be slightly different. Although knotted looping for netting existed, it was not required to the
same degree that it was on the coast where its functional value, particularly for fishing, was of considerable importance. In the case of La Galgada, blankets and bags were the two most readily recognizable functional forms. The blankets were produced by using the twining technique, generally weft-twining which was well-suited for the execution of large areas and was probably a direct follow-on from the use of the selfsame techniques used for matting and for roofing purposes.

Looping could be achieved by the use of one element or continuous thread; not so in the case of twining, where warp and weft were required. Looping and its flexibility as a technique meant that it was suitable for the manufacture of a variety of shapes, particularly bags. Techniques also to be found in La Galgada are netting, knotted looping and interlooping. Designs on fabrics during this period are sparse. Engel\(^5\) has

reconstructed some designs from twined fabrics found on the south central coast of Perú, at the site of Asia. These designs were carried out by transporting the warp.\textsuperscript{6} The sample illustrated shows clearly how transported dyed warp cords give shape to a series of hexagons on a twined background;\textsuperscript{[1b]} a form of tapestry was also achieved again in combination with twining.\textsuperscript{6}[34b]

Likewise an early form of kelím or slit technique was employed in conjunction with a transported weft on twined ties. Obviously experimentation with techniques for decorative purposes was taking place on a fairly unrestricted basis. The functional aspect was in these cases subservient. Slit or kelím techniques do not strengthen, but rather weaken the textile. Engel illustrates a fragment of a particularly ambitious piece of textile where the artisan has sought to obtain opposed triangles on a twined cloak and then added a fringe.\textsuperscript{[35b]}

\textsuperscript{6} Ibld., 27; 30.
\textsuperscript{7} Ibld., 31; 46.
\textsuperscript{8} Ibld., 84; 200.
3 4. a) Twined fabric from Río Sur, Asia, sample in the Museo Nacional de Antropología y Arqueología №75835

34. Isometric drawing of sample from Asia with bast fibres over warp cords twined in pairs.
37. Double-headed serpent on twined polychrome manto from Rio Sur, Asia, Level X (75 X 111 cm) No 6-1-1-744. 0.809

National Anthropology Museum, Lima.

35 Opposed triangles on a twined fragment from Unit 1, Asia.
Terence Greider and Alberto Bueno Mendoza, in their report on La Galgada, illustrate an example of the art work at this site.\(^9\) From evidence obtained at this highland site, it would seem that men carried a smallish round bag, made by the looping technique. Nine bags with a variety of designs were recovered. Themes were birds and double-headed snakes and one example had an anthropomorphic figure depicted on it, possibly a deity.[36]

This last design was rectilinear and the pose of the figure was frontal. It is clear that all the design themes mentioned are ones that retain their importance throughout various textile periods, that is to say, their symbolic value remained largely unaltered over several thousand years. The designs on the bags were not added on after the completion of the article. This would have been possible by painting, dying or possibly embroidery; however, the manufacturer's technical capacity enabled him to include the design during the construction of the article in spite of the fact that generally speaking in the case of looping only one thread was necessary. The design would obviously require changes in thread,

La Galgada designs on looped cotton fragments.
particularly when colours were used. Colours employed were yellow, red, blue and black as well as the natural brown and cream of the cottons.

Interesting that the artisan regarded as important the inclusion of the decoration of the textile as an integral part of the structure of the fabric, rather than as an addition on the surface. Technical mastery and craftsmanship were obviously regarded as valuable assets before the advent of the loom. These assets, rather than the more flexible and spontaneous one of painting the design onto the cloth, seem to have been preferred for several thousand years. Only very later on in Peruvian prehistory was painting and dyeing textiles to become, possibly, a more acceptable procedure, that is to say around the 1470's or possibly slightly earlier in the case of the well-known and distinctive Chancay textiles. Not even then did textile art lose itself of the shackles and limitations of the rigidly geometric patterns which can only be seen as the outcome and the receptors of the direct influence of the straight-jacket of weaving procedures and the weaving structure and its inherent limitations from the decorative point of view. There are only two major textile periods
when a greater flexibility, but not a total break, took place, those being the aforementioned Chancay textiles and very much earlier, the world-renowned Paracas textiles. In these, embroidery was taken up as a way of getting round the problem of strict geometric forms. With the advent of loom-made textiles, in La Galgada, towards the end of the Pre-ceramic period and in the case of Guitarrero Cave, somewhere around B. C. 5,780±150 (if the ten samples of warp-faced plain weave textiles are to be understood as being loom-made textiles) the restrictions on the production of designs became more stringent due to the greater technical difficulties. In the case of La Galgada the suggestion is that where the textiles were not manufactured by the loom process they were more likely to have been executed on a frame of sticks. At this stage weaving would be an extremely laborious process, only allowing the manipulation of warps on an individual basis, one warp thread, or just possibly two threads in one movement, in the case of paired warps.

To speed up the process of loom-manufactured textiles the heddle was introduced. The date when this took place has been the subject of
some controversy. However Terence Greider and Alberto Bueno Mendoza\textsuperscript{10} in their article suggest that the heddle (their term being "harness") was used at the end of the Pre-ceramic era. Evidence cited from the site of La Galgada is that supplied by narrow cotton belts. One of the problems faced by the weaver during the period of transition from non-loom to loom technology was to find ways round representing things or executing traditional designs, adapting them to new techniques of manufacture.

At La Galgada, an early woven belt was executed in the plain-weave technique which is normally a method used on the loom. However, to enhance the cloth and add some decoration, the weaver or artisan painted dark brown bands across it. As is often the case, the acidity of the dye used damaged the material. With time, ways and means were found to avoid this method of decoration. Structural ornamentation on a textile was generally of paramount importance, as evidence in the Pre-ceramic

textiles of Asia and Culebras\textsuperscript{11} on the central coast suggests and also in the case of a similar design executed on a large fragment (75 cm. X 111 cm. No. 6-1-1-T44. 0.809) at the National Anthropology Museum in Lima. The piece was excavated at Río Sur, Asia, level X. On this piece, the design is executed by means of twining on paired warps which are transported to form hexagons which are picked out in beige cotton as opposed to the natural twined cotton base and fringe. The transported warps form hexagons which are part of a larger design which have been and can be interpreted as a serpent.

At Asia other methods of decoration were employed, such as the use of feathers. The feathers were incorporated into a looped fabric, where what Engel describes as the "knotted-half-hitch loop" is used.\textsuperscript{12} At La Galgada a different form of ornamentation occurs. Dated around B. C. 2140 and 1860 (after dendrochronological calibration) an "early woven cloth"

\textsuperscript{11} F. Engel. A Preceramic Settlement on the North Coast of Perú: Asia, Unit 1: 8; 191-192.

\textsuperscript{12} Ibid., 41; 80-2.
which I take to mean plain-weave cloth, was discovered, and attached to it were four shell disks with designs on three of them, which have elements of the Chavín Style, or more likely traits of what were later to become part of an extensive style known as Chavín. The description of the piece is as follows:

"The second iridescent shell disk is incised with an angular abstract design based on the head of a raptorial bird with a hooked beak. Red paint was rubbed into the incisions. While the first disk is characteristically Pre-ceramic in style with its plain surfaces, small size, simple bird heads and varicolored inlays, the second disk begins to show Chavín characteristics in its abstract angularity and the specification of a hooked beak. The third disk is entirely in the Chavín style. The four heads are now those of fanged feline monsters typical of Chavín art and are made of modular strips and bands. The shell is orange spondylus imported from the Ecuadorian coast and is deeply excised to hold bands of red pigment. The presence of this disk along with the others implies the existence of the mature Chavín style before 1800 B.C. Altogether the three decorated disks suggest that Peruvian art developed from Pre-ceramic to Chavín style."
more rapidly than has been thought previously. "13

It is interesting to note that forms and geometrical or "angular abstract designs" were at this stage also appearing in other materials and media, not just in weaving. Pre-ceramic art was already well developed, and that, well before the appearance of ceramics; that is to say in the case of both coastal and highland Perú. When ceramics became much more commonplace they adopted and adapted to the pre-existing artistic conceptions, traditions and ways of approaching art. The variations were not great, in spite of the fact that clay modelling enabled freer and more creative approaches to art. The textile art tradition, even at this stage, seems to have become engrained in the means of expression, and methods of portrayal in the textile tradition are found to have common traits with other art forms. The demise of the Pre-ceramic styles and their eventual merging with the Initial Period styles has been traced for the north coast, although our knowledge of the central coastal area still has to be filled in. William Conklin in his article has analysed the textiles for this site

near Trujillo.\textsuperscript{14} The excavation carried out at this site helped to clarify the boundary of the textile assemblage of the Pre-ceramic Period to the Initial Period, particularly as seen through the techniques which in turn seem to have had a direct influence on the aesthetic content. Briefly, and to summarize the relationship of the two periods:

- The Pre-ceramic Period, as has been noted, shows a certain preference for the twining technique, with a gradual shift to weaving, particularly plain-weave, in the Initial Period. Not far from the site of Pampa Gramalote, a small settlement from the Pre-ceramic Period was excavated. The site is known by the name of Padre Abán. This site provided four net fragments. No twining was recorded; however it was found that even the netting, which generally has few distinctive traits, indicated a technical change from the earlier Padre Abán site to the later Pampa Gramalote site. There was a visible increase

in the mesh size from the Pre-ceramic samples to the Initial Period examples.

Finally, reference must be made to southern and coastal Ecuador, where textiles and textile impressions have been found. The major problem with evidence coming from Ecuador is establishing its chronological relationship to the Peruvian evidence. Here, certainly during parts of the Pre-ceramic period in Perú, pottery objects were being made, although technically rather poor. There was little evidence of textiles. However this situation was redressed when Jorge C. Marcos discovered in poorly fired clay two distinct textile impressions which date back to the Valdivia Phase IV (c. B.C.2150-2050 ). Both impressions were of plain weave textiles.\textsuperscript{15} This fact alone would tend to indicate that there was a long development period for the textiles in the Valdivia area. The link-up with Peruvian traditions is a rather difficult one to understand, and some work is being done in this field, particularly with reference to northern Peru and southern Ecuador, and generally speaking dealing in much later periods when the time gap between the two areas

seems to level out considerably. However Dr. K. Stothert has suggested, on a speculative basis, that people of the equatorial Pre-ceramic culture of Las Vegas (6000 - 4500 B.C.) had cotton, (personal communication 1985) and by implication would use some textile techniques. Evidence from Guitarrero Cave, as described earlier, would tend to support part of her theory. To quote her:

"Se puede plantear que el algodón primitivo domesticado, poco diferente de las plantas silvestres, fue cultivado y que ya existieron algunas técnicas para aprovecharse de las fibras, especialmente para hacer redes y otros equipos para la pesca."15

For the time being, it would be preferable to view the development of textile traditions and art of Ecuador as a separate development from that of Perú, certainly central coastal Perú, where on a regional basis the development of Pre-ceramic textiles takes a clear path. In the absence of ceramics the textile evidence has been employed as the main relative

15 Ibld., 8
dating mechanism. There are eight Pre-ceramic settlements of note which can be dated relative to one another on the basis of twined textiles recovered from excavations. Through time the techniques of twining changed, and these changes subdivide the Pre-ceramic stage into four archaeological phases according to M. Moseley: 1) Pampa. 2) Playa Hermosa. 3) Conchas. 4) Gaviota. 16

I rather suspect that there is a terminological confusion or possibly mis-identification of techniques, since he doesn't back up this statement with the evidence. Perhaps what was meant was knotting or looping. However, he does indicate that Pre-ceramic nets were of small-mesh construction, 2-3 cm. in size, suitable for the fishing of anchovies. In later Pre-ceramic times, larger meshes were also used, for fishing larger species. 17 This development of the textile arts is unlikely to be autonomous but it probably acted as an agent for northern traditions to spread further afield.

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17 Ibid., 9
The Andean obsession with textiles arose during the Pre-ceramic period and already fabrics were becoming enmeshed with the secular and non-secular, functional and non-functional organizational foundation of society. "The structural and decorative potential of cloth served domestic needs, aesthetic aims of the maritime populace, and also economical, political and religious ends..."\(^{18}\) and "While Pre-ceramic artistic and symbolic expressions occur in stone, bone, shell, clay, gourd and wood, it was fiber (specifically cotton textiles) that constituted the primary vehicle of aesthetic and symbolic communication..."\(^{19}\) and "While samples of archaeological fabrics have been adequately analysed, they reveal a rich variety of geometrical and representational motifs which include birds, serpents, crabs, fish and other animals. The attributes of several animals are often combined to form preternatural beings. In terms of iconography and symbolism such composite beings were presumably surrounded by myths and lore, much as griffins and sphinxes were in the

\(^{18}\) Ibid., 12.

\(^{19}\) Ibid., 13
It has to be borne in mind that many of these communities will not have identical technical developmental patterns. For example, what happened at Huaca Prieta did not necessarily happen at Asia. However in the field of textiles there are motifs and techniques that find expression akin in both sites, and others. To quote Junius Bird:

"This limited evidence suffices to extend the known antiquity of artistic expression in Perú and indicates at least some continuity with the work of later times. It shows that an angular, highly conventionalized style can be the outgrowth of techniques and does not have to fit into any theoretical sequence of art forms starting with naturalistic treatment. There is as yet no basis for suggesting the origin or antecedents of this art style. As it is primarily a textile art, the chances of solving the question of its origins are exceedingly remote and will, in any case, involve an understanding of the rise and the development of twined fabric technology in various parts of the world."

20 Ibid., 13.

Bird's statement is essentially true, however it would seem that he is ignoring the considerable body of evidence of basketry and particularly matting which *per force* tend to have to employ twined fabric technology. While an influential factor, this area is a large field of study on its own, and therefore cannot be covered in this work.

The Initial Period Textiles.*

Geographical Background.

Sites recognized to be of this period follow a similar distribution pattern to those of the preceding period, that is to say, of the Pre-ceramic period. Once again the sites are located on Perú's long desert coastal strip, sites like Guañaape, Las Haldas, Consuelo, Erizo,

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* This period in some literature is classified under the Formative Period (Kauffmann Doig *Manual de Arqueología Peruana*. Lima, PEISA, 1983: 155-6) and can be included in it; likewise, but to a very limited extent F. Engel's "Preceramic with cotton." It should be noted that generally speaking the Initial Period can be seen as a transitional phase between the Pre-ceramic, or "Incipient Agriculture" to the Formative. The Initial Period as defined by Rowe (J. H. Rowe. "Stages and Periods in Archaeological Interpretation." In Peruvian Archaeology: Selected Readings. Palo Alto, Peek Publications, 1978: 1-15) should coincide with Kauffmann Doig's *Formativo Temprano*. 
Gallinazo, Ancón, Paraíso and Huaylas to name but a few of the major or better known sites. Of these only the last mentioned site is to found in the highlands.[38] Textile material for this particular period is notoriously sparse, that is excluding Ancón, some 60 km. of Lima. Notwithstanding this sparsity of material some important conclusions will be made concerning the state of the art during this period and the consequences it was to have on subsequent periods. It is not surprising therefore, that the period is also known as the Formative Period. Evidence cited for the Pampa Gramalote/Padre Abán sites will be referred to again in this section, partly for the sake of continuity and also due to the absence of information on textiles for this period. However a few other textile examples from sites mainly on the central and south coast will be drawn upon for a more comprehensive survey and understanding of this period.

The Pampa Gramalote textiles were manufactured in what corresponds with the information defining the Initial Period, as distinct from the Pre-ceramic material.

Pottery fragments were found at the site and also a settlement
Map: Initial Period. Principal Sites.
likely to be of Late Initial type layout. At this site evidence for the transition from twining to weaving as the manufacturing technique, is available, albeit in a rather indistinct fashion. In terms of techniques the samples of weaving, *sensu strictu*, numerically outweigh those that are constructed by twining. Strangely enough, the emphasis on twining remained for decorative pieces. The constraints of weaving techniques, from the decorative point of view, were already making themselves felt even at this early stage. Functional fabrics, or fabrics of a more functional nature, now adopted weaving techniques rather than twining in the manufacturing process. This was probably due to two factors—firstly the ease of manufacture and secondly, the overall strength of the material would tend to take multiple direction tensions and the stresses of everyday use on a more even basis than twined textiles (this applies mainly to plain weave textiles).

However, despite the apparent distinctive nature of weaving it must be noted that weaving is essentially an outgrowth of twining techniques. As Conklin explains;

"Twining is a fabric construction in which pairs of weft elements
turn about each other consistently in one direction as they enclose successive warps. This turning can either be clockwise producing Z-twining, or counterclockwise producing S-twining; but it must be consistent to produce a twined textile. Weaving can be described as a form of fabric construction in which pairs of weft elements turn about each other alternately clockwise and counterclockwise as they enclose successive warps. Weaving thus can be considered as merely as a specialised form of twining, rather than an alternate or opposing form of fabric construction.  

The development of weaving at Pampa Gramalote did not preclude experimentation or possibly even invention of new techniques within the more recent tradition. Weft patterning was now being understood as a means of producing designs in textiles, although maintaining innovations within very strict boundaries, never affecting the structural integrity of the pieces. Warp patterning was carried out on the well established and traditional method, to form striped patterns. This is the case of a

twined textile (H6168B-I=60/10) illustrated in Conklin.\textsuperscript{23} True to ones' preconceived notions of what sort of textiles a transitional phase like the Initial Period should supply is the example (H6168B-3=77) which combines the techniques of twining and weaving.\textsuperscript{24}[39a] The twining is used in this case for the patterning. The pattern encountered is one that has already made an appearance in the Pre-ceramic period, and used from then on till the time of the Conquest and is even used quite frequently today, namely the stepped fret. The background is executed in plain weave. This feature of a plain weave background body for a textile becomes the basis for the execution of designs, sometimes totally obscuring the backing itself and this is very much so the case of embroidery. This feature is to be noted in the majority of later Paracas textiles.

Textile sample (H168B-I-44) presents the use of both simple warp and weft floats, a sign that experimentation with techniques strictly within the weaving tradition was taking place.\textsuperscript{25}[39b] Perhaps even more

\textsuperscript{23} Ibid., 86; fig 1.
\textsuperscript{24} Ibid., 89; fig 6.
\textsuperscript{25} Ibid., 90; fig 8.
39a. Plain weave fabric with compact patterned weaving, Pampa Gramalote (H6168B-3=771). [Conklin]

39b. Patterned weaving by means of floats (H 6168B-1=44). [Conklin]

39c. 2 X 2 Herring-bone twill. Probably an indication of the use of heddles on the loom.
surprising is the example (H618A-2-81/5), a 2/2 herring-bone twill, and also an example of diamond twill which according to Irene Emery is only likely to have been woven using a four-shed heddle loom.[39c] As noted for the Pre-ceramic period, the netting can be divided into two groups, not so much by technique, which is normally a simple overhand knot, but by the mesh size. This varies from 0.5 to 1 cm. to the larger mesh size which is 3.5 cm. square. It would appear by the small number of samples of pieces executed using the looping technique that they reflect a decreasing need for the use of this technique. Techniques also employed were, figure of 8 looping, overlapping and interlocking. In the central coast, from the key site of Ancón, at least two radiocarbon dates for this period have been obtained based on dating carried out on textile samples. The first (I-810) was excavated at Las Colinas (PV45-2) Sector G and was associated with twined textiles. Sent by F. Engel in 1963 to Isotopes Incorporated, Westwood, New Jersey. for analysis. It yielded what I take to be a corrected date of B. C. 1825±220.27

26 Ibid., 90; fig 9.

The other date was supplied by another sample from El Tanque (PV45-2) at Ancón, Sector F and it was sent to the same laboratory as sample (1-2363) in 1963 through Junius Bird. The description of the second textile is not clear. It was found associated with human tissue at the burial site. Three dates were given. I have selected the intermediate dating, since it would seem to tie in with the dating of the previous piece and also due to the fact that there is a U.C.L.A. dating for a piece of wood also from El Tanque (U.C.L.A. 968) 1965, which comes from a Pre-ceramic settlement with textiles. The date given is B.C. 2250±80 As indicated earlier, the bulk of information concerns the coastal area. Few sites of this period are to be found far inland. However, there are indications that man is having to move inland to enable him to support larger populations and settlements. In the main, the sites line the coast, particularly so in the case of Ancón. The tradition according to Moseley was still maritime oriented. The textiles tend to indicate the increasing use of

28 Ibid., 18.

29 Ibid., 31.

fibres other than basts, particularly cotton. It could be due to the fact that increasing quantities of cotton, in addition to the main food crops, such as maize, was a prime reason for moving inland, gradually changing subsistence patterns to an agriculturally based economy. Certainly there is a change in subsistence patterns, as reflected at the sites like Paraño and Punta Grande.

Also in the case of Asia some minor changes in subsistence patterns may have taken place, although agriculture was very much in evidence at an early stage. While cotton had been in use in the north for quite a considerable time as evidenced at Huaca Prieta the southern sites came rather later in this development. The earliest radiocarbon dates cited for cotton-yielding sites are; B. C. 1890±80 from Otuma (to the south of Paracas). B. C. 1840±100 from Río Seco (on the central coast). These dates were supplied by Engel.31 Las Haldas, 350 Km. north of Lima between Casma and Culebras supplied a date of B. C. 1842±100 for plant remains, including cotton (some of these dates are likely to have been

31 F. Engel. "A Preceramic Settlement on the Central Coast of Peru: Asia. Unit 1."
superseded). The weight of textile evidence of the Initial Period falls largely on the well-documented sites of Pampa Gramalote and Ancón. The last site was excavated at various stages by T. Patterson; Colinas at Ancón, by Lanning and Willey. E. Tabío also excavated near Ancón, 3 kms. to the south, at Playa Grande and Ancón (Tank Site). At trench "B", Levels 2.5-3.0 m. and level 3.0-3.5 m. he refers to textile fragments. However, no detailed description of the pieces is given apart from the fact that netting and weaving existed in level 2.5-3.0 m. and also in level 3.0-3.5 m. Where small fine netting had been found which would tend to indicate an earlier stage, although it must be noted that ceramic fragments were recovered which did not correspond to the Baños de Boza style. Mention is made of Chavinoid ceramics, which could well be interpreted in view of recent information, as coming prior to the florescence of the Chavin style. The south coast has examples which tie in with a pre-Chavín tradition, currently known as Chavinoid, iconographically connected to Chavín. The most notable collection of these textiles comes from a site called Karwa, or Carhua, on the Tablazo de Ica,
between the Paracas Peninsula and the Ica Valley. Technically they are not distinctive, almost all are plain weave, the designs being applied post-manufacture by painting.\textsuperscript{34} Since this group is outside the technical tradition of the three textile zones of Peru, it will be considered in a section in this chapter at a later stage rather than include it under the section on the Initial Period textiles, (although the possibility exists that they are of the Late Initial Period). Also on the south coast at the site of Hacha (in the Acari Valley) \textsuperscript{47} fragments were recovered. Unfortunately due to the lack of data and associational information from the textiles no exact date can be allocated. They are, however, of Initial Period tradition according to work carried out by Ann Gayton.\textsuperscript{35}

Apparenty, the distinctive feature of the textiles is that the warp-skeins did not have incorporated crosses (warp-crosses) when they


were put onto the loom but, rather, it was a post-loom operation. This technique remained until the end of the Early Horizon on the north coast. Unfortunately data for the highlands, to my knowledge is almost totally non-existent for the Initial Period. Sites like Kotosh have been excavated systematically and thoroughly yet none of the textiles or fragments of garments used have survived. Fairly rapid decay of organic material would normally take place in most areas. Qaluyu, near Pucara in the northern area of the Titicaca basin on the altiplano is also likely to date from the Initial Period. Once again climatic and soil conditions are against the preservation of organic material. Notwithstanding the lack of textile samples and pieces, there is just enough information to build up some sort of a picture of the developments during this period, notably so with the Pampa Gramalote Textiles, which continued in the well-established Pre-ceramic and geometric traditions which find themselves extended in the field of pottery decoration and to an extent in the lithic tradition such as seen at Cerro Sechín, in the area of Casma. Cultural diffusion, and likewise artistic diffusion, seems to have taken place with relative ease within the northern area of Peru, and the enigmatic Karwa substyle fabrics may reflect an even wider movement of ideas, traditions or even exports.
The evolution of Cerro Sechín's lithic art cannot quite be explained merely in terms of the constraints of textile art, however there are strong elements of it that can be detected in it, and these traditions of the time must have been influential, eventually leading into what is known as the Chavín style. There is good reason for suggesting that this art medium should be considered one, if not the most influential and likely artistic ancestors. The Initial Period saw the introduction of pottery to most areas and at the same time a second innovation was spreading rapidly during the Initial Period - the heddle loom. It must be noted that pottery was taking over as the main medium for artistic expression.

Summary

Innovation in the field of textile technology was much slower, tedious process in spite of the use of the heddle. In point of fact, the heddle may have held up the development of artistic expression. It had however a distinct advantage in terms of the rapid production of greater quantities of cloth, and eventually allowed the development of complex and intricate technical knowledge for the manipulation of elements for the manufacture
of woven goods. These developments took place over a long period; the innovation did not have an outstanding or immediate effect, but, rather, was gradual in making itself felt.

There is however a major transition from Pre-ceramic technology to that of the Initial Period, particularly as seen in terms of the development of plain weave.

The Early Horizon Textiles *

For ease of presentation this section will be subdivided into a section on:-

a) Chavín and associated or Chavín influenced textiles, and b) Paracas textiles and textiles in the Paracas tradition.

This would be preferable to lumping the two distinct traditions together without reference to style, cultural and socio-economic differences and particularly the geographical distribution of each group.
a) The Chavín Textiles.

The evolution or development of the first of the major art styles took place over a fairly long period, of perhaps six to seven hundred years and was a product of an older tradition. It reached maturity at around 900 B.C. The style is in fact summed up by the lithic artwork rather than through the fibre arts, as it is represented at the highland site of Chavín, and the blanket term "Chavín style" has been given to art expressions that fit into the tradition as found at Chavín.

* This period correlates with what some authors term the Formativo or the Formative Period (as defined by the Mesa Redonda, Lima, 1953. See L. E. Valcárcel. Etnohistoria del Perú antiguo. Lima, Universidad Nacional Mayor de San Marcos, 1967: 60-4), and particularly with what is known as the Formativo Medio, and the Cultist Period (W. C. Bennett and J. B. Bird. Andean Culture History. 96). However the term Early Horizon has been selected in this case because it reflects the notion of a wide spread dispersal of certain cultural traits associated with a specific culture—in this case Chavín. The style and designs associated with it were diffused through a large area of north and central coastal and highland Peru. It is important to note that Ravines quotes Rowe when he refers to this subject; "Cabe subrayar el hecho de que el contraste de periodos de unificación y periodos de diferenciación es solo una cuestión de énfasis. En ninguno de los periodos de unificación dejó de haber diferencias."
The Archaeological Background.

The style is found at numerous locations, largely in the coastal areas and the western slopes of the Andes, from the extreme north of what is, today, the border between Peru and Ecuador, to the area of Nazca, in the south and in the central highlands, chiefly in the upper reaches of the Marañón and the Huallaga river valleys. The evidence for the traditions behind this style, which have been recovered so far, relate mainly to architectural, ceramic and lithic artwork. Despite the excavations at numerous Chavín and Chavinoid sites, reports of textile finds are extremely sparse, and often lack detail. Sites which are documented as having archaeological textiles are Huaca Prieta, the Lighthouse Site at Supe, also the Chincha area and I would suspect from the information in Tabío's work on Ancón and Playa Grande that textiles relating to this period were also found at these last two mentioned
sites. Textiles were varied. Some of the north coast textiles show the early usage of supplementary weft techniques and others, tapestry techniques with discontinued wefts. However, currently, the main source of textile evidence for the period in question comes from a south coast site near Paracas. Approximately 200 painted Chavín, or Chavinoid, textile fragments are reckoned to have been extracted from the site of Karwa, or Carhua, as it is also known. Unfortunately the pieces were not obtained by scientific excavation, but rather, by looting, yet as a result of much study and consideration they tend to be pinpointed and allocated to Phase D of the Chavín Sequence or Early Horizon Epoch 4. The textiles can be tied in safely with the Chavín site sequence on the basis of the motifs used and the method of abstraction, which is generally speaking in line with Chavín canons.

The Textile Evidence

Conklin draws our attention to an example of cotton slit tapestry on a plain weave background from the site of Chucho.\textsuperscript{38} The design, which is that of a bird, has very distinct traits and a strong base in the Chavín Style, however, in terms of the representation of the head it resembles the Paracas tradition.\textsuperscript{42} The piece chronologically is probably fairly late although the concept of using a blend of plain weave and tapestry could be understood as being early. Tapestry is generally rare. The Chavín style introduces a series of techniques, largely unused such as supplemental and discontinuous yarn techniques. Conklin also illustrates a wool weft tapestry from the south coast (no finds location is given).\textsuperscript{38,43} The designs as in the previous example, are Chavín derived, however the piece is distinct from the sample described earlier. Wool wefts are included in the production of this slit tapestry and the technique of dovetailing was being used to increase the strength of the structure of the piece. \textsuperscript{41}


\textsuperscript{38} Ibid., 27; 7.
4 1 a) Tapestry with discontinued wefts. b) Dovetailing.
42 Condor? Cotton Slit (kelim) tapestry in a plain weave background from Chucho. Possibly a similar type of representation of the combined condor and snake seen in the Huaca Prieta example N° 41.2/1716. (See fig. 1a). [Conklin]

43 Highly geometricized avian and feline figures. Wool weft tapestry.
The use of a wool weft can be used as an indicator that this was a somewhat later piece. The increased usage of wool on the south coast gave that area a distinct advantage over other coastal areas; an advantage that was to last several centuries before the regional differences were levelled off. This levelling off took place primarily during the Middle Horizon. This is not to say that cotton went out of use, in fact cotton would remain as the main manufacturing material. It was used mainly for the warp threads and less frequently throughout the fabric. This is the case of a plain weave cloth with a checked design almost like that of a tartan; which is illustrated in Engel's work *Paracas* and described as "una tela típica de la época Chavín."\(^{39}\) I am also of the opinion that the illustration in figure 31 of a "telar de Horizonte Chavín; Curayacu..." is primarily cotton.\(^{40}\) Unfortunately no description is given. It is, however, the Karwa examples that have been documented most thoroughly, although

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40 Ibid., 125; 31.
44. "Tartan" plain weave with warp and weft stripes. [Engel] b) Sample from Macas
their exact provenance is not known. These textiles are considered to be
of a slightly later date than the Cerrillos textiles of Ica\(^4\) and include
configurations within plain weave that are found in the south.
Nevertheless, technically the Karwa single-ply, and to an extent
double-ply, warp configurations tie in more strongly with more northerly
traditions which are to be found even as far north as Supe. It would appear
that if Wallace is correct, external influences resulted in changes in local
traditions, but that the effect was not of a wide based nature. The Karwa
textiles, nonetheless, present certain features which are outside the
northern S-spun traditions, the most outstanding being that of the useage
of counterpaired rows of twining on warp end turns. In some ways the
Karwa lot must represent a discontinuity in the general pattern of
continuous steady, regular development that characterizes the time
between the Cerrillos and Nazca groups.

\(^4\) D. T. Wallace. "The Analysis of Weaving Patterns: Examples from the Early Periods in
Discussion.

As with stone carvings, [45a & b] (which are currently understood to be the main medium of Chavin art,) so also in the case of many Chavín style textiles, they are found to be characterised by a style which includes elaborate interweaving of eyes, mouths, fangs, heads, hair, snakes and geometric figures which occur in stylised combinations which form part or are related in some way to a central anthropomorphic figure, which in many cases may be interpreted as a deity. John Rowe has worked out that a code of visual metaphors existed, which he terms "kennings"^[42] which relate to the figures and allow them to be read from different angles and dimensions. As examples of kennings he gives are; hair represented by snakes, belts and backbones as jaws, tails and legs as tongues and so on. These kennings sometimes have a subset of associated kennings incorporated into them which also require to be read, and frequently from different angles and points demanding of the viewer an understanding of

45. a) Black and White Portal, Chavín, showing avian creatures and their various elements or "kennings."

b) Part of frieze from the temple site of Chavín, with avian designs. (Condor?)
the various dimensions of the image. A complex Chavín design might include dozens of partial or complete secondary faces at various points on the central figure, along with the snakes, eyes, fangs, long lips, double or triple faces and other such kennings. Virtually all mouths, human, birds or any other creature were represented with fanged feline mouths and eyes, pupils were not centered, but rather, eccentric, that is to say that they are shown at the top of the eye. These two features in particular came into extremely wide usage are to be found represented at a wide range of sites. They help to define the area of Chavín and Chavinoid influence or exchange in other areas. They also help trace change in the style through the centuries. The Chavín culture, not surprisingly saw substantial changes in its art in the thousand years or more years of its existence. This change, however, can be traced more generally in the pottery record (particularly in the Ocucaje pottery sequence of Ica) and also in the lithic art of Chavín itself. The use of low relief and the nature of so much of Chavín stone carving tends to indicate its direct derivation from the textile arts, which is unfortunately very sparse; however it would also seem that the textile art in later times benefitted from the
ready transfer of the complex, abstract geometric motifs to the textile medium.

Edward B. Dwyer suggests that the iconography to be found on many of the painted cloths indicates that they were meant to be used as wall hangings with similar symbolic significance as the lithic art found at Chavín itself.⁴³ In many ways the iconography on the textiles relates more closely to the stone carving of Chavín than many of the Chavín influenced pottery pieces which tend to be selective in their choice of symbolism and use of kennings. To quote Dwyer:

"...and it is probable that it is in textiles rather than in ceramics that we shall find a measure for the spread of Chavin religion." ⁴⁴

A good example of this would be textile Nº 0477 at the Museo Nacional de Antropología y Arqueología in Lima which is a piece without

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⁴⁴ Ibid., 62.
an exact provenance and is considered to be Chavinoid and from the Ica area. It is likely to be a Karwa textile as the threads are S-spun, the warps are of a finer, tighter spin than the weft and executed in plain weave. The designs in question are painted on in beige, brown and cream; with dark brown is used for the outlining. The base band includes a series of double sceptered figures (or deities?). The upper part of the design on the fabric consists of a series of incomplete rhomboids, or a latticework containing simplified double-sceptered figures, but they are in profile as opposed to the ones at the base which are viewed head on. [46] The designs relate quite strongly to designs illustrated in Rowe from Chavin and also an unprovenanced gold plaque in the Rafael Larco Herrera Collection in Lima. [47] The fact that this textile and many other pieces in the Chavin style are essentially painted on rather crudely in a "negative style" leaving the design area its natural colour, would lead one to believe that it may indicate that in the case of the lithic work a dark background was used. To my knowledge no work has been carried out on this possibility.

45 J. H. Rowe. "Form and Meaning in Chavin Art.": 103; fig 20.

46 Ibid., 103; fig 23.
47 a) Staff god on a gold plaque in the Rafael Larco Herrera Museum, Lima [Rowe] and b) a gold double headed serpent (Chavín?) in the Museo Nacional de Antropología y Arqueología, Lima.
According to Alana Cordy Williams the Karwa textiles relate to Chavín D or Paracas 4.47 It is interesting to note that Lumbreras states;

"No se trata de una pintura creativa hecha con propiedad y dominio local. Son elementos y recursos de diseño que son copiados seguramente del arte textil y probablemente de la lapidería chavinense." "Por eso, pese a que los personajes son los mismos de Chavín organizados chavinescamente, no son plenamente Chavín son personajes chavinenses hechos "a la manera de Karwa" o de la costa sur, como se prefiera." 48 "La pintura chavinense de la costa sur, sin embargo, sigue siendo una expresión plástica cautiva del diseño; es más dibujo que pintura; los colores que se usan para rellenar áreas de diseño sin resolver imágenes por sí mismas..." 49

The plates on pages 50 to 61 of Arte Precolombino-Pintura: Tercera Parte. Banco de Crédito del Perú, portray a

49 Ibid., 16.
selection of painted textiles from the site of Karwa and on pages 59 and 59 a piece in a similar tradition from Callango, Ica.50[48a & b] & [49 & b]

Finally, reference must be made to a group of textiles which merit attention by the fact that the decoration on them is structural and not post-construction ornamentation. These are the Chucho tapestries as they have been termed by E. Dwyer51 were found near the Paracas Peninsula, to the south of both it and Karwa. His study is carried out on 32 fragments, however it does not include the few painted textiles he mentions. The evidence provided by these tapestries is many ways different from that obtained from the Karwa textiles. The symbol system is particularly complex and surprisingly sophisticated, perhaps due to the restriction in manufacture. The set of motifs employed show stylistic derivation from the Chavín style, such as the use of feline heads (Numbers 72-2379 to 2399)52 and full figure profile felines (No 72-8379)53[50] However, they would tend to be viewed as a later development within the Early Horizon tradition.

50 Ibid., 18 -19 and 50-61.
51 E. Dwyer. "Early Horizon Tapestry from South Coastal Peru.":62; figs 1-14.
52 Ibid., 77-81.
53 Ibid., 79.
4 8 a) Entwined snakes, Karwa. b) Double sceptered figure, Karwa.
49 c) Section of fragment from Karwa in the Amano Museum. [K. Doig] d) Fragment from Ocucaje, Dumbarton Oaks Collection. In all cases the fabrics are plain weave and the design is painted on. [Lumbreras]
50 a) Feline motifs on cloth 72-2396-2399. b) Full figure feline.
The pieces are considered to be of Epoch 6 and are therefore more recent than the Karwa examples. Once again the author of the article finds it necessary to locate the textiles he studies and to put them in context: "the Chavín style is best known from the decoration of stone and ceramic objects. The relationship between the symbol system carried on these artifacts and that on the textiles will always be difficult to establish because the techniques of manipulating different materials cause style differences which are not temporal or related to distance in space, but reflect the structure of the media and the nature of artistic convention that surrounds working them."54

They are of considerable importance, for they herald the use of wool in tapestries and are the earliest examples of its use on the south coast and by extrapolation would indicate the likely existence of a tradition in this field in the southern highlands.

54 Ibid., 73.
Summary

Technical proficiency in textile technology advanced considerably during this period, partly through the use of new materials, like wool. This fact was to become particularly important in terms of dying and spinning. Cotton does not take dye as easily and tends to be less pliable and flexible during the weaving process.

This meant that a growing artistry could develop with considerable variations on styles and canons. The difference is obvious when comparing Karwa painted, plain weave textiles with those executed in tapestry/plain weave technique as represented in the Chucho textiles. The back-strap loom was in widespread usage producing a wide variety of weaves but mainly plain weave. Tapestries needed only a simple frame for their manufacture.

The artwork represented, within the Chavín style or tradition has certain canons which it retains throughout a wide area of Peru over a considerable period. Figures are reduced to a combination of straight lines, tight simple curves, scrolls and stepped designs which lead to the representation of anatomical features as strongly geometricised figures.
All these conventions mentioned above make Chavín art very distinctive. The figurative representations in Chavín remain difficult to understand, however, they can be appreciated purely for their aesthetic value and achievement, nevertheless Chavín art should be considered as an essentially religious art conveying a powerful language or message graphically.

b) The Paracas Textiles*

In the previous subsection, Chavín and the textiles to be directly related or associated with it, were discussed. While the known distribution of sites relating directly or indirectly to Chavín spans a wide area and a long period of time, comparatively few examples are available.

* The chronological ordering and sequence of Paracas textiles has been subject to a lot of discussion and reordering, generally on stylistic grounds, sometimes technological and rarely on purely stratigraphical grounds. Nevertheless the developmental patterns detected outlined some time ago by Tello are still generally valid. The system of Epochs as defined by Rowe, Dawson and Menzel in 1964 for this area has been applied to the textile evidence by J. Dwyer in 1973 and Lumbreras (L. G. Lumbreras. "Arte textil y adornos: 1era. Parte." In Arte precolombino. Eds. J. A. de Lavalle and W. Lang, Lima, Banco de Crédito del Perú, 1977: 26-66.) and will be followed here.
Map. Paracas Principal sites.
Background and discoveries.

The sites that yielded textiles that conform to this tradition have been recovered in southern Peru in the vicinity of the Paracas Peninsula (Karwa).[51] This is where the world-renowned Paracas textiles were first identified largely through the work of Tello in the mid 1920's. Tello soon isolated two major groups after his excavations at Cerro Colorado in 1927, where he uncovered what was to be called the Necropolis. The two groups he found in the area he named A) Cavernas and B) Necropolis. They will be discussed further on in this section.

The Textile Evidence.

The cultures of the south coast were considerably influenced by Chavín as it has been noted previously, this is to be seen particularly, and reflected in their art styles. Paracas was no exception. Indeed, it adopted one motif in particular which frequently recurs even in the later stages of the development of art forms in the fibre arts. this was the representation of the feline head, and more particularly, the feline fangs and mouth. Many other mythological figures became primary and secondary
motifs during the Early Horizon and were retained during it. It must also be pointed out that motifs which were initially used in textiles during the Pre-ceramic period recur in the Paracas textiles. Reference can be made to the snake or serpent on a transposed-twined textile from Asia I referred to previously.  

The repeated snake design is often used in Paracas Necropolis embroidered pieces, and in Cavernas prior to this it had already been subjected to a few transformations or variations on the theme, such as the well known interlocking snake designs in woven pieces. [52a & b] The importance of the snake as a symbol was carried on through to Inca times and represented in various types of media, for example in stonework, where little representational or decorative work was carried out, due to the fact that Inca architecture was primarily and essentially functional.

Myths and legends refer to creation stories involving the amaru or snake in Quechua. Jorge A. Lira in his "Diccionario Kkechwa-Español" notes under the heading amaru; "La serpiente ha sido animal sagrado

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entre los Incas.\textsuperscript{56} This is a bit of an understatement and ignores the fact that the snake had been, prior to the Incas an important element in the belief systems. The two headed snake is believed to be visible in pure spring water and a deity that was defeated and was turned into stone. Stone is pulverised and the powder extracted is consumed for protection. The snake is also a fertility symbol. We shall touch on some of these points later.

A carved rock at the Hacienda Urco, Calca, Cuzco bears witness to the ritual aspect and importance of the snake. The channel, presumably for sacrificial blood, terminates in a snakes head.\textsuperscript{[53]} The description is to be found in Elizabeth della Santa.\textsuperscript{57} The rock is also mentioned by Squire during his travels last century.\textsuperscript{58}

Regional Developments.

No specimens in pure Chavín style are known from the Paracas area, and the textiles recovered are generally speaking considerably different

\textsuperscript{57} Elizabeth della Santa. \textit{La Celebre Huaca del Ticcl Viracocha en Urcos (Calca) y su flavo gigante}. Arequipa, 1968: 14; 4.

53. "Sacrificial" stone at Urco, Calca. The channel ends in a snake's head.
in their general characteristics, that is to say, what may have originally have been Chavín elements adopted a very different visual character. However, there are instances of stronger Chavín influences in slightly later traditions, and one such group has been discussed by A. H. Gayton in her article on the early Paracas style from Yauca, on material she feels is Chavín-influenced Paracas style. In her words:

"... the textile finds were considerable, and of the many fabrics from Yauca, there are five which need no ceramic determinants for their chronological placement: their decoration speaks for itself. It is obvious that they belong to the Chavín-influenced Paracas style period."

Two of the textiles are representative of the feline "deity" found in Chavin style art, in a locally standardized version, linked into the Early Paracas artistic expression. Yauca is approximately 150 Kms. south of Paracas and it is interesting to note that Chavín elements are to be found as far south as that.

60 Ibid., 117.
61 Ibid., 119.
The other two facts which are of considerable interest are the use of wool and the use of the techniques for producing double cloth weave, an extremely demanding weaving method from the technical point of view.[54a]

The feline deity and the guilloche pattern (which can be paralleled in the representation of twined snakes of the hair of the smiling god of the new Temple at Chavín (Phase D)\textsuperscript{62} indicate the weavers' exceptional skill and virtuosity. The pieces which generally have the same characteristics, excluding the brocaded examples, have been examined by Rowe and Dawson and placed in their T-2 phase.\textsuperscript{63} That is to say, may precede the well known Paracas Cavernas (T-/3) ceramic style after following up many sources, mainly supplied by huaqueros Julio C. Tello, Samuel K. Lothrop and Toribio Mejía Xesspe, tracked a cemetery in the Paracas area on the 26th of July 1925 where they were to excavate a site dating back to the fifth or the sixth century B.C. or possibly somewhat later. As indicated earlier, Tello was able to identify two main groups:-

\textsuperscript{62} J. H. Rowe. "Form and meaning in Chavin Art.":103; 21.

\textsuperscript{63} Ann H. Gayton. "Early Paracas Style Textiles from Yauca, Peru.": 121.
5 4 a) Isometric drawing showing double cloth structure. b) Example of a later double cloth in the Daniel Guerrero Collection. DG.9 From Macas.
A) Cavernas, named thus because of the shape of the tombs, and B) Necropolis or "house of the dead" due to the appearance of the site. Studies carried out since then have been numerous and in many ways vastly overplayed the importance of Paracas textiles, particularly those from the Necropolis. As we shall see, they are in fact generally very simple in their construction and the designs and design elements depend largely, not on weaving skills, foresight or virtuosity, but rather, on embroidery stitches and a great deal of patience. However to give the artists who created these pieces their due credit it has to be noted and cannot be ignored that new attempts were made to break away from the set mould or patterns. Shapes now gained a certain degree of freedom and a feeling for movement in which there is a break from the "linear style" as defined by Ann Paul\textsuperscript{64} in her Ph.D thesis. She quotes Dwyer "In this style "all elements of the design figure are created by a series of narrow, closely spaced paralleled lines." \textsuperscript{65} Cavernas is now generally agreed to belong to one phase, perhaps better defined as a period, which ties in with Epoch 9 of the Menzel, Rowe and Dawson ceramic sequence for the Ica Valley (1964).

\textsuperscript{64} Ann Paul. Paracas Ritual Attire; Symbols and Authority In Ancient Peru. Ph.D. University of Texas at Austin: 106.

\textsuperscript{65} Ibid., 106.
The Necropolis mummies do not, as previously thought, come from one period but rather, three epochs, Epoch 10 of Paracas and Epochs 1 and 2 of the Nazca culture. The last two mentioned epochs are considered to be part of the Early Intermediate Period, however, for the sake of continuity they will be considered under the section dealing with the Early Horizon material.

The sheer quantities of textiles extracted from a fairly small area by Tello in October 1927, are astounding. There were four hundred and twenty nine mummies, all these without exception accompanied by an array of funerary deposits. Rebecca Carrión Cachó mentions that mummy bundle N° 319 had thirty mantos alone, not to mention nine coarse cloths, a ceremonial rod, one fan, seventeen wigs, balls of cotton, two pieces of cured or treated deer skin, an unspecified number of cloths decorated with yellow feathers, twelve small gold plaques, one shell necklace and a basket of foodstuffs such as maize and yucca (The sex of the individual is not stated, but in almost all certainty is a woman.)

66 Rebecca Carrión Cachó. "La Indumentaria en la Antigua Cultura de Paracas." Wiracocha 1(1)1931: 75.

67 Ibid., 50.
The sheer quantities of both textiles and non-textile material are almost beyond belief. Mummy N° 319 is, perhaps, just average, from the statistical point of view. It could be suggested it might be possible to work out the status and hierarchy by analysing, the material included in the mummy bundles and by determining the sex by looking at the skeletal evidence from the mummies. It has been frequently noted that mantas are almost new, rarely, probably never, worn, and in some cases incomplete and still in the process of manufacture or completion. For example in Paracas, Arte y Tesoros del Perú on page 95 a series of flying figures are depicted, yet they are incomplete. The artist embroidering the piece was filling the outlined areas at the time the person died. [55] Engel mentions unfinished pieces in storage wall recesses at Cabezas Largas. 69


Unfinished flying figures on a Paracas embroidery. [Lumbreras]
The Paracas Textile Epochs.

Epoch 9, which generally relates to Cavernas textiles was a period of slow change from the well established traditions. Designs at this stage are still an integral part of the textile, that is to say patterned weaves, achieved in the main by double cloth, followed by other techniques like triple cloth, tapestry, gauze, twining, braiding, knotting and also looping.[56]

Interestingly enough the use of wool is not widespread until the next epoch. It is interesting also that wool was being used at Yauca, probably prior to the developments in the Paracas area itself. Yauca on the other hand, is nearer to the trade routes with the southern Andes from where the wool would have in all probability have been brought originally. Colours, likewise, are generally rather limited; usually only three colours are employed. The designs and the motifs that appear in this epoch are ones that tend to be retained through the different phases of the Paracas development. There are, during this period, designs which retain a linear, geometric pattern, even in the few cases of embroidery. The techniques employed are essentially those employed on a loom, therefore designs are part of the structure of the fabric. Put crudely and in technologically
56 a) Triple cloth. b) Braiding. Museum of Mankind Study Collection.
deterministic terms Cavernas textiles have a tendency to be geometrical and lineal this being due largely to the direction of the warps and wefts, even diagonals tend not to be commonplace.

The next epoch, Epoch 10, or Early Necropolis, saw a slackening in the strict use of the lineal principles, as embroidery began to make itself felt as a decorative process. Structurally decorated cloth gave way to embroidered work, (an example is a piece from Daniel Guerrero's collection, No 26, which was a surface find from Paracas Necropolis, and is very typical of this transitional phase. However, despite the technical freedom and ability to alter angular, forms the use of curvilinear forms was scarcely attempted. The linear style was retained and wool was introduced, allowing a slightly wider range of colours, hues and tones. Designs during this epoch are generally executed in bands and on a limited scale, normally using the stem-stitch or the Paracas stitch, often using them to depict feline figures, double-headed birds and a new feature, that of the falling figure, also referred to as the "ecstatic shaman."  

Information is lacking for the backing of the embroidery, which is normally a plain weave 1X1. The background cloth also provides the ground colour for the piece. Often the piece has a square count, particularly for the later pieces. The weavers would seem to have taken into account that the base for embroidery work has to have an even thread count for each design block and used the same thickness and likewise spin for warp and weft. This means that the weft once inserted was not beaten back tightly as it would normally have been in the manufacturing process. In Lila O'Neale's statistics for square count weaves, there is an increase in the finer plain weave 1X1 backing cloths, from Cavernas to Necropolis.\textsuperscript{71}

The following epoch, Early Intermediate Period, Epoch 1, textiles continue in the same tradition as outlined earlier; the development of themes is strictly within the Early Horizon style, as are a large percentage of the symbols. The backing for these pieces was as before, either brown or white/cream cotton in 1X1 plain weave. The white cotton was more resistant and could be dyed using almost any colour. Brown cotton was probably more readily available, as the plant had a higher annual yield than white cotton. The decoration was applied later, in wool.
Embroidery was usually the method used to apply the design to the background cloth.[57] A model or stencil was used in some cases. One particular example (No 290-13) described by Yacovleff and Muelle, includes several varied themes for future execution.72

The Necropolis textiles with their bright and colourful designs have gained much fame, although they are technically fairly simple. The technique used is usually a 4-2 stem stitch although 6-4 and 8-4 stem stitches are less frequently used.73[58] The design was likely to be applied off the loom, probably requiring a frame and possibly special needles. The time-expenditure in the manufacture of these pieces must have been immense. They are also indicative of considerable patience.

During Epoch 1 the embroiderer experimented, taking a new direction,


72 Yacovlev and Muelle. Revista del Museo Nacional. 1934:

58. a). 4-2 stem stitch. b). 6-4 stem stitch.
searching for new ways of obtaining a greater clarity of form and more naturalistic shapes and figures, mainly by the greater use of colour. Epoch 1 has been divided into two subphases which have been defined on stylistic grounds. The majority of the material representative of this epoch comes from the sites of Necrópolis and Cabeza Larga and Cahuachi near Nazca. The style is no longer strictly geometrical in layout, nor is it rectilinear. The textiles have now generally abandoned what could be termed the "plectogenic style", that is to say the style that tends to imitate the structural limitations of a method, in this case loom and weaving techniques as applied to embroidery.

In Epoch 1 we see a gradual trend towards the use of block colours to define shapes and forms. Colour patterning with set colour shifts from one element or figure to the next became part of the total composition of the fabric.

The general trend was towards the abandonment of linear and highly angular geometrical forms to the additional use of curved lines to define shapes. This marked the beginning of the concerted effort to break away
from the ancient traditions to achieve a more naturalistic or realistic representation. Figures were no longer restricted to frontal and profile outlines, but rather experimentation with some sort of depth and perspective was taking place.

A design figure would no longer be portrayed with his limbs pointing in four directions but rather, figures would be given a sense of purposefulness and direction by pointing the feet in a particular direction, and the arms in the same general direction, rather than having them hanging at the figures sides. In some cases, as in the example illustrated in *Arte Precolombino* the figure is shown with one arm outstretched and one immediately in front of his chest. The representation of the head also shows a certain degree of reduction in size in relation to the body, and likewise facial features in relation to the head.74

The second stage of Epoch 1 is characterized once again, stylistically, by variations on the representation of the limbs which tend to be far

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wider and shorter, fringes are shaped and very often the figure is outlined in black, bringing to mind elements of German Expressionism. Mythical figures or masked individuals proliferate during this period, particularly the flying or falling figures.[59a & b]

Epoch 2 textiles are readily recognizable, but, due to the sheer quantity and complexity and the elaboration of designs and symbols no serious stylistic seriation has or can be undertaken as yet.[60] Examples of this epoch would be a garment 100 x 52 cm, Nº 3532.179 at the Göteborg Ethnographical Museum executed in three dimensional cross-knit loop stitch where 32 different figures are portrayed and many other smaller figures round the border⁷⁵ and the well known Mme. Jean Levellier textile which has been described by Raoul d'Harcourt.⁷⁶

All the previously known innovations in technique, symbolism, colour coordination, composition and design reach a high degree of complexity.

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59 a) Paracas embroidery on plain weave. Masked figure carrying a trophy head.

b) Paracas embroidery "ecstatic figures". Museum of Mankind.
60. Manto from Paracas. Göteborg Ethnographical Museum

N°3532.179.

63. Design for chumpi from Nazca. Wool weft tapestry (& kelim)

Summarized snake shapes.
This is the culmination of approximately five hundred years of experimentation within a certain tradition. The progression was from a strict linear style of construction which went out of fashion, to give way to a block colour mode, which, despite the fact that it contained block colours, included many details within the design figures.

One figure that sees considerable developments during Epochs 1 and 2 is that of the figure which is termed the "Ecstatic shaman" and is described by Ann Paul and Solveig A. Turpin. Mention was made of it in reference to earlier periods or more precisely, Epochs. However it is a figure that becomes predominant in the later epochs, the suggestion being that the pose indicated magical flight, ascent to the celestial sphere or alternatively descent to the underworld. Indeed, this motif or symbol is an appropriate one for burial purposes. It may give some sort of clue of beliefs at the time.\[59b\]

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78 Ibld., 24.
Summary and Conclusions.

Decorative textile designs and styles in the earlier epochs at Paracas tended to follow fairly closely the painted pottery tradition or vice-versa. Later the use of new technical processes in textile design particularly embroidery enabled a breakaway from the designer's usual constraints. The pottery tradition remained fairly entrenched in a strict geometric style. Two influential factors in this break with tradition are outlined; firstly, the increasing use of wool and its advantageous dyeing properties. Secondly, the increase in the use of embroidery as a textile technique. This must have also been a side effect of the adoption of wool for use in the fibre arts.

The fact that the Paracas artists chose to express themselves through the themes mentioned earlier gives an idea of the importance of fabrics, the art and symbols as a means of conveying (most probably) religious beliefs which underlie these textiles.
While the textile designs have a very strong visual impact, it must be borne in mind that the techniques employed are extraordinarily simple particularly for the later pieces. What is lacking is a more complete study of the functional textiles which must have been used on a daily basis, but largely ignored because of their less glamorous appearance.

The Early Intermediate Period textiles *

The historical background.

The Early Intermediate Period is considered to have begun round about the fourth century B. C. or the second century B.C. according to some authors. It is marked out as a distinctive period, due to several major changes that will be described. Throughout the coast and the intermontane valleys in the highlands, a series of large cities developed,

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* This period is also known as the Período de Desarrollos Regionales Tempranos or Período de las culturas clásicas (L. G. Lumbreras. "Arte Textil y Adornos"):72-80) Or Bird and Bennett's Experimenter and Mastercraftsman Periods (W. C. Bennett and J. Bird. Andean Culture History: 105-33.)
some of them eventually becoming important centres, if not capitals, for their particular area, and a few of them to such a degree that they are considered to have been city states. The growth of the cities could not have been achieved without adequate support from an agriculturally based economy, which naturally specified and required the use of irrigation systems, particularly in coastal and desert areas. Land pressure was considerably greater and the likelihood and incidence of conflict increased accordingly. fortified or, more generally speaking, defended sites appeared at various points along the coast as did many ceremonial sites. The area of Lima between the river valleys of the Chillón and the the Lurín saw enormous development and considerable construction projects on a grand scale especially in terms of structures of a ceremonial nature. There are some areas that saw a decline, perhaps due to centralization, possibly due to the creation of buffer-zones between major settlement areas. One such example could be the case of Casma, which saw a notable decline in its population levels.[61]

The strange fact is that while there is a large population in many of the coastal areas (that is, when compared with earlier periods), textiles
with distinctive designs and techniques are rather scarce. It was the case that other art forms gained ground during this period, particularly ceramic art where a new freedom in style was developed. It was a more naturalistic art, free from the constraints of geometric expression.

The Textile Evidence.

The South Coast.

The break with geometric art forms and traditions had occurred in the textile art in the previous period (as outlined in the preceding section) and seems to have made itself felt slightly later in ceramic art. This development took place in the Department of Ica and is best represented by the Paracas textiles of the Necropolis phases. Indeed, the last two phases, while described in the previous section, for sake of continuity, were actually generally speaking pieces that derive from the beginning of the Early Intermediate Period and tie in with the first phase of Nazca. The textiles at Nazca continue using many of the embroidery techniques developed in Paracas textiles. (Borders of mantos in Daniel Guerrero's
collection, which were recovered by him at the sites of Cahuachi and Trancas (?) near Nazca are examples. DG. No 032 X 2 and No 31 (Las Trancas (?)) and No 28 X 2; 29 X 2 and 30 (Cahuachi) (Guerrero, personal communication 1986). [62a, b & c] The developments are essentially regional in character and have a distinct identity. The freedom of expression found in textile samples, finds itself reflected in ceramics, particularly in phases 2, 3 and 4, but in phases 3 and 4 there is a gradual reversal of this trend.

During these phases, painted textiles come as a major development. In fact they show a reversal of tradition. The textile designs would seem to be influenced by designs on painted ceramics (These phases probably tie in with Sawyer's Early and Middle Nazca). The other development in Nazca art is a well defined return to methods which tend to employ stricter geometric and less naturalistic forms. Techniques used were tapestry, brocade and other weaving techniques. That is to say designs were once integrated as structural elements of the cloth.
The design of the interlocking snake came back to the fore, sometimes in an extremely summarised form. For example a chumpi or belt illustrated in Arte Precolombino\textsuperscript{80} has what is probably an interlocking snake design, without the snake heads.\textsuperscript{[63]} In this case a wool weft was used on a cotton warp in tapestry technique, which include the use of the kelim technique. Embroidered forms see a considerable simplification towards an uncluttered approach, perhaps a curious inversion of the "plectogenic style" mentioned in the case of Paracas textiles of the Cavernas and phase 9. For example, also illustrated in "Arte precolombino" \textsuperscript{81} are two chuspas from Nazca.\textsuperscript{[64]} Both are wool and Cotton and tapestry weave. The upper example in the illustration includes brocaded highlighting and the lower piece the kelim technique; they both present a highly unified style depicting geometric zoomorphic figures. An additional feature is the use of a restricted range of colours. These geometric and highly simplified designs are obviously in the same tradition as the well known piece which was on display until recently in the Museo Nacional de Antropología y Arqueología in Lima (1982).\textsuperscript{[65]}

\textsuperscript{80} L. G. Lumbreras. "Arte Textil y Adornos.": 82.

\textsuperscript{81} Ibid., 87.
64. Designs from Nazca style tapestry *chuspar*. Cotton with woolen wefts.

65. *Unku* of Nazca origin, woven in wool and the design is embroidered on. Sample on display at the National Anthropology Museum, Lima. (1982).
Here the designs, while embroidered, borrow heavily from the tapestry tradition. The colours are also restricted to about four or five in a single design. The piece is extremely curious from the point of view that the figures are seemingly unconnected motifs. It is possible that the piece was produced as a sampler. Harcourt describes and illustrates at least three tapestries from Nazca which fall within this tradition.  

This last piece is of particular interest when we consider the fact that round shell beads were threaded on and placed in position during the warping process, and that the textile was constructed incorporating non-fibre elements into the design. This involved a lot of foresight above all when dealing with the problems of highly stylized design and manufacture.

This piece is likely to herald the beginning and appearance of Tiahuanaco influenced, or Tiahuanacoid textiles, such as the example illustrated in *Perú Precolombino* from Moquegua, particularly in terms of the use of tapestry techniques and also the variety used. The pieces

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82 R. d'Harcourt. *Textiles of Ancient Peru and their Techniques*: 150; Plates 4 & 7 and 186; 117.

for this period reflect the greater use of wool, which would seem to tie in with the highland origins of Tiahuanaco and their trading network. The majority of these samples are to be found in the south of Peru and the First and Second regions of Chile. Some exceptional examples were studied at the San Pedro de Atacama Museum which were from tomb 3236 Quitor 9 and dated to around 1050±80 A.D, that is to say, well past the development of Tiahuanaco. However, they are still in the same tradition. The colour range is typical of these pieces (where a wide spectrum is used), as is the fine, tight spinning of the wool.[66a & b]

The Central coast.

The developments in this area follow a similar pattern to those of those of the southern pieces. During this period, wool is recorded for a few sites, particularly in the late phases of the Lima culture (this culture and its phases are known by a confusing array of names such as Maranga, Nieverfa, Proto-Lima, Interlocking and Huadca to name but a few). The tapestries described by Dwight Wallace84 are proof that a number of

techniques were being used, and that different weaving techniques were sometimes combined, such as sample 169415, a piece which is partly tapestry and partly twill. Many of the tapestries of this Period present tapestry warp-weft locking and also *kelím* techniques. The designs tend to lie between the design layouts of the south and the colour range normally to be associated with the northern area. Wallace illustrates a weft-pattern weave border with the well-known and wide-spread interlocking snake design, specimen No169411f. Here in the Lima area, developments in textiles, pottery painting or ceramic art, mural painting remain in roughly the same bracket. [67b]

The range of techniques used in the vicinity of Lima (also Lima itself) has been studied for Ancón, where it has been established that plain weave and modified forms of plain weave have been used, such as basket weave, 2 X 2 vertical herringbone twill and diamond twills of 2 X 2 and 2 X 1 techniques, to mention but a few. The range of experimentation is quite considerable and is the product of much trial and error. Specimen /21 from stratum 13, Lima 4 P.V. 45-3 at Playa Grande near Ancón is

85 Ibid., 137; fig 92.
67. a) Fragment of double face and supplementary weft cloth from Maranga, Lima № 16941f. b) Maranga pottery in the Daniel Guerrero Collection from Huaca San Marcos
described and illustrated in Harner, shows an irregular vertical herringbone 2-2 twill. It is likely that the weaver was still tackling design problems when the piece was produced. Harner points out that if the piece were to be woven on a modern loom it would have to be a multi-harness loom. Ten heddles or changes of shed would be required to complete only one repeat of this particular design. Perhaps it could be suggested that it would be possible to use a series of swords or battens to create the crosses or sheds, as in the case of some woven bands of Araucan origin. The use of multiple heddles is also a possibility.

Harner also illustrates specimen //26 which combines tapestry and a twill section. They are two very distinct techniques. Again, it is a piece that would require considerable forward planning.

Netting had not gone out of use, although little mention is made of it in archaeological literature as of Pre-ceramic times. Coastal sites

87 Ibld., 157; fig. 12.
68 Warp faced patterned weave from Ancón, Playa Grande PV45-3, Surface find. Elements of interlocking snake designs.
present a number of samples for this period, notably Playa Grande. The knotting methods expanded and are a large subject in themselves. Knots used were clove-hitch, overhand knots, square knot and lark's head knot. Design elements are fewer in the Playa Grande samples, which tend to be of a much more functional nature. However one piece with an Interlocking style snake, specimen //68A and B, was constructed in a warp patterned weave.88

She emphasizes the importance of the relationship of the textile evidence to that supplied by the ceramic tradition, in that the first more than replicates the ceramic evidence. In the northern area techniques such as embroidery are scarcely represented, although there are probably some relating to the Moche development and culture. This culture will be discussed in the following section, since it is normally classified as a Middle Period style, although it does have Early Intermediate Period antecedents.

The sources for Early Intermediate textiles are the sites of Supe

88 Ibid., 159-60.
and Gallinazo, though the Supe gauzes were classified in O'Neale and J. Clarke as a "middle culture" group and is consequently open to a series of fairly wide reaching interpretations. However on account of her descriptions and illustrations, the examples shown fall into the general decorative trend that has been noted as far back as Paracas Cave times, and thematically to the Pre-ceramic. In this case I refer to the double-headed interlocking snake design and also, to an extent, the motifs identifiable as fish and birds and also the step-fret motif. The pattern samples as represented at Supe are characterized by repeated units of the main motif which are represented with zig-zags, diagonal S's which can be broken or continuous, indented or stepped upwards to the left or right. The body is usually a simple 1 X 1 plain weave, the design area composed mainly of the gauze weave which consists of threads drawn together to form minute holes which as a whole give shape to the motif.


90 Ibid., 182-5, 5-7 and 212-3, 12-3.
69 a) Gauze weave pattern from Supe UC4-7481c on plain weave background. b) Gauze weave pattern from Supe UC4-7481g and UC4-7481j [O'Neale]
c) UC4-7481k from Supe.
d) UC4-7481d from Supe.
e) UC4-7152 from Supe.

[O’Neale]
The earliest recorded use of wool on the north coast is reported for a textile from Gallinazo.91 This is used in a tapestry piece with a cotton warp and a wool weft.92 The design is the ubiquitous interlocking angular snake head motif, which in execution corresponds directly to the céramique tradition for this period at Gallinazo.[71] Conklins description gives details of the relative complexity of the piece -

"The textile has a combination of techniques including tapestry, creating an overall pattern of multiple-headed snakelike figures. One set of figures is constructed of 1 X 1 cotton plain weave with discontinous weft. The other is constructed of discontinous weft also; but the weft is wool, pale yellow or pink and is compactly woven over pairs of the cotton warps creating a weft-faced surface of wool. White cotton, weft faced and on paired warps, is used to outline the eyes of the figures woven in wool. These ringed eyes resemble the eyes on Gallinazo ceramics."93

92 Ibid., 18.
93 Ibid., 18.
71 Gallinazo cotton textile with wool weft and patterns in tapestry. Virú Valley Site V.51, Cat 1, Level 2.75-3.00.[Conklin]

73 c) Tiahuanacoid sample in the Museum of Ethnography, Basle.
In the highlands, as is the case for preceding periods, the textile evidence is scant, nonetheless, excavations at Guitarrero Cave at Complex IV yielded, after a considerable hiatus dating back to the Pre-ceramic, quite a range of textiles in various techniques, from twining and looping to plain weave and looping to plain weave and tapestry. The material for the threads unfortunately is not indicated and design and ornamentation is sparse.

Summary.

As discussed earlier, this period saw the beginning of the growth of what were to become the city-states, and the larger habitation sites accompanying these developments, particularly in the Nazca and Lima areas where the developments in textile and ceramic art took place. The break with traditional lineal and geometric representation attained during the Paracas Necropolis phases was comparatively speaking rather short lived, as Lumbreras states: "Pero ocurre con Nazca un fenómeno si se quiere "regresivo" en términos morfogenéticos" and

95 Ibid., 20.
...; en las fases tardías de Nazca se nota un cambio de dirección en el estilo en su conjunto que parece nuevamente basarse en un "patrón textil", con pautas de diseño lineales, en bandas y usando el entrelazado --incluidas las "serpientes" entrelazadas-- como norma decorativa más generalizada. Quizá este renacimiento del "patrón textil" explica el desarrollo de ese cierto sentido "barroco" que adopta el estilo Nazca a partir de sus fases 5 a 6.96

In Lima these developments were followed fairly closely and there is more evidence of the direct influence of textile art on other media. While art forms become generalised (e.g. the interlocking snake) for the coastal areas the techniques of manufacture tended to be more regionalized. It would be surprising, for example if the piece illustrated by Luis Ramos Gomez and Blasco Bosqued is correct, where piece No 36 XIII-E is indicated as having come from Chancay, North of Lima.97 The example illustrated is, however, in pure Nazca style and technique. Thus, while it can be said certain motifs or symbols came into general

96 Ibid., 20.

use over a large area, they can still be distinguished on a regional and technological basis.

Middle Horizon Textiles *

Background.

This section includes information on the Moche culture which dates to the Early Intermediate Period, however it does continue and outlives (at least in the field of art) the development of Huari (Wari) and Tiahuanaco art forms to find itself placed well within the Middle Horizon. There is a curious lack of direct and well associated textile evidence for the Moche area in the Early Intermediate Period.[72]

The Middle Horizon saw the rise of two greater empires represented by Huari and Tiahuanaco. The relationship of the two is

* Alternatively known and fitting chronologically under the following headings; Las Culturas Clásicas, Imperlo Wari (L. G. Lumbreras. "Arte textil y adornos."72-106), Mastercraftsman Period (W. C. Bennett and J. B. Bird. Andean Culture History. 114-32) or Tiahuanaco Epigonal Horizon (Kroeber, 1930)
Map. Middle Horizon. Principal Sites.
uncertain, as is also their relationship to the Moche area. The Huari
Empire, as it is commonly referred to, had a very wide sphere of influence,
contact or economic and religious importance. At its greatest extent it
probably included a considerable area of both the highlands and the coast,
from Chicama and Cajamarca in the north to Sicuani and Ocoña in the
South. There were fairly small areas, particularly along the coast that
were not completely dominated, and retained a distinctive character, such
as Moche, areas of Ica and the central coast.

A reciprocal movement of ideas and goods became commonplace
between the highlands and the coast, particularly in the area of Nazca in
the south, and with the highlands and Huari. To what extent this tradition
developed, had its roots, or simply exchanged goods and ideas with the
southern Andean peoples is not understood. The Tiahuanaco group
dominated the Titicaca Basin and a large area between it and Arequipa,
the Majes River system and to the south, the coast and Highlands of Chile,
as far as the second region of Chile. Tiahuanaco tends to have a series of
regionalized associations or pockets where local and Tiahuanaco

traditions developed together.

Tiahuanaco and Tiahuanaco Associated Textiles.

In the early days of Peruvian archaeology, Max Uhle was greatly impressed by the numerous similarities between the Huari style group of southern Peru and the Tiahuanaco style of northern Bolivia and classified both as Tiahuanaco. This has complicated the understanding of the two separate developments, which do in fact have important stylistic differences. Pieces which are commonly termed Tiahuanacoid or coastal Tiahuanaco tend to be erroneously identified as pure Tiahuanaco. In fact, Tiahuanaco pieces are generally very rare and have been classified under the Pucara style of northern Chile and others. Some Tiahuanaco pieces have been reported for Arica, Tacna and Moquegua. Generally speaking they are found in the more arid and dry zones. Some of the pieces date back to the early stages of Tiahuanaco in the Early Intermediate Period such as basket-type weaving at San Pedro de Atacama, Phases II and III, studied at the Museo Arqueológico R. P. Gustavo Le Paige, San Pedro de Atacama, pieces such as a bell-shaped basket found at tomb 4010 at Coyo Oriente.[73a,b &c]
73 a) Double-sceptred figure on cap from Coyo Oriente. b) Similar type of cap in Gustavo Le Paige Museum, San Pedro de Atacama, from Quitor 9.
This was constructed employing weaving techniques, a vertical warp with a weft backing which was held in place by embroidery in tightly spun wool. On top of this was added the design in thicker, coloured wools. The design is related to the Tiahuanaco "Staff-god" symbol and has represented on its headgear two features which could be interpreted as serpents.

The style is not pure in its derivation from Tiahuanaco or its development towards it, but rather it would appear to be a stage in a series towards the development of the Tiahuanaco style. José Berenguer reports in his article that in the same tomb where a basket was found there was also found a four-cornered cap\(^99\) which is considered diagnostic of Tiahuanaco influence, although the techniques mentioned for the basket are not tapestry weave, which is generally regarded as being typical of the Tiahuanaco period.\(^{100}\) Lumbreras view may in fact be an overstatement.

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\(^{100}\) L. G. Lumbreras. "Arte textil y Adornos:" 106.
Coastal Tiahuanaco cloth sample in the Museum of Ethnography, Basle.
of the case, possibly an unfounded assertion. This is particularly so if reference is made to the finds at Niño Corfn described by Henry Wassén where textiles are shown to represent a wide variety of techniques but none of the techniques employed include tapestry weave, but, rather, plain weave seems to be the common denominator for most pieces, decoration being executed by rows of vertical loop-stitch embroidery.\textsuperscript{101} Thus it can be said that contrary to general opinion, at least in the case of Tiahuanaco style materials, there is little that will prove that tapestry was the usual weaving technique used. The reason for this conclusion is likely to be due to the influence of the large body of Huari tapestries to be found in the Peruvian coastal zone which were previously assigned to Tiahuanaco or Coastal Tiahuanaco.

The Huari textiles.

The evidence for this period and style is considerably greater, and much more research has been done to understand its growth, nature and

chronology. This has been achieved largely by pottery association and seriation, but, some of the information is yielded by the textile evidence particularly from the coast where the preservation of organic materials is better. The Nazca Culture continued a few of the Paracas traditions although in a diluted version with an increasing tendency towards the use of tapestry and slit tapestry (kellim). The Middle Horizon brought in the use of extremely fine interlocked wool-weft tapestry which is distinctive of the Huari textiles. It is often suggested that these textiles were brought down from the highlands. The evidence for this is sparse.

Conklin refers to an example in the Amano Museum, Lima, which presents a combination of plain weave and a side selvedge of wool-weft in interlocked tapestry on a poncho from Huarmey. There has been a confusion in the analysis of styles, in that the identification of the style erroneously allocates it to Tiahuanaco and is built up largely on the presence in the textile designs of the winged deities that appear on the Gateway of the Sun at Tiahuanaco. It is worth bearing in mind that this

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design has appeared at a very early stage, as far back as the Chavín period and possibly earlier. There is a major resurgence of interest in it, in both the Tiahuanaco and Huari styles.

In the case of these textiles these motifs tend to suffer a series of distortions, eventually becoming so abstract in their elements that they are barely recognizable. There is a gradual development of stylization and abstraction which is linked into a growing complexity of lateral distortion, conventions where a certain module or unit gets expanded or compressed according to how near the design is to the edge or selvedge, the centre of the piece and other additional factors in textile design.

The changes in complexity and abstraction can be sorted into a developmental sequence following the variations in Huari and Tiahuanaco influenced design conventions. These conventions seem to have a logical system which enable the weaver to vary combinations of colours and also the emphasis, allowing a flexibility within the tradition, at the same time retaining the distinctive appearance and symbolic meaning enclosed in the textiles.
A Huari style which can be termed Tiahuanacoid exists both in textile and ceramic traditions, but due to the fact that there are elements which are totally outside the Tiahuanaco tradition; they should be known as "Imperial Huari," that is to say, roughly an equivalent of Tiahuanaco Clásico and Regional Huari or Coastal Tiahuanaco as defined in older archaeological literature.

The regional Huari Style has a distribution along most of the Peruvian coast. Even so this area presents several variations, notably so in the Pachacamac or central and northern areas where the traditions became further diluted mixing with the ones that were prevalent locally. On this basis, developments are usually subdivided into northern, central and southern variations. There are areas with localized traditions or in some cases weavers who were involved in experimenting with techniques outside the ones normally associated the Huari tradition. Examples are documented for the Ica area. They tend to be later in the sequence (Middle Horizon 4) and may be seen as an outgrowth of Huari traditions inspired by Late Nazca tapestries, the techniques from Huari derived sources and the designs from Ica - Pachacamac motifs; that is to say, according to
Ann P. Rowe in her study of these textiles. Tapestries in this group reflect a resurgence in experimentation with weaving techniques, such as the use of floats to create designs and in some cases seemingly sloppy finishes on the reverse of tapestries, with underfloated wefts, and generally speaking a break with the technical rigidity of the Huari pieces.

This technical rigidity in Huari art is of great importance and it would seem that yet again as in earlier periods, the weaving process is imposing certain restrictions on the construction of the design. It would almost seem that there was an officialized pattern, colours and width for the designing of the pieces with a progressive geometrization of the figures to be found in Tiahuanaco and Huari lithic and ceramic art, which occurred on transferring them into the textile techniques and medium.

There is a repetition of the design, not in the same manner as the Paracas method, but rather, a bilateral symmetry, with the motif enclosed

either in a square, rectangle or opposed triangular sections that, when put together, form a block. These designs are then generally placed in strips or bands, the width decreasing the nearer the band is to the selvedge of the piece, resulting in the compression or compacting of the figures within these bands (increasing the abstraction of the figures proportionally).

The intermediate bands are generally a plain weave 1 X 1 structure normally within the cream, ochre, brown or red to purple colour range. In the central coast and the north two traditions come together during the Middle Horizon. Conklin illustrates and describes a Moche area textile as being an all wool weft tapestry poncho in Moche style with Huari influence. The method used in its manufacture is slit tapestry (not a Huari technique) however the curious fact remains that the slits have been sewn together. The iconography associated with it is quite distinctly Moche in character.

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105 Ibid.
7 5 Moche-Huari wool weft tapestry poncho (Moche?).
Moche Textiles.

The Moche culture developed in the northern coastal area of Peru, primarily between the Moche Valley, Trujillo and Lambayeque, although possibly further south. This development commenced in the Early Intermediate Period, but the textile evidence for this period remains largely undocumented apart from some fragments excavated by Max Uhle in 1899 at Moche, which were analysed by Lila O'Neale. The majority of examples analysed were ones adhering to metals. Examples mentioned were generally of plain weave, basket weave or were brocaded. Tapestry with either cotton or wool weft is likely to have existed in early Mochica times, but there is no record of pieces dating that far back. The bulk of the information on Mochica comes from the last phases of the culture where tapestry is one of the dominant methods and much used technique. The net result is the development of a distinctive rigidly geometric style, quite different from the ceramics.

which show a new freedom of expression, particularly in the painted designs on them. This freedom is reflected in some plain weave "canvasses" found at Pacatnamú, Faclo cemetery.[76]

These panels were made of cotton paired warps and single wefts in plain weave (S-spun) and coated with lime and plaster prior to painting. The figures include warriors and a snake; the pieces are generally outlined by a running scroll or wave design.\(^{107}\) Pacatnamú has yielded numerous tapestries, which have helped fill the gaps and complete the picture; for example the piece illustrated in Conklin, where a Moche V strip of weaving, wool on cotton weft is shown. A slit tapestry technique with stepped diagonals in either black or white outlining is often recorded.\(^{108}\)[77a & b]


76. Plain weave fabric with painting from Pampa de Faclo, Pacatnamú.

77. a) Weft wrapping b) Slit tapestry. DG 21
It is similar to pieces illustrated and described by Lumbreras\textsuperscript{109} where tapestry using the *kelim* technique is shown. The pieces he illustrates come from the Ançon Necropolis. The Moche style had a fairly wide range of influence. Pieces from this area and period reflect a series of techniques and there is no strict rigidity as encountered in the Tiahuanaco or Huari examples. Instead, it must be noted that some experimentation with techniques is taking place.

Conklin suggested in 1978 that there were five main types within the Moche tradition\textsuperscript{110} to which the further examples of the painted textiles from Pacatnamú can be added as a new type in addition to his:

I) plain weave with modular weft bands

II) compound weave with discontinous supplemental weave on warp floats.

III) slit tapestry weave with a square matrix,

IV) slit tapestry weave with a tendency to cursive design,

V) weft wrapping.[77]

Christopher Donnan in his "Moche occupation of the Santa Valley, Peru" lists some areas hardly touched by Conklin, particularly in terms of the more functional weaves such as basket weave, twill, double cloth and gauze, and also forms of twining used primarily for matting.\footnote{111 C. Donnan. Moche Occupation of the Santa Valley, Peru. 1973: 107-115.} He also mentions a double cloth weave textile found at the Huaca del Sol, of Moche period III association. The technique was already well-developed and unlikely to reach a higher degree of complexity. Nevertheless he also illustrates a detail of a fragmentary Moche textile from Campanario, Huarmey, in brown and white double cloth.\footnote{112 Ibld., 173; fig 11.} The weaver has added to this piece by highlighting certain features in the design of a monkey (?) with supplemental coloured wool wefts on warp floats (probably a form of brocading).

Summary.

Moche textiles reflect considerable changes, not in their techniques
but rather, in their design elements; from uncluttered designs in Moche III through to elaborate pieces with a wide range of figures in Moche V. A major problem still to be resolved is as to how the integration of the two styles took place, that is to say between Moche and Huari. The relationship of the two is not clear.

Huari art had moved a long way from the designs, forms and techniques associated with Paracas art. The preferred technique was tapestry weave. Through it an ordered and systematized manner of expression was conveyed and a completely new abstract form developed. Unlike Paracas art where the symbolism of the object portrayed could only be appreciated almost immediately and instantaneously in a figurative sense and not in an abstract manner, Tiahuanaco art also falls into the bracket of abstract expression, through the simplification of the form and omission of unnecessary detail.
The Late Intermediate Textiles *

Background.

This period is characterized by a noticeable increase in technical competence in various fields and at the same time by the growth of inter-regional exchange and commerce, particularly by sea. The growth of small regional kingdoms or states is well attested by the evidence, but there is a continuation of the concept of empire, as represented by Chimú Cities with Huari associations see a considerable decline in their population levels, particularly in the central coastal region, although long lived sites like Pachacamac retain much of their importance.[78] The general trend in the south and certain areas of the central coast is towards depopulation (e.g. Cajamarquilla) or limited growth, that is, the

* The degree of agreement in the use of this term and its chronological time scale would seem to be greater than that for the previous periods (c. A.D.1000-1476). Lumbreras (L. G. Lumbreras. "Arte Textil y Adornos." :114-124) prefers the term Desarrollos tardíos or Reinos y señoríos locales the last for his highland sequence; Bennett and Bird (W. C. Bennett and J. B. Bird. Andean Culture History: 143-51.) advocate a shorter timescale, which they term the "city builder period" (ca. A.D. 1200-1450).
Ica and Chincha areas aside where expansion of a limited nature takes place, particularly in terms of trade.

The north shows a considerable development as attested by Chimú and Chachapoyas in the Marañón basin, where the establishment of citadels and large urbanized complexes was carried out. A trend which became fairly commonplace during the Middle Horizon and continued on into the Late Intermediate Period was that of burying the dead in the old pyramids and *huacas* probably remained in use as ceremonial centers and gradually became favoured as burial sites. The number of textiles to be associated with them is well worth noting, as attested by the 3000 textiles and fragments of textiles found at Garagay and analysed by Helen Englestad\(^{113}\) and the burials with an abundance of textiles from Huaca Granados in Lima, a site I visited during the excavations of 1982. Details of burial No.125 are given in a report by Marfa Mendoza F. on Huaca Granados.\(^{114}\) This only one of the several burials cut into the mound.\(^{[79]}\)


78. Map. Late Intermediate Period. Principal Sites.
The period has been documented to a degree by the early chroniclers particularly with reference to the Chincha traders and the Chimú Empire in the north, Cuismancu in the Chancay, Chillón and Rímac Valleys, the Cañete Valley and the Chincha in the Chincha, Pisco, Ica and Nazca Valleys.[80] Of the four areas defined, only Cañete lacks documented evidence for textiles, in fact the textile evidence would tend to indicate a further subdivision of regions, each having a distinctive textile and ceramic style and tradition.

The Textile Evidence.

Weaving and textile technology had developed on an important scale as defined and outlined for the Early Intermediate Period, with a trend towards the constant addition of new techniques in the Middle Horizon and Late Intermediate Period. The main thrust in terms of technology was that of the use of tapestry techniques used during the Middle Horizon, particularly in the tapestries of Huari, Huari related or Tiahuanaco influenced origins. These had a very distinctive style which eventually became phased out as Huari's influence decreased, however the technique,
that is to say, tapestry was retained as one of the most popular methods of manufacturing decorated cloth. In the south coast the technique of interlocked wool weft tapestry did not continue in use, although underfloat weft came into common use in tapestries. There is also a great upsurge in 1 X 1 plain weave, which probably represents a larger percentage of the total textile sample for this period. However many of these plain weave textiles were decorated subsequently, through the painting of one of the surfaces of the cloth. The widest range and best known examples are those from Chancay. Here again, there is a break to an extent with the inhibitions, constrictions and restrictions and problems of construction of patterned weaves. This is not to say that patterned weaves went out of use, in fact a considerable number of techniques can be named for this period, for example: gauze weaving, warp striping, brocade, embroidery, double and triple cloth, twill; warp patterning, tie dye, ikat, knotted lace, gingham and feather work, to name but a few. Artistic standards remained high, although perhaps, not so much in the cases of the Chancay style painted textiles.
Chimú and Chimú Related Textiles.

The Moche culture of the Middle Horizon went through a series of phases, until it became known as the well organised Chimú Empire with its center at Chan Chan. During this period a whole series of distinctive features can be outlined, some represented more widely than others. For example, the construction of miniature textile samples, like chuspas or bags, and ponchos. Both have earlier precedents but show an increase in the usage during this period, as do, also the techniques which include the addition of what are quite often elaborate supplemental decorations, such as feathers, metal, beads, and tassles. Mention should also be made of the use of the ikat technique, which is a method for producing designs on a fabric by means of a fabric dyeing process in which either the yarns of the warp or the weft, or both, are patterned prior to the weaving of the garment or its completion. Few examples are known and most come from the Chimú area of influence and are reported in Ina Van Stan.

The abandonment of the extensive use of wool is a strange one and a rather difficult to understand, although it could be suggested that the emphasis on cotton was due to the regionalisation and specialization in the crops of the area. That is to say cotton would have been important during this period, due to its accessibility and the possibility of growing it on the coast. There is, however, evidence that *auquenidae* or camelids were kept in huge numbers in certain areas of the north coast in earlier periods, although also in the earlier phases of the Late Intermediate Period according to Melody and Izumi Shimada. Remains were found of domesticated llamas (*c. glama*) and direct evidence of local herding, such as a stone corral, llama dung approximately 20 cms. thick which was also used, as it is today for burning from Galindo (Moche Valley) and an area attributable to Moche V.

At Huaca del Pueblo Tucume (790±70 b.p. and 900±70 b.p.) dung deposits some 3 mts. thick by 5 mts. wide were located. The authors

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suggest a ritual use for the llamas.\footnote{\textit{Ibid.},}{17}

Exchange of goods was taking place on a larger scale increasing the possibility of confusion of identification of pieces. In the case of Chimú, the figures portrayed on the textiles often find strong parallels in the textile arts elsewhere. Chimú can be seen to vary considerably even if we compare two figures with essentially the stance and features. The execution of the piece illustrated by Lumbreras\footnote{L. G. Lumbreras. "Arte textil y adornos." :115-7.}{18} reflects a more distinct relationship to Huari although the figure with the semicircular crown or helmet on its head is typically Chimú. The variety in techniques and design is wide. If the piece that T. A. Joyce describes in his article,\footnote{T. A. Joyce. "Note on a Peruvian Loom of the Chimu Period." \textit{Man}, Jan 1922: 1-2.}{19} is accepted as Chimú,\footnote{\textit{Ibid.},}{17} it then indicates that another series of designs existed which tended to get executed on double cloth, such a stricter geometric shapes (e.g. stepped frets and cats or feline figures).
The Ica and Chincha textiles.

The Chincha culture is considered to rank amongst the greatest of the traders documented for Pre-hispanic Peru. The Chincha group alone were responsible for the trade of gold, precious or semiprecious jewels, such as emeralds; which they traded for the inhabitants of Ica. While this is the case, it must be pointed out, that despite the trade, Chincha developed a distinctive style of its own which can be distinguished quite readily from textiles from other areas, and even from Ica textiles. On the other hand metalwork in this area sees a considerable change in that elements of Chimú culture filter through. There are quite a number of Ica and Chincha sites distributed along the northern and central coast particularly in the areas of Lima and Pachacamac. However the highest density of the pieces was still centered round the area of manufacture. Some of the pieces are exceptionally fine. A piece on display in the Larco Herrera Museum, Lima (19859 is exhibited as a Chincha example. A tapestry fragment with plain weave and briding for edging, and only measuring 6 x 2 1/2 inches. It is reported to have an amazing thread count of 398 warp ends per cm., which must be near a world record for hand made fabrics.
In Daniel Guerrero's collection piece N° 1 is a cloth of slightly lower quality (50 warp ends per inch [25 mm.]) this time with a combination of plain weave double cloth and weft floats. Another piece in his collection, N° 7A and probably also N° 7B are reputed to have come from Tambo de Mora, in this case the warp count is something like 25 warp ends per inch.[80] The colour ranges are wide and strong colours predominate; yellow, red, green, olive green and black. It is suggested that the *ikat* technique mentined for Chimú was also used in the Ica area on the basis that a piece found at Graveyard I, Pachacámac presents strong elements of both Chimú and Ica design.120 The technique is essentially from the north and the design principles from the south. Mention was also made earlier of miniature textiles. This is also the case in the Ica area, where Gloria Olivera de Bueno reports on some small pieces from the Hacienda Ocucaje in Ica, such as small *chuspas* which were placed round the mummy bundle.121 In the south there seems to be no decline in the use of

120 Ina Van Stan. "A Peruvian Ikat from Pachacamac.":158.
7 9 Wool weft tapestry, with kellm. Variation on the sceptered deity from the C. Coast.
80. Samples D.G. N° 1, 7A & 7B from Tambo de Mora, Chincha.
wool or camelid fibres and the colour range remains correspondingly wide and varied. Chincha designs and likewise Ica designs tend to be arranged in rows, columns, bands or diagonals and the figures that are generally incorporated into them, tend to get moulded to the width of these bands. If they are figures that can be read from two or more directions, that is if they can be read from different points and have a bifold symmetry, they tend to be found associated with diagonal banding.

Chancay Textiles.

This area, rather surprisingly, has received very little attention and few studies are available for it, (despite the fact that the area is near to Lima and the vast collections of textiles stored in museums there from Chancay sites, which are readily available for study.) In fact it would seem to be one of the most poorly documented areas and cultures. The Chancay culture is characterized by its distinctive textiles and its black and white pottery which comes from the area of Huaura and Chancay. The art forms, run through from Chimú designs to Inca influenced forms both in pottery and textiles. The Chancay culture textiles often reflect the use
of motifs that appear at least 1000 years before, (and in many cases earlier) the Chancay pieces were manufactured. Particularly interesting is a pattern sampler illustrated in *Museums of the Andes* from the Amano Museum, Lima, where three samplers have been sewn together to make a mosaic. A wide variety of techniques are used and the motif common to most of the pieces is the theme of the bird. In Daniel Guerrero's collection, Lima there is a sampler of a similar nature, from Carabayllo, Lima. (No 5B).

Chancay textile art is very varied both in terms of techniques and themes, perhaps even representing the widest range of weaving techniques over a limited period. The painted textiles to be associated with Chancay forms a large and varied body of evidence. The backing for the design to be painted on is usually a straightforward 1 X 1 plain weave with the design painted on rather crudely, generally in varying shades of brown, red and yellow ochre, and sometimes blue. Quite a number of the pieces imitate textiles with woven designs and attempt to show the same

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81. a) Sampler from Carabayllo, Lima D.G. N° 5B showing variety of techniques and the designs used. b) Same sampler from Carabayllo, Lima D.G. N° 5B
features as the textiles with woven designs and attempt to show the same features as the textiles with woven designs (that is to say plectogenic), for example, a piece that is obviously an imitation of double cloth is illustrated by Lumbreras in *Arte Precolombino*.\textsuperscript{123} Painted Chancay art also achieved a greater freedom of style in many cases, as opposed to the stricter design, interpretations of pieces employing other techniques.\textsuperscript{[82]}

Mujica Pinilla published some fascinating details and insights into the iconography of a piece he illustrated, which consists of two oculate figures with two serpents growing out of each head which were separated by a small central figure, all these figures were enclosed by a larger serpent.\textsuperscript{[83]} The exact provenance of the piece is not given. The oculate figures which are almost identical, bar the fact that a detail of one is executed in yellow in one, and grey on the other, are reckoned to be representations of the sun and the moon. Great emphasis is placed on the dragon or bicephalous snake which encloses these two beings. This is the


82 Fragment from Puruchuco, painted cotton 1X1 weave, simulating double weave. (Note two headed serpents).

83 Unprovenanced Chancay style piece.
*amaru* mentioned earlier, and at the same time represents a form of rainbow. There emerges a strong parallel with Santa Cruz Pachacuti yamqui's well known cosmological interpretation. The smaller figure between the two oculate beings is playing the pan-pipes or *antara* which is considered to represent the union of what is above and below. These designs almost come to be the culmination of the pictorial use of representation and iconographic beliefs expressed in contemporary Quechua lore, although in the case of contemporary lore there is an adoption of a Christianized tradition, that is to say a form syncretic acculturalisation. There is still a vague memory of an ancient way of thinking and its body and terms of reference.

**Summary.**

The textiles of this period reflect a regionalism from the technical point of view, but not so in the case of Chancay where experimentation with a wide variety of techniques and designs are used. In terms of the designs used there seems to be extensive borrowing earlier periods and cultures, almost a form of plagiarism yet it was also a time of extensive use of new freedoms in artistic expression particularly in the field of painting.
The Inca Period Textiles

The formation of Inca culture was deeply influenced by preceding cultures, such as Tiahuanaco. Eventually this culture was to become a major empire with influence over various cultural groupings and regions.

Inca culture was spread forcibly by a systematic mobilization of peoples and their resettlement in other areas. This is to a degree reflected in the textile evidence, however this it also true to say that in some areas this reshuffling of peoples took place on a more limited scale enabling local traditions to continue.[84] For example in the central coast of Peru, particularly in the vicinity of Lima, the tradition of painted textiles was maintained although overall designs tend to reflect Inca symbolism.125

In the south coast and highlands, tapestry weave reemerged as the most influential and prestigious technique. Prestigious, because it was frequently used for high officials and nobility. The designs incorporated in many textiles, are considered to symbolize the authority of the individual.

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Map. Late Horizon. Principal Sites.
In terms of iconography there is a continuity between Inca and earlier cultures, a selection, combination stylization of well-established symbols and design concepts; the motifs taking on their own distinctive style under the Incas. Inca design and composition is generally very simple with a distinct preference for ordered, balanced geometrical patterns as I shall now show.

A particular feature that crops up very frequently in the Inca style is the use of square units forming what are termed *tocapus* which contain simple geometric shapes, possibly types of ideograms or hieroglyphs which could be read by the viewer. They are often referred to as support for the theory that the Incas had a form of writing. Certainly there is a high degree of standardization in the layout, proportions and size of designs.[86]

John H. Rowe has carried out a comparative study on standardization in Inca tapestry tunics and has established that there are certain standard patterns which reappear with considerable consistency;[126] be they

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highland or coastal examples they vary little. Unfortunately Rowe's study
does not cover the techniques or the thread counts. However it would
seem from the pieces inspected at the Regional Museum of Ica, Peru and
Cambridge, England, that there was a very strict quality control imposed,
as well as a design control. The wool is invariably very fine and tightly
spun. There is sufficient documentary evidence on the Incas to realize that
they had very strict quality controls at every stage of the manufacturing
process. This is attested by the chroniclers at the time of the Conquest.

At the time of Pizarro's exploration of the north coast of the Andean
area, Cieza records meeting a *balsa* at sea,\(^{127}\) from the area of Tumbes,
and he states that:

> "Bartolomé Ruiz, el Piloto, les hizo buen tratamiento holgándose por
llevar tal gente de buen razón y que andaban vestidos, para que Pizarro
tomase lengua..."\(^{128}\)

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\(^{127}\) H. Buse Historia Marítima del Perú, Época prehistórica Tom.II Vol I Lima,
Instituto de Estudios Histórico Marítimos del Perú, 1975:430.

\(^{128}\) Ibid., 430
The fact that they were dressed even at sea was something that obviously impressed the chronicler. He also indicates:

"Mostraron lana hilada y por hilar que era de las ovejas las cuales señalaban del arte que son, y decían que habían tantas que cubrían los campos."\(^{129}\) and another quotation in much the same vein:

"traían muchas mantas de lana y de algodón, y camisas y albujas, y alcaceres y alaremes y otras muchas ropas, todo de lo mas de ello muy labrado de labores muy ricas, de colores de grana y carmesí, y azul y amarillo, de todos otros colores y de diversas maneras de labores, con figuras de ave y animales y pescados y arboledas,..."\(^{130}\)

The details are interesting in view of the fact that the motifs mentioned are not the ones we would normally associate with the Incas. We are obviously dealing with the records which indicate that the *tocapus* were not the only form of decoration in existence at the time. Oviedo also supplies a valuable insight into the trade\(^{131}\) and what the pieces looked

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\(^{129}\) Ibid., 430.

\(^{130}\) Ibid., 431.

\(^{131}\) Ibid., 431.
like:

"Traían muchos cántaros negros y mucha ropa de diversos colores, de lana, y camisas y ayubars, y mantas de colores muy labradas, paños blancos con franja, todo nuevo para contratar; y lana de colores, tinta en lana y otras muchas cosas sútiles y muy primas, en que parescían ser gente muy entendida."\textsuperscript{132} and Murua mentions that at the times of Tupac Inca Yupanqui;

"Había cierto comercio en la costa de perlas y caracoles por oro y vestidos."\textsuperscript{133}

There is obviously a large body of information on textiles and their trade at the time of the Conquest. This would lead us to believe that tocapu type textiles were only a small part of the total amount of textiles produced. There were a large number of textiles produced for everyday use by the commoner, often simpler fabrics, although not always necessarily so. This body of evidence goes largely unnoticed due to its

\textsuperscript{132} Ibid., 431.

\textsuperscript{133} Ibid., 683.
85 Fragment of uncu from Lauri, Chancay, in 1X1 weave with the design heightened by cotton padding. Amano Museum.

86 Tocapu designs as compiled by Victoria de la Jara. Chart in the University of San Agustín Museum, Arequipa.
simpler design concepts, very often simple warp bands (see above the quotation from Oviedo) in plain weave such as a sample analysed by T. Gabra-Sanders and M. L. Ryder\textsuperscript{134}

Next to no study has been carried out on textiles of everyday use in the Inca times. The evidence from the little written on the archaeologal textiles of the Inca period tends to suggest the use of simple one over one plain weave in cloths decorated with stripes which can be any of the following colours; cream, brown, tan, sepia or dark blue. Coarser thicker cloths are often paired plain weave structures in either cream or brown. samples collected from the looted burial site at Huaycan Tambo, 35 kms. east of Lima tend to support this view. Piece No.10 from the Soldi Collection described by Gloria Olivera de Bueno\textsuperscript{135} shows that additional elements could be added to a piece after its construction, in the case of the sample cited, by means of embroidery.[87a] Another technique used

\textsuperscript{134} M. L. Ryder and Thea Gabra-Sanders. "The Application of Microscopy to Textile History." *Textile History*. 16(2),1985: 123-40,

\textsuperscript{135} Gloria Olivera de Bueno. "Algunos tejidos de Ica." 6; 60.
87. a) Embroidered sample from Ica, The Soldi Collection N°10.

b) Textile on display at the National Anthropology Museum, Lima from Ica. (1982).
principally in coastal areas was that of painting on textiles, for example a piece illustrated in Arte Precolombino\textsuperscript{136} from Oyuyaje (Ocuaje?) which has a repeated design of eight pointed stars enclosed in blocks in the manner of a chequerboard. While the design can be considered essentially highland Inca in style and origin, its execution (painting) is in the coastal manner and materials (cotton) as are the colours (browns and creams). It would seem to be a tocapu piece such as those mentioned in Cieza;\textsuperscript{137} where he refers to the Ayar brothers legend:

"que salieron vestidos de unas mantas largas y unas a manera de camisas sin collar ni mangas, de lana riquísima, con muchas pinturas de diferentes maneras, que ellos llaman tocapu, que en nuestra lengua quiere decir vestido de reyes."\textsuperscript{138} (Cieza Chap VI p15) According to Sarmiento de Gamboa the tocapu was created by "Inga Viracocha, Inga octavo." (1410 A.D.?).

\textsuperscript{136} L. G. Lumbreras. *arte textil y adornos.*: 171.
If this is the case these designs had a very limited period of use and should be able to be dated fairly accurately.

"(El inca) fue industrioso y inventor de ropas y labores polidas, a que llaman en su lengua viracochatocapu, que es entre nosotros el brocado."\(^{139}\)

The use of the term brocado is likely to be a confusion of textile techniques and a mis-identification, and is more likely to be a reference to tapestry weave which is known to have been more commonly employed as a technique for the execution of tocapus. In terms of technical experimentation Lumbreras illustrates some extraordinary pieces from the central coast executed in cotton.\(^{140}\) The technique used is tapestry simulating feathers with a superimposed layer of more feathers using elements of the ke\textit{llm} technique, while these are supplementary to the fabric they still form an integral part of the fabric.

To summarize, the majority of techniques used in Inca times had already been experimented with, or widely used long before. However this not to say that there were no developments in Inca and immediately pre-Conquest times, as we shall see.

We also know how the labour was subdivided for the production for the different types of cloth. Huaman Poma de Ayala gives some clues on pages 17 and 21 as to how this was achieved:141

Page 218 refers to "Segunda Vecita enesta calle dela segunda llamadas-payacona- viejas deedad de cincuenta años -biejas quese ocupan a texer ropa gruesa decomunidad estas..."142

Page 220 to the "Terzera Vecita enetacalle dela terzera llamado-punoc-paya-biejas que entiende solo dormir y comer -de edad deochenta años // las quie pueden ande servir deportera yaconpanamiento y algunos quepueden andetexer costales y hilar cosa gruesa loque pueden..."143

142 Ibid., 218; 217.
143 Ibid., 220; 219.
88. Huaman Poma, illustration from Nueva Corónica y Buen Gobierno.
Page 216 the Primera Visita is described and accompanied by an illustration entitled; "Primera Calle Avacoc-uarmi de edad detreyta y tres años - muger de tributo." These were the women who were involved in the manufacture of finer pieces;

"Primera Vecita la primera calle delas yns mugeres casadas y biudas q-llaman auca camayoc pa uarmin las cuales son del oficio de texer ropa delicada para cube auasca para el ynga y demas senores capac apoconas y capitanes - y para soldados fueron deedad de treyta y tre años..." "estas otras tenian oficio de texer ropa de auasca delgada y-hilasen para qumbis..." [90] & [91]

Cobo is also a well informed source on this subject, the names of the different types of clothing, the material used, the techniques, the weaving implements and the labour division.

"Mas abundancia de ropa tuvieron estos indios del Perú que los de otras regiones del Nuevo Mundo; porque allende del algodón, que es general en

144 Ibid., 216; 215.
145 Ibid., 216.
todas las tierras calientes del, y de que también abunda este reino, por los muchos valles templados que en el hay fertilísimos desta planta, gozaban los peruanos de gran copia de lana de sus llamas y vicuñas, de quelabraban la mayor parte de las telas y paños de que se vestían. Así la ropa de lana como de algodón hacen muy pintada de colores finos y labores curiosas y tienen para teñirla tan perfectos colores de azul, amarillo, negro y otros muchos, y sobretodo de carmesí o grana, que hacen conocida ventaja a los de muchas partes del mundo y que pueden competir con las mejores que en el se hallan. La tinta dan a la lana y algodón en pelo, antes de hilarlo, y despues de sacada del telar la pieza, no usan darle ninguna.\textsuperscript{147}

Cobo was very observant and described with considerable detail and care all he saw. Chapter XI entitled, "De la ropa y telas que hilaban y tejían." is an extremely useful chapter and it is well worth quoting large sections from it.

\textsuperscript{147} Ibid., 234.
PRIMERA VEÍCITA

Huaman Poma, Nueva Corónica y Buen Gobierno.
90. Huaman Poma, illustration from Nueva Corónica y Buen Gobierno.
SEGUIA VECITA

91. Huaman Poma, Nueva Corónica y Buen Gobierno.
"Tejen ropa de algodón basta y delicada, una blanca, de su color natural, y otra de colores; destas labran algunas piezas de un solo color, y otras de muchos; dellas vareteadas y listadas, de su color distinto cada lista, y dellas con figuras varias de animales, flores y de otras cosas."  

"Sólo los indios Yuncas y los moradores de los llanos y costa de la mar vestían algodón que los de la sierra, que es la mayor parte del reino y en que estaba la nobleza antigua de los Incas y Orejones, hacen sus ropas de lana."  

"Cinco diferencias hacían antiguamente de ropas y tejidos de lana una basta y grosera, que llaman Abasca otra muy fina y preciosa, llamada Cumbi: la tercera era de plumas de colores entretejidas asentadas sobre Cumbi; la cuarta como tela de plata y oro bordada de Chaquira; y la quinta una tela muy basta y gruesa que servía de alfombra, tapete y frezada. La ropa de Abasca tejían de la lana más basta de las llamas o Carneros de la Tierra y della se vestían la gente plebeya. Labrándola casi toda de color de

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148 Ibíd., 236.
149 Ibíd., 236.
la misma lana, si bien tenían algodón: la de Cumbi de la lana más fina y escogida, y los más delicados y preciosos Cumbis, de lana de corderos, que es sutilísima. Labraban algunos tan delgado y lustrosos como gorbaran y dábanles los mismos colores que al algodón. Destas ropas se vestían los Reyes, grandes Señores y toda la nobleza del reino, y no la podía usar el común del pueblo. Tenía el Inca en muchas partes oficiales muy primos llamados Combicamayos que no entendían en otra cosa que en tejer y labrar Cumbis. Estos eran de ordinario varones, aunque también las Mamaconas solían tejerlos y eran los más finos delicados los que salían de sus manos. Los muy ricos que labraban para el Inca y grandes señores, eran de lana de Vicuñas, o todos, o parte, y también solían mezclar en ella pelo de Vizcacha, que es muy sútil y blando; y también de muerciélagos, que es más delicado de todos."150

The use of bat fur or wool is improbable and questionable, in view of the fact that the fibre staple is very short and probably extremely difficult to spin.

150 Ibid., 236-7.
Cobo is also useful because he distinguishes two types of loom, the backstrap loom and the loom for producing tapestries, and presumably the _tocapus_.

"Los telares en que tejían estos Cumbis, particularmente las piezas grandes para tapicería, eran diferentes de los comunes; haciéndolos de cuatro palos en forma de bastidores y poníanlos levantados en alto arrimados a una pared, y allí iban los Cumbicamayos con muchos hilos y espacio haciendo sus labores las cuales salían muy perfectas y acabadas, igualmente a dos haces; y el día de hoy suelen hacer reposteros delo mismo con los escudos de armas que les mandan; si bien el Cumbl que ahora labran no llegan a la fineza del antiguo."\(^{151}\)

Textiles with featherwork are also mentioned in Cobo's work. Archaeologically feather-covered fabrics are generally recovered from post-Tiahuanaco graves. The feathers are usually attached to a cord or open weave 1 X 1 and then stitched or knotted on to the woven fabric row by row. The feathers are generally from forest birds; which would tend to

\(^{151}\) Ibid.,237.
indicate trade contacts. Cobo’s reference to featherwork is interesting:

"Las telas de plumería eran de mayor estima y valor, y con mucha razón, porque las que yo he visto, son mucho de estimar donde quiera. Labrábanlas en el mismo Cumbí, pero de forma que sale la pluma sobre la lana y la encubre a modo de terciopelo. El aparejo que tenían para este género de telas era muy grande, por la innumerable multitud y variedad de aves que cría esta tierra de tan finos colores, que excede todo encarecimiento."

"Aprovechabanse para esto de solas? las plumas muy pequeñas y sútiles, las cuales iban cogiendo en la tierra con un delgado hilo de lana y echándolas a un lado haciendo de ellas las mismas labores y figura que llevaban sus mas vistosos Cumbis. El lustre y resplandor y visos destas telas de pluma eran de tan rara hermosura, que si no es viéndolo, no se puede dar bien a entender. Entre las demás cosas de que los españoles, cuando entraron en esta tierra, hallaron llenos los depósitos del Inca, una de las mas principales eran gran cantidad de plumas preciosas para estos tejidos; casi toda era de tornasol con admirables visos, que parecían de oro muy fino."

152 Ibid., 237.

153 Ibid., 238.
"Otra suerte había de un tornasol verde dorado; y era inmensa la cantidad que había de aquella pluma menudita que crían en el pecho los pajarillos que llamamos Tominejos en una manchita poco mayor que una una; parte estaba hilada en un hilo muy delgado, y parte por hilar, metida en petacas, que eran los baúles y arcos destos indios. La ropa que bordaban en Chaquira se titulaba por la más preciosa de todas."\textsuperscript{154}

At the opposite end of the scale in terms of quality was a cloth referred to by Cobo as \textit{Chusi}.

"La tela más basta y gruesa que hacían se decía Chusi; no era para vestirse de ella, sino para frazadas, alfombras y otros usos: algunos tejían tan gruesas como el dedo, porque el hilo de la trama era una cuerda de lana de ese grosor."\textsuperscript{155}

To my knowledge this type of cloth is not or rarely represented in the archaeological record, perhaps not surprisingly since it probably would

\textsuperscript{154} Ibid., 238.

\textsuperscript{155} Ibid., 238.
not be included in burials where it would be able to survive the rigours of time. Cobo closes his chapter summarizing and comparing the cloth types to their European equivalents;

"...podemos decir que la ropa de Abasca corresponde a nuestros paños de lana; la de Cumbi a nuestras sedas; la de pluma a nuestras telas de plata; la de Chaquira a nuestros brocados; y los Chuses al sayal, gergas y frisas; y últimamente la ropa de algodón a nuestros lienzos."^156

Summary.

The textiles of the Inca Period are well documented both archaeologically, and also historically in documents left by the chroniclers. They tend to be an easily distinguished group of textiles due to the uniformity of symbols and/or techniques used. Why the preoccupation with textiles? Why did they become such a close second industry after agriculture? Murra may have the answer:

^156 Ibid., 238.
"El estudio de las fuentes etnohistóricas revela que en la cultura andina la mit'a textil casi igualaba el trabajo agrícola, creando así un segundo vínculo económico; toda unidad doméstica entregaba tiempo y energía tejiendo para el Estado, en forma regular, anual y repetida."\textsuperscript{157}

Why there were different types of textiles is also explained:

"El tono afectivo extraordinario que caracteriza el uso de tejido y el hecho simultáneo de que las sociedades andinas estuvieran divididas en clases, permitió el uso interesado y al manejo de los tejidos en la variedad de situaciones sociales y políticas. El simple hecho que el tejido fino era, por definición un privilegio real, significaba que una dádiva de este material fuera muy estimada por el recibidor." "Es así como, por un lado, el uso desautorizado de las prendas de vicuña se castigaba, según los informantes, con la pena de muerte, y, a la vez, era un regalo al que aspiraban los parientes del Inca y hasta los kuraka."\textsuperscript{158}


\textsuperscript{158} Ibld., 164.
"La política de redistribución textil, que consistía en obligar a todos a tejer a favor del Estado, y a su vez a "regalar generosamente" tejidos a los distinguidos se burocratizó."159

Its importance may be exaggerated by Murra, however, it must be recognized that it did play an extremely valuable role.

"En ésta representó un ingreso básico en el presupuesto estatal, una tarea anual entre las obligaciones campesinas una ofrenda común de los sacrificios; en varias ocasiones funcionó igualmente como símbolo de status personal o como carta forzosa de ciudadanía, como obsequio mortuorio, dote matrimonial o pacto de armisticio. Ningún acontecimiento político o militar, social o religioso era completo sin que se ofrecieran o confirieran géneros de cualquier naturaleza o sin que fueran quemados, permutados o sacrificados."160

The arrival of the Conquistadores brought to a rapid end, the organizational network of the Incas and at the same time disrupted many of the traditions and the textile tradition was one of the ones to suffer.[92b]

159 Ibid., 165.
160 Ibid., 170.
Colonial to Present Day Textiles. A Brief Overview.

This study does not aim to cover this period in any detail. However, the fact that the geometric style and tradition has continued to the present day, deserves to be mentioned. At the time of the Conquest the Conquistadores saw fit to exploit the technical knowledge of the highly talented indigenous workforce. Consequently the Andean artist was subjected to the influence of European art. Tribute obligations had to be met and at the same time the obrajes (textile workshops) were set up for the production of a variety of articles. Fig 92a [92a] shows a large tapestry housed in the University of San Agustín Museum, Arequipa. This tapestry is an obvious attempt by a master or patron of European origins, to utilize the weaving skill mastered by the indigenous weavers, blending these skills with European manufacturing methods (e.g. the use of sheep wool and silks; the frame and mechanical loom) and designs.

Pattern manuals were probably brought from Europe, providing models for the craftsmen to work from. The example illustrated includes the Hapsburg, or double-headed eagle (this element may also have had some symbolic value for the Peruvian weaver), and the fleur-de-lis normally
Colonial tapestry in the University of San Agustin Museum, Arequipa.
associated with Bourbon times, and even Chinese elements crop up in some cases. Autochthonous elements may have been retained, rather subtly, for, if we look closely at the S-shaped floral designs we may notice that there seems to be some similarity to the S-shape double headed snake seen throughout pre-Columbian times. Unfortunately the textiles for this period have gone largely unstudied. These textiles were manufactured either for patrons like the Church, Spanish nobles or the creoles. Each fabric had its own appropriate iconography. Technically textiles were not that different from their pre-Columbian predecessors. Little remains of the textiles that were used for everyday use during Colonial times.

After Independence in the 1820's the indigenous population was left largely forgotten and hispanicised traditions continued on largely unaltered. The greatest change, has in fact, occurred in the last forty years, as employment patterns have changed. The concept of time has changed. In many areas Andean women have less time for weaving. The weaving of technically complex and competent pieces is a very time consuming and economically less feasible than even thirty years ago. Designs and shapes have been summarised, although the underlying concept of geometricity has never disappeared.
92. Chronological chart with major developments in textile technology indicated. Expanded and annotated version of Rowe’s chronological chart for the Central Andean Region (1978).
Textiles seen in relation to culture zones

The general overview given in the previous chapter gives some sort of idea as to how textile technology changed, (and designs) progressed, in some cases suffered setbacks, or adapted to a series of changing circumstances and conditions over a very long period. A conservative estimate would put this development in the region of 5,500 years. Textile techniques and design have changed very slowly even over thousands of years (with the exception of the Pre-ceramic and the Initial Period).

The introduction of the loom was certainly a major step forward enabling a speeding up in the manufacture of woven goods which had been previously had been constructed by techniques relating more closely to the manufacture of matting and basketry. The techniques used for matting and basketry were usually twining and looping. The geometric patterns and design which persist even to this day have their foundation in the early Pre-ceramic traditions.

The distribution of techniques and designs is fairly uniform for the
Pre-ceramic period, not as in later periods, where regional developments can mean the absence of certain techniques and designs perhaps due to the lack of cross-cultural relations, for example the case of Paracas Necropolis textiles which tend to be in their overwhelming majority pieces that are embroidered and unique in pre-Columbian terms. This is a phenomenon that is not to be repeated elsewhere on the same scale in pre-Columbian textile history.

Other sites as, for example, Culebras, Asia, Huaca Prieta show many similarities. They also show a uniformity of tradition to be found later in Chavín, Tiahuanaco and Huari and Inca times. In the case of the Pre-ceramic traditions, no specific culture can be named.

Initial Period.

In the Initial Period there is a gradual breakdown as individual subcultures in separate valleys naturally retained traditional styles and techniques, though occasionally we can identify cross-currents of other traditions. This may explain why the loom was adopted so slowly.
It is likely that the same situation that applied on the coast was also applicable to the highland zone, although the highland textile record is negligible, that is, Guitarrero Cave aside. The coast is likely to have had a technological lead since cotton was grown and readily available while the wool from the camelids (llama, alpaca, vicuña and the guanaco) was more plentiful in the southern highlands, though evidence exists to show that animals were brought down to the coast. There is evidence of this at a very early stage in the northern coast of Peru between Trujillo and Chiclayo. The use of wool only became more widespread during the Early Horizon and even then cotton remained as the main weaving material, above all, in the coastal areas.

**Early Horizon.**

The Chavín style can be recognized within a culture zone that developed extensive links with other zones and regions, to a large extent unifying a tradition which is now known as the Chavin culture. The Chavin style can, in loose terms be equated with the Early Horizon. The strict linear and geometric forms to be found initially in the textiles of sites

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2 Ibid.,8.
like Huaca Prieta, Culebras and Asia in the Pre-ceramic and Initial Period are developed in textiles, lithic and ceramic art. The design and symbols are of a general nature and probably signify the same thing from area to area (for example the double-headed snake or the staff-god). The technical prowess of Early Horizon textile technology is not outstanding. However, towards the end of its development, particularly in the south, there is an exceptional localized development known as Paracas Cavernas.

**Paracas.**

Initially this had many Chavinoid elements in spite of the fact that the development took place in a very restricted zone in south-central Peru. While the area of development was limited, the number of techniques employed was very wide and varied.³

The designs at this stage were increasingly geometric, with angular shapes predominating. With time this localized development became even more insular both in terms of design concepts and techniques. As wool became more popular, so did brighter and more vivid colours. Wool

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accepts dyes more easily than cotton. With the gradual introduction of embroidery there was an added dimension of flexibility both technically and aesthetically, prompting the development of the use of curvilinear and flexible shapes and forms, leading to a breakdown in the use of highly geometric shapes.

Middle Horizon.

Due to the fact that the Paracas style was so limited in its distribution, it is unlikely to have had any major influence on subsequent styles, that is, with the exception of Nazca which is in the vicinity of Ica and Paracas. There is, after Paracas, a gradual but noticeable return to stricter forms both in terms of techniques and designs found in earlier periods. This trend comes to its fullest development in the textiles of the Middle Horizon when the use of tapestry weave became commonplace, or so the archaeological evidence would tend to infer. The trend was to standardize certain design forms and symbols which would seem to be vastly different, one piece from another.

The technique employed to obtain this apparent variety was the use of a variable modular width and length. Thus, a figure, compressed, for
example, by half its normal width would appear vastly different from its standard presentation. This was a method not unknown earlier, but it becomes virtually the trademark of Tiahuanaco and Huari pieces. Their distinctiveness also helps define the area of Tiahuanaco and Huari influence and as in the case of textiles dating to the Chavin period. Certain cultural elements crop up repeatedly in other media such as lithic and ceramic art. The Middle Horizon textiles often represent figures and associated symbols that appeared in the Early Horizon particularly under Chavin but also earlier. The gap between the two horizons is approximately that of a millenium. Are we then, seeing some sort of Renaissance, a resurgence in the interest in the purity of form and forms of the early periods? [93a & b]

Certainly some aspects which must be full of symbolic meaning such as the twin-sceptered figure must be important and probably maintained their importance through the intermediate periods with greater or lesser

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93. Samples of coastal Tiahuanaco (Huari) style. a) Sample in the Rocamora Collection, Barcelona № 28308. b) D.G. №3A & B from HUARMEY
emphasis.[94a & b] The twin sceptred figure is also to be found in the lithic art of San Agustín in Colombia at a slightly later date (in the equivalent of the Peruvian Late Intermediate Period).5[95] There are symbols and traditions that have validity, to such an extent that other cultures adopted or identified with them directly. There was a trend towards a standardization of techniques throughout the Andean Area which began to break down in the Late Intermediate Period with the formation of independent culture regions.

Late Intermediate Period.

This lack of standardization is reflected directly in the textiles, where each region has textiles and techniques that make them distinctive (for example Chincha and Ica textiles).6 It must added, that while very often the pieces are distinctive there is also a plagiarism or reuse of designs developed in previous cultures. In Chancay textiles, this is very


94. Double sceptred figure in coastal Huari style a) Sample in the Rocamora Collection, Barcelona N° 28306. b) D.G. N° 058 from Macas, Canta. Note similar style and execution.
95. Lithic art of San Agustín, Colombia. Stone sceptred figure at Mesita "C".
much the case. A wide range of techniques were being used and experimented with (eg. DG.5b from Carabayllo, Lima[81]). The quality of Chancay pieces is very variable as are the designs and symbols employed (D.G.4a and 4b). The general trend is towards lower quality products, products that are executed with much less care.

The Late Horizon under the Incas is well documented archaeologically and likewise by the chronicles in the case of textile evidence, mainly from southern and central coastal Peru (e.g. D.G.18 from Armatambo, Lima) and the Lake Titicaca region, the picture is rather similar to that of the Middle Horizon, eight hundred years earlier.7 There was a standardization of patterns, shapes and techniques.8 These were often adopted in other areas. There was also a noticeable tightening up of quality controls under the Incas. This general overview leads us to the conclusion that the textile evidence ties in very well with the current understanding of the

development of pre-Columbian prehistory, with its variations, be they military conquests, economic depressions or periods of high cultural and technological achievement and social stability. The textile evidence is shown to be a useful tool in the reconstruction of aspects of the past. We saw in the previous chapter how this evidence can be applied (take for example the evidence for the Pre-ceramic Period).  

Archaeological Time-scales.

Concepts of archaeological time-scales and chronology changed rapidly by the turn of the twentieth century. Much was clarified through scientific and careful excavation. One of the pioneers in this field was Max Uhle, a German archaeologist who was probably amongst the first to establish the use of stratigraphic excavation procedures in the Andean Area. On the foundation of his findings he built up a chronology of five periods. Unfortunately much of his work has never been published and much of it remains in the Museum of the University of Pennsylvania holdings.

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(although the R. H. Lowie Museum has published many of his finds). He surveyed and excavated a large number of cemeteries on the coast from the area of Mochica control in northern Peru to Acari - south of Nazca in southern Peru. Fortunately for us Uhle recognized the quality and importance of textiles. He was able to collect samples from Nazca burial sites in the 1890's. These textiles gave some sort of foretaste of the pieces that were to be discovered by Julio C. Tello some thirty five years later. Tello followed up several trails, which eventually led him to discover the sites of the Paracas Peninsula. At Cerro Colorado he was to unearth the world-wide known Paracas textiles in their original context. The huaqueros, or tomb-lopeters had discovered them at the turn of the century and started exporting them shortly afterwards when they discovered their value.

Many of the finest pieces ended up in Europe and above all in

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collections in France and Germany.\textsuperscript{12} It was around this period that Raoul d'Harcourt published his monumental work on ancient Peruvian textiles.\textsuperscript{13} There was no serious or real attempt to tie the textiles into chronological sequence. The author's aim was to analyze the techniques and designs.

The highland region yielded very little in terms of textile information, save some pieces which are believed to come from some islands (Island of the Moon, Koati ?) on Lake Titicaca and made known by Posnansky.\textsuperscript{14} Many years earlier (1934) Wendell C. Bennett began a study of the Tiahuanaco area in the southern highlands of Peru and northern Bolivia, defining the culture and its area of influence. Meanwhile on the northern Peruvian coast Junius B. Bird was carrying out excavations at the site of Huaca Prieta, subsequently defining the term "pre-ceramic."\textsuperscript{15} It was at this site that he

\begin{itemize}
\item \textsuperscript{14} A. Posnansky. \textit{Tiahuanacu}. Vol III-IV, 1957:137-38
\item \textsuperscript{15} See W. C. Bennett and J. B. Bird. \textit{Andean Culture History}. London, Robert Hale, 1965.
\end{itemize}
excavated layer by layer, uncovering thousands of textile fragments. He realized that they were significant part of the cultural record and set about studying them.

1949 saw the publication of Andean Culture History by Bennett and Bird.\textsuperscript{16} In it the cultural sequence for the Andean area was outlined and cultures were ordered according to the current research on Andean chronology. In the book referred to above and in other publications he made a valuable contribution to studies in the field of textile studies. It was also around this time that Lila O'Neale published a series of monographs on Peruvian textile periods.\textsuperscript{17} Unlike Harcourt's work, it was based mainly on provenanced pieces and it aimed at describing both the techniques and ordering them chronologically. In 1953 with growing use of radiocarbon dating some modifications were made to previous chronologies and following the Roundtable on dating held in Lima that year, the dating of time and culture periods was agreed upon.\textsuperscript{18} Changes were

\textsuperscript{16} Ibid.


not major nor were the subsequent adjustments made by J. H. Rowe to the chronological and terminological tables in 1955. Since then there has been a surge of interest in both prehispanic and contemporary textiles in the Andean area. Particularly in the U.S.A. and to an extent in France. It has become commonplace to have a separate section on textile analysis in archaeological reports, as has been the case for pottery for many decades.

A large body of the information in this thesis is based on conclusions reached through the analyses of the information given in them; that is in addition, to data collected personally in the field, private collections and museums. The evidence collected from these samples is direct proof of the high technical and aesthetic quality of weaving in Pre-Hispanic times. It is sometimes mute evidence of a capability for transferring to a material medium certain aspects of ancient societies, their traditions and customs, above all in terms the symbolism used. This ability to combine textile and symbolism is continued until this day, particularly in the area of Lake Titicaca and its islands and large areas of northern Bolivia.¹⁹ In these textiles, symbols can be read and are generally

understood in the area of their manufacture. In Pre-hispanic times fabrics often contained coded messages. Perhaps the three most outstanding motifs are: - the feline, the double-headed snake or serpent and the single or double-sceptered figure.

Customs and beliefs were and are interpreted and transferred into the field of arts and crafts. Unfortunately ancient customs and beliefs that are represented can only be understood by deduction, extrapolation or through ethnographic parallels. 20

Style and Stylistic Development.

Style is a word that is difficult to summarize or pin down, yet it is a term used with much freedom both by the art historian and the archaeologist.

At the beginning of Chapter 3 we dealt with the appearance of the Chavín Style, and reference was made to the styles that followed. We are faced with a series of problems; How do we define style, and what qualifies as style? Another question to be asked, is if whether when all

20 W. Iain Mackay. Wiracocha and His Possible Representation In the Arts:6.
the mentioned styles are analysed, can an overriding pattern be defined and termed the "Peruvian Style"? The Longmans Dictionary of Contemporary English suggests certain guidelines for the definition of style (p. 1109); "..in a certain form or manner like that of the stated person, place, etc.", "to form in a certain (good) pattern, shape, etc.", "a type or sort esp. of goods.", "a general manner or way of doing anything which is typical or representative of a person or group, time in history, etc." or "a type or choice of words, esp. which marks out the speaker, or writer as different from others"

This last definition with minor modifications would seem to be the most appropriate, if we replace the words "choice of words" by choice of design, symbols and techniques and, "speaker, or writer" by artist or artisan. Even so the definitions remain curiously inadequate if we try to relate them to, for example the Chavín Style. There are a series of factors that should and will be studied, such as; appearance, the category of the piece and its most readily palpable characteristics, that is if it fits into a recognizable pattern. These elements defining style reflect the spirit of the artist or artisan. Could we say that by applying these definitions we can define and understand the Chavín Style?
Numerous nations through the ages have sought to represent their world in so many and often very different ways, but why? These representations may look unconvincing to us today when seen as true to life or as naturalistic representations; however it is unlikely that it was the primary object or intention of the many artists who executed these numerous textiles and works in other media from Peru throughout the millennia.

Why did the ancient Peruvians maintain the series of conventions to be outlined in this chapter, rather than adopt more faithful representations, that is, closer to western perception of nature? Nature was, as it is today amongst the Quechua and many of the Amazonian groups, perceived and conceptualized in a very different way from the highly evolved and complex nature of Western or European art.

The research carried out by John H. Rowe in his Form and Meaning in Chavin Art is an outstanding work, yet it is a typical example of the approach taken to a problem commonly faced by the archaeologist when confronted with a lack of direct chronological evidence. Answers cannot

be obtained by historical or archaeological methods alone. The archaeologist or historian becomes an art-historian and describes and attempts to trace changes that may have taken place particularly in terms of differences in style from one art group to another. Besides the suggestions made above for the identification of style the art historian must follow a sequence in his method of description, which is that of grouping, organizing and identifying the pieces or artifacts. This way of fitting things into a sequence by grouping, organizing and identifying them is largely a by-product of nineteenth century evolutionary thinking, which still holds strong in much of the popularizing scientific literature and audio-visual presentations we are shown almost daily. It is true, that sometimes the evidence, as we are presented with it, would lead us to take an uncritical evolutionary point of view and this approach is as commonplace in studies on art history and associated technology as it is in scientific circles. The lack of technology and certain techniques can in fact be a major hindrance or at least restraint in the development of styles, and an influential factor in the interpretation of evidence in favour of a blindly obsessive evolutionary point of view.
What may look like progress from the standpoint of mastery of a
technique or medium, can be viewed as a decline into a virtuosity with no
real content. We are living in a world of rapid technical progress and
inevitably conditioned and to a large extent influenced by the outlook that
this produces. It is also easy to forget in a materialist age that Andean
man had very strong beliefs and sought to represent nature and the world
around him in terms of these beliefs. Indeed, many elements of Andean art
are a direct reference to the natural world round the artist:— references to
the Pachamama or Earth-goddess

The title of this thesis may seem to suggest that stylistic and
technical developments should be understood as the outcome of a unilineal
evolutionary approach. It will be shown that while one major factor, that
is, geometricity, was a dominant feature over many thousands of years in
the Andean area, it was not in fact a became a determining factor in a
unilineal evolutionary development.

The approach that commonly suggests that plant decorations in
architecture and sculpture in the Near East and Greece is one continuous
evolutionary sequence in the field of art, from the Egyptian lotus, or
papyrus, to the Proto-aeolic capital to the Corinthian column to the arabesque is not taken or applied here.

The process is not that straightforward. One cannot say that patterns depended solely and entirely on techniques like weaving and basketry and take the technologically-oriented interpretations and assumptions that suggest that what counts most in art is the skill employed in the execution of a piece. These conclusions are false as is the conclusion that what is easy for us was always easy, that was for our forbears in the past.

Styles develop, yet remain within certain parameters set by tradition. Likewise, artistic and technical conventions can be persistent and remain in use over centuries (e.g. the stepped fret, and the double headed snake). Repetition is a compelling force and one that is difficult to break with. No artist is totally independent of predecessors and their models and their beliefs. The archaeological record shows a series of variations throughout periods and areas which enable us to distinguish styles within the Andean Area (and tradition).
Art and Chronology, the Development of Geometric Forms and Symbolism.

The previous section leads us on to deal with the evidence of the development of the geometric style throughout the eras or sequence of horizons and intermediate periods that form part of Andean prehistory. The Pre-ceramic period presents us with evidence of a few features which suggest the development and growth of groups, of organization and the unification of belief systems in some areas. In terms of the identification of styles it can be safely said that style(s) can be identified for the Pre-ceramic Period.

It is not surprising therefore that Bird can state so positively when referring to the art of the Pre-Ceramic Period: "It shows that an angular, highly conventionalized style can be an outgrowth of techniques and does not have to fit into any theoretical sequence of art forms starting with naturalistic treatment. There is as yet no basis for suggesting the origin or antecedents of this art style."22

Prior to Huaca Prieta the evidence for a distinctive textile style is scant. However, the evidence coming from Ecuador from areas other than

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the textile arts suggest an early formalization of shapes and forms and a considerable interest in angularizing forms, no doubt linked in with a textile tradition. Sadly, in the case of Ecuador, due to the lack of good preservation conditions little has survived, so we are forced to depend mainly on the ceramic tradition of Ecuador (still the aceramic and the pre-ceramic in Peru).

Already in Phase I (B. C. 2600 - 2550) of Valdivia, patterns and designs which could be textile derived were being used in ceramics. By Phases III - V (B. C. 2300 - 1950) we are seeing a closing of the gap between traditions of Ecuador and Peru and the chronology of the two areas fits into place reasonably well. In fact, Ravines illustrates a piece from La Libertad, Sta. Elena, Ecuador. Which while executed in ceramic, replicates almost exactly a highly angular and geometric design of a face from a piece from Huaca Prieta. The Huaca Prieta example piece is different by the fact that it is executed on a gourd. Bird had the

96. Contemporary symbols from the altiplano region of Peru. (Callahuaya, Bolivia and) Taquile, Peru.

98. a) Carved gourd from Huaca Prleta, Excav. 3 Layer H2 1/2 N° 41.2/2554.

b) Pottery samples from phases II-V of Valdivia.
gourds inspected by various artists and art-historians who came to the conclusion:

"that the work was not that of a beginner or someone experimenting in gourd carving, and that the character of the designs indicates a well established traditional style. None could suggest a source or even a close parallel."

I feel that while the parallel is to be found in Ecuadorian ceramics there is probably a missing link between the ceramic evidence and the almost non-existent textile evidence for this period in Ecuadorian prehistory. What can be confirmed, is that there is a well established style and certain themes that unify the areas, suggesting common traditions. In the fibre arts there are major constraints on the development of style, due largely to the restrictions imposed by the techniques employed, principally twining but also by looping.

According to Bird what makes these pieces from Huaca Prieta so distinctive of their period and classifiable as a style? They can be grouped

26 Ibid., 63
technically by their use of twining and the limited design possibilities that this type of structure presents. The selection of designs generally used are ones that include people, birds and animals with highly geometricized and angular shapes. Curves are represented by steps, that is geometricized, and this is done with considerable difficulty. Elements of a form of symbolism feature in what must be a precursor of the Chavín type feline head referred to above in the case of the two gourds mentioned. The figure shown on one of the gourds may also be a representation of the twin-sceptered deity. 27

Another element to be pinpointed is the double-headed serpent, occasionally a single headed-\textit{cum}-raptorial bird. I regard them as symbols, 28 largely due to the fact that they are elements that persist into much later times with little modification. A study and interpretation of this composite being should perhaps be left to later, after all the evidence has been assessed. [99]

This northern style also finds acceptance in other areas further

\footnotesize
\begin{enumerate}
\item W. I. Mackay. \textit{Wiraqocha and His Representation In the Arts}: 5-6; Plates I & III.
\item Ibid
\end{enumerate}
Selection of double headed serpent designs from the Preceramic Period from Huaca Prieta, La Caldera, or Corralones, Arequipa: a: two-headed serpents with toothed bodies; b: toothed serpents, "interlocking" style (drawings by E. Linares Málaga)
south, for example from Culebras and Engel's site at Asia. Twined fabrics are well documented as are the techniques such as transposing elements to form angular designs. The double-headed or multi-headed snake can also be closely associated with the design/symbols to be found at the site of Asia and while there are some parallels with the designs from Huaca Prieta, they don't necessarily need to be interpreted as part of a larger more comprehensive pattern developing outside this area. Nevertheless there does seem to be some sense of organization and particularly a common identity, forming in the coastal zones in the field of textile style, techniques and symbolism, despite the large distances between the areas mentioned.

To sum up this period, it must be noted that the cohesiveness of style is surprisingly evident in most areas, in spite of the fact that the areas represented are in many cases at large distances from each other and provide evidence that they were separate cultural groupings. Amongst the highland pieces there is not such a cohesiveness of style, in fact, the Guitarrero Cave pieces cannot be said to have a style.29

Only at La Galgada in the north central highlands of Ancash can some sort of an inkling of a style be perceived.\textsuperscript{30} It is the evidence from the coastal strip which motivated M. E. Moseley to write his work on the maritime foundations of Andean society\textsuperscript{31} and it would seem that it was in the coastal area that cultural contacts enabled the development of a style, or perhaps several styles. Only further research and information will give some idea if there was a specific style for this period.

The transition from the Pre-ceramic into the Initial Period in terms of changes in aesthetic concepts and methods of representation was a slow one. It was during the Initial Period that pottery and the loom were introduced in many regions of what is now Peru.

Experimentation with both new materials and the methods of production associated with them was slow as was also the case with progress in design development. In textiles new ways of adding figures or symbols had to be sought preferably in such a way that the design was an integral part of the fabric.


\textsuperscript{31} M. E. Moseley. \textit{The Maritime Foundations of Andean Society}. 
In ceramics where much more liberty could be taken with representation of objects, an interest in retaining geometric forms continued with only a few exceptions to the rule.

Likewise in lithic art, there was the possibility of turning to three dimensional work, yet, this was not followed through. As with textiles all art forms remained within a two dimensional plane. The pattern was set for centuries to come, only being broken occasionally by short-lived incursions into the field of three dimensional representation.

One such exception is the case of Mochica potters who created a style which was very different from that of previous periods, working in a very much more three dimensional and sculptural style than any of their predecessors. It is worth noting that while the Mochica potters made a break with tradition in many respects, the person who painted designs onto the pots retained the older two-dimensional traditions. This was also the case of the Mochica weaver. Technically, stylistically and aesthetically the Mochica weaver made little or no progress. He was strongly entrenched in his traditional methods, and perhaps not surprisingly. The case of the Mochica potters and weavers should serve as a warning to the art-historian who may try to trace parallel and
contemporary developments in various types of media. Progress can be made in one medium and not in another, and pottery certainly allows for flexibility, variety and experimentation with shape and form. To sum up the Initial Period, it must be said that due to the fact that new materials, media and methods were being introduced there is no obvious prevalent style. Indeed, it would be likely, that had there been a style, it would have been outstanding in the archaeological record for the period.

The Early Horizon shows a complete change-around from the preceding period. During this period there are two regions that develop a choice of designs, symbols and techniques which mark out the artists quite distinctly. The styles have been used in many ways to define the more important cultures of this period. During the Pre-ceramic we were able to follow the development of a choice of designs, which are likely in many cases to have functioned as symbols. These designs were executed in a manner which was largely determined by the techniques used in weaving.

The development of a distinctive Pre-ceramic style came to full fruition in the Early Horizon after a shortish hiatus during the Initial Period, and it did so in the north central highlands of Peru, not in the field of textiles, but rather in stone sculpture.
The stone sculpture to be found at the site of Chavín has served, correctly or not, to define the Chavín style and representations of a kindred nature in other parts of Peru both in lithic art and other media, above all in pottery. According to J. H. Rowe who carried out much of the initial work on the Chavín Style, this style can also be traced in much later times, even after the demise of the Chavín culture. This influence will be mentioned later and in context, bearing in mind the two groups that J. H. Rowe defines. One of them he terms archaistic, that is, the direct imitation by later craftsmen of objects manufactured and designed in the original Chavín Style. The other group he defines is one that carries certain Chavín conventions through later periods. These are design elements which recur despite changing artistic traditions. 32

I would suggest that some of the elements Rowe highlights are conventions that have Pre-Chavin foundations. However, it was under Chavín that they became unified as a style which was expressed not only in monumental sculpture, but also in lithic work on lesser scale, gold

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ornaments, bone and shell, shaped and incised ceramics and in textiles.

The unification of the style was made possible because the site of Chavín was probably the centre for the distribution of ideas on religious art. Not surprisingly, therefore, that we find elements of the Chavín Style incorporated into the Paracas Style (Cavernas) which was a style that developed roughly contemporaneously with that of Chavín in the north. The development of this style will be discussed later. To return to Chavín art, we should note that it adheres to certain fundamental conventions particularly, symmetry, repetition, well regulated widths and the simplification and clarity of figures by the use of a combination of straight lines and simple curves.

These stylistic conventions can be summarized by what Tello defines as the two principal tendencies in Chavin art, which were for him: "el primer impulso se manifiesta en el proceso de idealización; y el segundo, en el doble proceso de eliminación y sustitución."33

The "process of idealization" is that of presenting the essential characteristics and emphasizing them sufficiently to have them identify the figure. These essential characteristics are then subjected to intrusive elements which can be interpreted in different ways. Thus elements are eliminated only to be substituted by certain features: for example snakes appear where hair would normally be described. This is the substitution referred to in Chap 3 in the subsection on Chavín textile technology which in Rowe's terms becomes a "comparison by substitution" or to use his favourite term "kenning" that is, a form of visual metaphor carrying a symbolic meaning. The Chavín artist and thinker would seem to be applying some of the principles to be found many centuries later in the works of the contemporary Argentinian writer, Borges, who often resorts to comparison by substitution by using visual metaphors, sometimes carrying a highly charged symbolic meaning. This is an aspect to be perceived when reading some of his short novels, not obvious at a first reading, but rather interpretations which may be perceived after reading the same novel at a second or third level.

Likewise with Chavín art. The viewer may initially read the design

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34 J. H. Rowe. Form and Meaning in Chavín Art: 78.
superficially, but if he takes care, as have Rowe, Kauffmann Doig and Doyon, the viewer will perceive, that Chavín art also has several levels of interpretation which are generally present in the "kennings."

Repetition is another feature of the Chavín style, whether it is multiple repetition on a single piece or designs that are repeated on separate pieces with individual designs. This is a feature of later styles, particularly those of Tiahuanaco and Huari. Take for example, the "Gateway of the Sun" at Tiahuanaco, Bolivia where avian or winged figures or demons are represented in rows giving the whole carved stone a sense of rhythm, yet not subtracting from any of the importance of the central figure. This was probably also a feature of Chavín lithic art and style, although a central figure remains to be determined. The "Black and White Portal" at the temple site of Chavín has two columns flanking an entrance. Both columns represent avian figures or more appropriately described as ornithomorphic creatures, which guard the entrance to the sanctuary, much as griffins did in the Near East or Sphinxes in Egypt.[45a] Regular repetition is commonplace and can be observed in the rows of figures on cornice details and the lintel of the "Black and White Portal".[45b]
At Chavín the avian figures of the cornice are invariably symmetrical and are repeated with a regular rhythm. This convention is repeated in the Chavinoid textiles from the site of Karwa near Ica, where whole figures or elements are repeated many times over, and are generally arranged symmetrically.

The designs were obviously conceived of in units, particularly in the lithic art, where minor changes occur. The variations are usually in the "kennings" used in the standard motif. Again this is something we see develop on a grand scale in the Middle Horizon textile samples, both coastal and highland.

What are commonly known as Tiahuanaco style textile pieces often present a series of repeated avian or ornithomorphic figures which can be viewed in much the same way as Chavín art. There is perhaps, one minor modification, and that is in terms of how the figure is read. In Chavín art you tend to read the figure from top to bottom and if repeated the design is normally laid out horizontally. In Tiahuanaco art the design is read from left to right or right to left and if repeated it is displayed vertically.
Chavin art seems to have, as Tiahuanaco art, developed round a series of modular elements. An area for study would be to identify the insertion of "kennings" and other elements to a design. It may be possible to isolate combinations of kennings which might be taboo. There was a slow breakdown in Chavin art and the style began to be employed in other areas, with modifications, particularly in the south coast. A batch of approximately 120 textile pieces obtained by two New York dealers which are believed to have come from Karwa, Ica, provide a challenge and an opportunity for much study. These textiles might yield some clues as to the belief systems of the craftsmen who made them.

It has been suggested by Alan Sawyer that a piece in a similar tradition to the Karwa pieces, in a private collection in Lima, can be placed in Rowe's Chavin Phase D, that is, at the time of the execution of the "Black and White Portal", on account of the use of the angular mouth corners and other stylistic features. Sawyer's conclusion concerning the Karwa collection of textiles is worth quoting;

"In view of the purity of the Chavin style and the comprehensive coverage of complex Chavin religious iconography present in Chavinoid-Paracas
religious painted textiles, we must conclude that they were highly ceremonial in nature and under the direct control of the Chavín priesthood. One possibility that immediately presents itself is that, just as Bennett concluded that Tiahuanaco religious iconography must have been transmitted to Wari in textile form, the primary vehicle for the introduction of Chavín religious symbolism to the South Coast peoples could have easily transportable painted fabrics..."35

In his view it is important to consider the possibility that the pieces are fragments of temple hangings designed as was the case of medieval Christian murals, to illuminate religious doctrine. He also highlights the fact that the textiles tend to be much more complex than their pottery or ceramic equivalents or in many cases their lithic parallels, only comparing favourably with the most elaborate of the carved stone reliefs at Chavín and similar Chavín or Chavinoid centres.

To sum up the Chavín style, we can state that it is represented by a religious art with an intellectual background which was meant to appeal

to both men's minds and emotions. While we today, cannot appreciate the intricacies of thought that went into the representations we do appreciate the style and its complexities, and as Rowe has stated, that after its end about B. C. 300:

"One way or another, however, it is evident that Chavin art and Chavin religion cast a long shadow in ancient Peru."36

We can follow hints of its influence on following periods. The influence of the Chavin style on Paracas (Cavernas) and to an extent on the later Paracas Necropolis phase has been mentioned briefly. Cultures of the southern coast were strongly influenced, notably in their art styles, by the Chavin style and in particular the Paracas culture.

The Paracas culture adopted a number of the Chavin mythological figures and their symbolic elements or "kennings," making them important motifs on their pottery and textiles. These pieces were not in pure Chavin tradition. Chavin ceramics are noted for being thick, chunky and usually dark ware, whereas pieces executed in the Paracas style, while reflecting some of the characteristics of Chavin stone carving (designs executed by

incision) differ greatly in that they were painted with brightly coloured resins which were applied post-firing.

It has been suggested however, that many of the incised designs to be found at Chavín were highlighted with paint or coloured pigments. This is certainly the case at slightly later sites such as Garagay (B.C. 780±70) on the coast, where in 1957 the Patronato Nacional de Arqueología carried out an excavation, and discovered friezes executed in high relief mud plaster, these were painted and decorated in a style which bears a strong relationship and similarity with the Chavín style.37

The typical feline mouth or fanged jaws associated with the Chavín style are used, although generally speaking they should be considered more in terms of elements of a "horizon style" or estilo de Horizonte as defined by R. Ravines:

"Al parecer, las convenciones iconográficas de las figuras de Garagay, presentes en Chavín, representarían mas bien una contribución de la

In Garagay or Paracas we are seeing some sort of concession to a form of worship to an "unknown god" as witnessed by the apostle Paul in Athens, or today concessions made to the potpourri of religions, such as can be observed at the Teh Lok Si Temple at Penang Hill, Pulau Pinang, Malaysia where Buddhist, Burmese and Siamese traditions are lumped together (this is particularly obvious when looking at the temple architecture).

Perhaps in this way we can understand what would seem to be such a hotch-potch of traditions that follow after Chavín. There is a slow depletion of the elements that are typical of the Chavín style and its symbolism. Chavín would appear to be the outcome of a process of ceremonial or non-centralized control in the area of Andean development. Paracas remained just outside the area of the Chavín and post-Chavín sphere of direct influence.

Paracas qualifies as a style on many counts. Paracas, Cavernas on

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account of the choice of designs and techniques can be typified by the repeated use of very strict geometric forms, which hardly make concession to the representation of curves, and the emphasis on the use of red, pink, yellow, black and cream, for a large number of the decorated pieces.

The techniques used were patterned weaves such as double cloth, tapestry and gauze and little in the way of embroidery. They depict or represent figures of entwined serpents and other mythical creatures.

The artists who executed these pieces had a distinctly different approach from those of the later Paracas Necropolis, particularly in terms of style, although this may be exaggerated by the fact that a new technical freedom was attained with the introduction of embroidery and also the variety of new dyes, since wool was now available on the market. Designs became more flexible and curvilinear, although some of the methods established during the Chavín period persisted, particularly in terms of the repetition of figures, as was the case with Chavín pieces where an element or "kenning" could contain variations.

So too in the case of Paracas Necropolis art where a figure could
be repeated on a plain background. However, the stance of the object depicted would vary symmetrically as it was repeated throughout the piece as would also the colour sequence, which tended to follow certain patterns.

The change in style as found in Paracas Necropolis reflects not only a change towards more freedom of expression and a break with conventions which were applied in terms of religious beliefs, but also indicate an upsurge in the representation of things of a non-secular nature, things of everyday life, such as, for example, hummingbirds sipping nectar from flowers. Treated in a much more naturalistic manner than before, this piece is unlikely to have fulfilled any ritual or religious purpose, except possibly, that found at burial where the deceased could take part of his world with him to the underworld, just as the ancient Egyptians had scenes from daily life painted in their tombs.

In Paracas art we can appreciate a profusion of life-symbols. We observe a gradual shift in style from Chavín to Paracas, largely because the function of the pieces was different. The suggested use for the

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Chavinoid Karwa textiles is one of a ritual nature, that of hangings for a temple or shrine. Whereas Paracas textiles particularly the later Necropolis pieces may or may not have had a ritual function, but they were certainly meant to be used, if not immediately at the time of weaving, eventually for burial purposes. In terms of the development of the Middle Paracas style, Sawyer may be trying to read too much into what he sees as a suitable religious style.  

However we can agree with most of his conclusion:

"The fate that awaited the awesome anthropomorphic feline god of Tiahuanaco when introduced into the South coast by Wari centuries later was to be much the same as had been suffered by the Jaguar god of Chavin. We must conclude that the only feline that was meaningful to the South coast peoples of ancient Peru was the gentle ocelot. Since they had no first hand knowledge of the formidable jaguar, its significance as a symbol of supernatural power was difficult for them to grasp. They may have been forcefully persuaded to accept a jaguar-god concept by

outsiders to whom it was a reality, but the idea never gained wholehearted local acceptance and could not be sustained without continuous foreign domination."

The Early Intermediate is characterized by a series of styles, all of which have regionalized distributions and these limited distributions reflect a profusion of smallish cultural groupings, such as Recuay, Pucara, Salinar, Gallinazo, Miramar and Lima, Early Tiahuanaco and Nazca. Inevitably, the style that can be described most accurately is that of Nazca, mainly due to the large body of readily available evidence. Also, because of the variety of materials used, for example textiles and ceramics and likewise because the Nazca tradition is inextricably linked to the development of the Paracas style. The Nazca style interests us, due to the fact that as a style it develops largely from the foundations laid in Paracas times.

The Nazca style artist was able to adopt and apply the simple shapes and forms to he ceramics and textiles. The choice of designs is very much

in the same vein as the preceding period, apart from the fact that some of
the designs required simplifying still more, so that they could be applied
to cloth by weaving techniques. This would seem to have meant a
tightening and return to stricter geometrical forms and a gradual
abandonment of the extensive use of the curve developed during the
Paracas phases. Certain shapes became much more angular, although the
curve was not abandoned altogether. This process can be observed
principally in Nazca ceramics. In textiles the approach was slightly
different, where the curve necessarily had to disappear.

This was of course a very influential factor in the development of the
Nazca style. Horacio Urteaga's analysis of elements of the Nazca style in
1928 has not been elaborated or developed greatly, nor have current views
altered his early studies on symbolism and totemism as represented in the
Nazca ceramics. The style that develops at Nazca, while to a large extent
the outgrowth of the Paracas Necropolis style is particularly distinctive
in that it employs a range of figures, mainly of a mythical nature relating
to sea life. Urteaga's analysis is rather valuable:

Selection of double headed serpent designs from the Paracas and Later Periods. a) Paracas Feline/Serpents in the Rocamora Collection, Barcelona №28307. b) Embroidery from Maranga, Lima D. G. №16.
"Los alfareros nasquenses, traduciendo la creencia común, fabricaron, para servicio del culto seguramente, y para fines rituales en honor de los muertos, una serie de vasijas y platos en que se ofrecía la imagen del "dios mar" con los más grandes atributos. Como ocurre siempre en las representaciones miticas, el objeto del culto tiene siempre una representación real y naturalista: el agua es un pez; la tierra es un reptil; el aire, un ave; el fuego, una serpiente o una llama; poco a poco se unen a estas representaciones naturalistas manifestaciones de atributos magníficos; semejantes manifestaciones, que ya son símbolos, acaban por convertirse en caracteres esenciales; la figura primaria se esfuma lentamente y conserva solo las formas más fundamentales o los rasgos más característicos, iniciándose entonces la representación simbólica y la estilización."43

Much the same approach can be taken when analysing the symbols and designs used in other styles of the period in other areas, such as the Lima or Maranga styles, although in both these cases the range of designs is much more limited as are the techniques employed in executing them. Nevertheless, artists who were involved in marking out a series of

43 Ibid., 9.
designs in ceramics and textiles, managed to isolate themselves from other groups or cultures by their style, in such a way that archaeologists and art-historians have been able to identify what is termed the Interlocking Style. This style is most commonly identified by the frequent representation of snakes or multiple-headed snakes in strict geometrical layouts, tying or locking into each other. This feature does in fact have a precedent in the Andes before what is commonly termed the Interlocking style appeared, versions are to be found at Paracas (Cavernas). [102] What we see is the development of a style that reaches its peak during this period. Features of this style continue on into the Middle Horizon art in Nievería in the central coast (and even occasionally into 20th century weaving). 44

A separate development was taking place on a grander scale on the coast further north during the Early Intermediate and its latter phases continued on into the Middle Horizon. The southern limits of Moche influence overlap with those of Nievería in the latter phases of the Moche

44 See Illustration in A. F. Barker. The Prospective Development of Perú as a Sheep Trading a Wool Growing Country. Leeds, Jowett and Sowry Ltd, 1927:116;84. Here the Interlocking snake head motif has been used in the Lake Titicaca Basin (photo taken around 1926).
101 Plain weave with embroidered design from Paracas in Nazca III Style.

102 Coastal interlocking designs. [O'Neale]
culture. Moche or the Mochica Culture is particularly noted for the quality and variety of its ceramics. The textile evidence is rather poor from the northern area, however, this more than made up for by the fact that the Moche were prolific potters. A word of caution, already mentioned earlier, with reference to the difference between the Moche textile style and the pottery style, should be reiterated here. While Moche textiles experiment a considerable fluctuation in style, aesthetically rather than technically, in their design elements, from the largely uncluttered designs of Moche III to the more elaborate designs with a variety of figures in Moche V, they maintain a two dimensional approach. The ceramics reflect a massive experimentation which leads to a pottery style that has to be considered separately from that of the field of textiles.

Perhaps for the first time in Peruvian prehistory the approach to design and techniques within a culture take diverging paths in a visible manner and on a grand scale. Despite the lack of source information for many of the pieces, much of the daily life of the Moche individual can be reconstructed with ease, largely from the scenes painted or modelled on the pottery. Nature was represented, plants, food, birds, mammals not to mention the largest group represented which was that of the Moche man in his environment and his activities:- hunting, fishing, working, man the
musician, the artist, the medicine man or even man suffering from disease.

Three techniques were used in the ceramic tradition and often combined and all were developed to a high degree. Casting using moulds; the use of plastic effects, be they integral to the piece, applied as high relief or low relief and thirdly painting. The technique of casting, was generally effected in the round and was rarely two dimensional. Pieces show an independence from traditions built up over centuries. This new approach survived several centuries before returning or degenerating back into older traditions and styles. The plastic effects were generally three dimensional and broke with previous traditions particularly when they were in carried out in high relief, however, if something was executed in low relief there was a strong tendency to go back to pre-Moche traditions and a stronger geometrization of forms. In the ceramic tradition, the field of painting (using slips painted onto the pottery surface) was one of the most conservative within the Moche style. Surprising perhaps, since it would seem the area and art form where most flexibility could be achieved.

This would lead me to suggest that the potter and the painter were probably different individuals in many cases, above all when we consider
that many of the pieces were mould-made. The developments in Moche art are very similar to those found in Greece where we can follow the Proto-Geometric style through to the Geometric and finally to the accomplished Attic wares where figures are no longer presented as profiles but adopt a variety of stances.

Sadly the Mochica artist never made this breakthrough, although he was not far off making it, particularly so when we consider the fact that the potter had achieved this seemingly painlessly. It has been said about pottery that: "...they tell us about the physical type of these people in a most sincere and naturalistic way." 45

Quite another approach is that to be found in the painting of the vessels as with low relief work on the ceramics. Here the Moche world represented is not really so naturalistic, but rather, it adopts a symbolic level, which is to be read and understood by the individual.

"Furthermore, the number of figures which are painted on a vase may run up to more than sixty. These scenes afford an excellent opportunity to study the interrelations, the actions, the functions of the various beings, human or mythical which might appear more or less isolated in other representations. In these dynamic paintings, we have an excellent chance for a deeper insight by functional analysis." 46

In the Moche style we see the reversal of what was previously the trend. We learn more from the representation of textiles on ceramics, in fact one author suggests:

"Los dibujos en los dibujos en los tejidos tratan de coplar los de la cerámica." 47

He also suggests one of the reasons for the static nature of representation and techniques in Moche textiles;

"A base de los pocos tejidos que se han encontrado, conocemos su dominio

46 Ibid., 118.
For some time prior to the Middle Horizon developments, particularly in the south, there was a fermentation of styles which produced a finely balanced and finished product, which was to have a far reaching influence, from north central Chile to northern Peru. Whether we call it Tiahuanaco, Coastal Tiahuanaco or Huari is not of particular relevance at this stage of the discussion. The fact is, that in all these areas there seems to be a unified tradition. Designs and patterns vary little as does the iconography making these pieces recognizable anywhere, even taking into account regional adaptations of themes.[103]

The designs, iconography and symbolism present well defined patterns. In terms of the techniques used, the greater proportion of pieces available to us for study are executed in tapestry weave, although as has been indicated in Chapter #3 this may be a gross misinterpretation of the record due to selective recovery of pieces.

48 Ibid., 80.
104. Tapestry with kelim Chancay style D.G. Design includes fox/cat cum avian creature and a border of interlocking snakes. Macas, Canta.

103. Tiahuanaco sample from Nazca in Göteborg Museum N°35.32.96.
The tendency has been to report pieces with designs on them, ignoring the large body of plain textiles. This is particularly the case with Paracas textiles. This process of selection is only natural despite inherent problems and drawbacks. It would be difficult to establish a sequence and follow the development of styles without it.

In Tiahuanaco and Huari or Coastal Huari traditions, the iconography, design organization, conventionalization and the distortion found within the conventions, and as noted earlier the construction techniques continue using principles developed before the Middle Horizon. Similarly when taken as a group, one of the most outstanding facts is that the textiles, despite of their wide distribution indicate very few variations in techniques or design content. Minor regional differences exist but are likely to be variations that would develop naturally through the centuries.

The ceramic evidence presents a similar pattern. It is fairly easy to define or label these art forms as styles. The iconography is limited, and not infrequently a single motif is the only one represented on an individual piece. Motifs are normally placed in series or arranged
horizontally by register within vertical bands. An additional factor in making the style distinctive besides the register, column and band system is that of a series of laws governing the distortion of a design. This is carried out by the lateral expansion of elements of a motif and compressing others. These samples can be shown as having modular width as defined by Dwyer.49

It is still difficult to trace exactly how this style developed. Its tendency to stylization, abstraction and a growing tendency to lateral distortion conventions, must be in part determined by the straightjacket of weaving techniques. The degree and extremes to which expansion and compression was carried, often rendered the original design or motif virtually unrecognizable to anyone who was not familiar with the unusual conventions.

What purpose did these conventions serve? Sawyer has a suggestion which would seem to answer the question;

These conventions appear to have formed a logical system which allowed the weaver considerable flexibility in their combination and emphasis, enabling him to achieve a rich variety of effect while maintaining the distinctive appearance and symbolic meaning required of garments worn by the Tiahuanaco official class.50

He refers to the use of this style in terms of an official class. It should also be suggested that the iconography employed in this style is of a religious or ritual nature, although this doesn’t preclude its use by official classes. To what extent it was an official class style, ritual or religious style still remains to be determined.

The lithic art of Tiahuanaco is associated with sites that are interpreted as being religious centres. The ceramic evidence from Tiahuanaco and Huari, as would be expected, is found at a wide range of sites, and the selection of designs employed are much more varied than those found in either the textile or lithic art. The textile art tends to summarize both the lithic and the ceramic traditions selecting elements or figures and repeating them.

Geometric repetition is made more visually interesting by skillful colour variations, harmonies and sequences. Franz Boas was fascinated by the use of repetition in Peruvian textiles and in Fig 34 of his book *Primitive Art* he presents us with a "Peruvian textile" which is obviously within the Tiahuanaco tradition.

"A curious development of this decorative device (rotation) is applied in the art of ancient Peru. On many fabrics we find patterns consisting of a diagonal arrangement of squares or rectangles. In each diagonal the same design is repeated, while the next diagonal has another type. In each diagonal line the design is shown in varying positions. If the one faces the right, the next faces the left. At the same time there is an alternation of colors, so that even when the form is the same, the tints and color values will not be the same."\(^{51}\)

This repetition and replication, which rarely appears in ceramics and even less frequently in lithic art can achieve a rhythmic repetition in textiles;

"Technical activities in which regularly repeated movements are employed

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to lead to rhythmic repetition in the direction in which the movement proceeds. The rhythm of time appears here regulated into space. In flaking, adzing, hammering, in the regular turning, pressing required in the making of coiled pottery, in weaving regularity of form and rhythmic repetition of the same movement are necessarily connected.\textsuperscript{52}

Thus the textile decoration of the Tiahuanaco-Huari Style shows an increasing emphasis towards the representation of deities in an abstract style composed of repeated but opposed fragmented elements of figures and arranged rhythmically.[103] For some this represents a deterioration in style, for Gayton it is:-

"... just gradual deterioration of a style on the wane."\textsuperscript{53}

Quite the contrary, I feel the style reflects a major step forward in terms of abstraction. However she does concede;

\textsuperscript{52} Ibid., 40.

"Whatever the motivation, the conversion resulted in a new sub-style, one of the handsomest in Peruvian textile history."\textsuperscript{54}

After the decline of the Tiahuanaco and Huari cultures, there was also a breakdown in the styles spread by the two. This happened during the Late Intermediate Period in an uneven manner throughout the areas that they had controlled previously. In some cases there was a fairly close adherence to the original style, whereas in others particularly Chancay, a new set of patterns largely based on motifs of previous periods, styles and cultures. At Chancay a diversity of techniques were used, and the artists were not content to work with, let us say, tapestry, but also painting on textiles, loose weave fabrics and gauzes.

Some of the variety in the motifs used in the styles may be adduced to increased trading links, probably maritime, along Peru's coast. There are a few references (in colonial times) to trading, amongst which the people of Chincha, south of Lima, were best known for their trading enterprises, mainly up the North coast.

Preservation of organic material, as is the pattern for most

\textsuperscript{54} Ibid., 291.
periods is much better in the south than in the north. Not surprising therefore, that the best known styles are to be found in the south or the central coast, that is, at Chancay, Ica-Chincha, and the less well established style if it can be classified as such, at Pachacamac.

In Chancay, more so than Chimú, Ica-Chincha and Pachacamac the style can be identified by the characteristic decorative motifs of human, zoomorphic and geometric figures. These are much more numerous than those used in earlier styles. Very often what is represented is a *melée* (amalgam) of figures, human, zoomorphic and anthropomorphic. However rarely does one figure become outstanding as the main motif.

There is an absence of hybrid or non-representational motifs which were common during the Early Intermediate particularly under Paracas art. Instead, the figures that are depicted are outlines, sketched out, skeletons or simple frameworks with next to no body with few details included. The "interlocking" of earlier periods had not disappeared, but rather, its range of application is much wider than previously known, no longer limited to purely snake motifs, birds, monkeys, cats and fish but also other figures are represented in both textiles, murals and ceramics. They became masters in the field of interlocking designs.
The snake motif remained as one of the favourite themes as did the stepped fret, both of which date back to the earliest developments in Peruvian textile art. The interlocking snake can be combined with other figures in a similar manner to an Escher trompe l'oeil (e.g. "Autre Monde" 1947) and become a form eye-twister or teaser. Textile art was as much for the viewer as the wearer. The viewer has to look closely to analyse what is happening or to understand what is being represented.

The representation of the shape of a head had become very much geometicized, often reduced to a triangle, particularly so in the case of the painted Chancay textiles where the figures are often outlined by a dark brown band. The figure is often presented in the classic Chimú stance with rather bandy legs and small appendages or arms, often pointing upwards, although also sometimes downwards. The pieces will always have a range of other items or figures depicted.

While the artist and weaver was adjusting his approach to certain decorative norms and conventions, such as viewing the figure in profile, representing human figures split in half, or shown as seen head on, (that is with the exclusion of the feet which are seen and depicted differently), he
was also seeking to lessen the sense of stiffness or rigidity, by varying
the method of representation and way the figure is broken down.

The Ica-Chincha Style artist was much more formal in his approach
and tended not to experiment so much with different techniques. However,
the Ica-Chincha as a style can be defined much more easily than Chancay.
Techniques, while not simple are not that varied either. The colour range
is simple, designs are uncluttered and textile orientated in conception.
Tapestry techniques could be used. Designs are straightforward
geometrical patterns rather than figures which are laid out in vertical
bands, sometimes including simple designs such as rhomboids or zig-zag
patterns. The Chimú culture, was slightly different in its approach to the
use and reuse of motifs. There is a big difference in style over the strict
formal and geometrical approach of earlier periods and the designs of
previous generations. Many of the objects depicted do not need to have a
ritual context.

There is probably an increasing sense of art for art's sake developing
during this period. Take for example the piece illustrated by Lumbreras on
p.130-1 of Arte Precolombino, where a Chimú piece is shown and
described. A variety of materials are used, cotton, wool, and vegetable fibres, and not only that, but the birds depicted are pushed into relief by a filling or padding placed between them and the supplemenary cloth behind. The birds (probably flamingoes) are laid out in bands alternating with small fish[105] Likewise the colour sequence varies between white, brown, ocre and black on a red background.

A point of additional interest is the use of a wider band of bird figures which decrease in size as the viewer eyes proceed up or down the piece. The weight of the design is balanced by a greater number of bands (3) under the main band of larger birds, and two bands in decreasing size above, the smallest birds being uppermost. There may be some sort of connection with other art forms, such as metalwork, particularly Chimú gold repoussé work and likewise with the ceramic tradition. The style is unified to a great degree and is distinctive above all in the field of ceramics where a Chimú or a Chimú inspired pot can be identified without much difficulty. Much the same can be said about the Ica-Chincha style, although this style is largely determined by the weaving techniques used at the time and developed in earlier cultures. The forms are heavily

105. Cloth in tapestry weave with padding for figure (flamingoes?)
geometricized, for essentially practical reasons, particularly the use of a type of tapestry weave with a series of floats which enabled the alternation of colours, a feature unusual elsewhere. The colour schemes are equally distinctive, grounds can be red, dark brown, green, or purple.

It is likely that as in the case of Ica-style pottery, the textiles also are a form of innovation through archaism, deriving designs from Middle Horizon styles, particularly of Late Nazca style tapestry woven textiles. The meanings enclosed in Nazca iconography would seem to have been lost by the time of the Ica-Chincha textiles, nevertheless, some of the motifs became incorporated into the later style, particularly those that lend themselves to be applied through textile techniques. It would be interesting to know what, and if, the textiles had an influence, by their geometrization, on the ceramic style.

Of all the styles, the Ica-Chincha style is the one that has the closest parallels with the Inca style and even contemporary textiles from the Andean area. It can be claimed that the Inca style had some of its roots in these coastal styles. The Late Horizon, which is primarily represented by the Inca culture and it's associated style, is an interesting case in that, while the Incas unified art traditions much as they unified
things organizatinally, militarily and economically, they allowed peoples subjugated to them to maintain many of the elements of their regional traditions.

For example, in the case of Chancay ceramics, the pottery in many cases preserved old forms, but the painting executed on them assumed Inca style elements. In the area of textile manufacture, Inca control was much stricter particularly in the case of the manufacture of the tocapus. Understandably so, when we consider the importance of weaving and textiles, as has been highlighted by Murra\textsuperscript{56} and indicated earlier in Chap#3. Standardization was obviously one of the objectives aimed at, at least at the higher levels of society. Those who were not of nobility or in positions of responsibility are likely to have been more at liberty to produce cloth to their own specifications, presumably carefully avoiding conventions that might belong to the classes of nobility.

The textiles surviving from Inca period sites on the central coast

are generally very austere, designs being limited to bands or stripes, (although even these may carry a hidden code). Quality controls and standards must have been strict. The tocapus are the only area of textiles that are directly useful in defining an Inca style. This problem was dealt with in Chap#3.

Conclusion and Summary.

One main reason for dealing with style development is that it automatically has to deal with both aesthetic and functional characteristics of cloth. It has been seen that up until the Inca period, pre-Columbian fabrics had as one of their main functions that of entertaining the viewer, giving him visual pleasure in what he saw. Sometimes the function would seem superfluous and the artistry the primary factor. In the earlier periods, function was usually the predominant consideration. For the weaver or artist, textile art had both advantages and drawbacks. There was much freedom in terms of the materials used, but there were also the restrictions of the preestablished plane of warps and their width or length.
The weaver, unlike the painter, really has no second chance to modify or correct his work. Errors are fixed, into the cloth and modification is difficult. Despite this, there are few examples of incompetence. Even samplers, [81] are well executed. Colours, particularly after the introduction of wool became very varied and were arranged in repeated designs rhythmically thus avoiding monotony. This is a common trend in Paracas embroideries, Nazca, Tiahuanaco and Inca tapestries. In the two last styles colour schemes were very subtle and were the most restrained and sophisticated of Andean textiles. Symmetry and colour symmetry has also been outlined as a major element in the organization of designs. As has been previously noted the two main forms of textile art which develop are representational and geometric as Gayton summarizes;

"The former (representational) range from mythical creatures of elaborate fantasy to naturalistic humans, animals, birds, serpents, marine life and food plants. Renderings of these supernatural and natural forms were realistically curvilinear in embroidery and tapestry weave, but were reduced to abbreviated angular lines in the more rigid weaving techniques. geometric forms or the expectable blocks, triangles, diamonds, and zig-zags, with heavy emphasis on stepped triangles and frets."
Interlocking or reciprocal motifs, made by combining opposed stepped triangles, frets, and stylized bird and fish heads were stand-by solutions for borders or all-over patterns throughout most of Andean history.  

The Peruvian weaver took a very different approach to his designs from that of the Near Eastern weaver although many of the techniques were common to both traditions. What was represented also differed greatly. Near Eastern art often features the "tree of life" or pomegranates, the lotus, and other floral motifs. In the Andean area these natural motifs rarely appeared, that is excluding the floral motifs found in Nazca and Paracas textiles. It has been seen that designs that frequently recur in textiles often preceded their appearance in other media, however there are many exceptions to this general trend. The beginning of the use of specific motifs may have been in one medium or possibly another at different times and places. It has been shown that the loan of motifs between crafts necessitates an adaptation to the technical limitations of the new material. Much the same can happen for example in the case of literature.

and poetry, and particularly the process of translation from one language to another.

In the case of the later phases of Nazca, certain curvilinear florid motifs in the ceramics were adapted by weavers to tapestry and weaving techniques with a considerable reduction and angularization of original curves in the designs. It is logical to suggest that many geometrical patterns on ceramics were stimulated and inspired by textile art, however this must be done carefully, weighing up the evidence.

It would be interesting to know what influence the social status of artists was and to establish how the demand for a style or certain motifs was created. Did the artist have patrons? Certainly common themes indicate the tastes, values and some of the beliefs which prevailed at the time of their execution, although it must also be noted, the styles which made the fabrics of a period and area distinctive were rarely totally novel. They were the readaptations of old themes, altering motifs by applying new styles to them, recombining and rearranging some, narrowing and expanding designs and showing preference for certain weaving techniques.
One would have expected that the designs would have become stale and static. However, the approach taken up over the centuries of development allowed for a variety of design within a framework of permutations of traditional concepts. Canons of design, symbolism, quality, colour combinations and usage were widely used at a very early stage and were never totally abandoned.
Chapter 6

Conclusion
Conclusion

The Genesis (and Exodus) of the Geometric Form and Conventions.

We have concluded the review of the various periods leading up to the Conquest; dealing first with the chronology and textile technology and then going on to analyse the designs and the development of styles. Many Peruvian textiles have been studied solely to analyse their technological achievement. It was my intention to avoid this and to see the relationship between technique and design; and to go a stage further, to see how these designs have overlapped into other media and traditions. I hope to have clarified the fact that textiles are not necessarily an imitative art but rather an influential art form which has had far reaching repercussions in other media.

Western textile arts developed to a large extent from painting. The influence of painting was strong and meant that most European weavers based their designs on the three-dimensional naturalism, modelling and the principles of perspective found in painting and drawing. These effects were very difficult to achieve, and were very time consuming. The artist
was not given the opportunity to develop his selected medium along its own line. As far as the weaver was concerned the medium was pushed in the wrong direction.

The Andean textile tradition was very different. It did not develop from, and was largely uninfluenced by other media. It may, in fact be considered partly responsible for the development of a type of artistic "conservatism" with a considerable emphasis on the use of geometric forms.

The warp and the weft automatically form a rigid framework with which the weaver had to work, -an inherent quality- and a quality I feel gave rise to the strong geometric tradition which arose in the Andean context.

The three-dimensional naturalism encountered in Western painting had no place there, instead, a tendency to a flat abstractionism developed: pictures built up by strong block colours sometimes more subtly, in some cases areas of sharply defined and contrasting hues or tones.
Due to the difficulties and arduous methods of manufacture involved, the Peruvian weaver showed a preference for repeated patterns in a series of blocks or units. These were easily repeated, and facilitated the progress of the weaver and at the same time created an exceptional internal rhythm. We have seen that once this rhythm is achieved, it is not abandoned, instead it gets stronger, and surprisingly, even during the Paracas period where embroidery comes into vogue, there are many instances of repeated designs on textiles; in fact, the majority. There may be a loosening of rigidly geometric forms in favour of more rounded and naturalistic ones, yet the designs tend to be laid out so as to provide strong geometric rhythms through the replication and multiplication of units. The textile arts of the Andean area must not be considered to be minor arts. They did, in fact, exert a strong influence on other media. The textiles often lent their unaltered designs for use in other media, as has been shown in many cases in the preceding chapters.

This influence has continued on until this day, altered perhaps by centuries of European influence. It still forms a strong undercurrent although not always visible or obvious at first sight. Much of the contemporary Peruvian art retains some of this long heritage of tradition.
I feel that the music of this area, whilst a very different art form, often expressed the rhythm, (to the Western listener, the repetitiveness) the tonality, (the range of colours) found in the textile arts, and as in the case of this type of visual art there was a restraining factor, the pentatonic scale (in textiles, the warp and the weft).

All in all, the textiles and associated art forms are indicators of a highly structured and ordered way of conceiving nature, in many ways alien to the Western way of thinking. The symbolic method of expression continues in use to this day and is typical of Andean man's conception of the world around him. We have taken the example of the double-headed snake and seen how from the very beginnings of the textile arts, this element has appeared. It is a motif that reappears throughout Andean prehistory right through to historical times, even appearing today in both Quechua art and lore.
Tables
TABLE 1

THREAD COUNT

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**Abbreviations:**

**Design:**
- BANDS
- SCEPTRED FIGURES, WILTED ORNAMENTS
- MANTO
- LLAMAS
- CONCENTRIC RHOMBS
- INTERLOCKING CATS HEAD
- CALAMITY
- FOLIAGE
- INTERLOCKING CATS"
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Abbreviations: E1 = EARLY INTERMEDIATE, L = LATE INTERMEDIATE, M = MIDDLE INTERMEDIATE, LI = LATE INTERMEDIATE, C = COTTON, W = WOOL.
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