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*Elemental Meanings:
Symbolic Expression in Inka
Miniature Figurines*

Penny Dransart

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Elemental Meanings: Symbolic Expression in Inka Miniature Figurines

Introduction

It is the aim of this study to examine a category of Inka artefacts in order to explore Inka visual representations of the elements: water, earth, fire and air. The places at which these elements are seen to coalesce most clearly in symbolic form (and which have survived in the archaeological record) are the so-called high altitude shrines, located on or near the summits of extinct volcanoes in the Andes. Fully clad female and male figurines are frequently found at such sites and it is the aim of this work to explore their contexts and some aspects of the symbolism involved.

In western philosophical traditions there is a considerable literature pertaining to the tetralogy of the elements. We can be relatively confident of our understanding of how attitudes have developed through time in the west.¹ In the absence of written records, evidence from the Inka period in the Andes must be obtained from patterning observed in the material remains. This may be supplemented by written accounts dating from after the Spanish invasion of 1532. However, it must be stressed that these accounts postdate the pre-contact construction and use of high altitude shrines. There are two basic premises on which this study rests. The first is that it is possible to examine the artefacts and the contexts in which they are found, in order to understand something of the symbolic associations made by the Inkas themselves. Secondly, information may be extrapolated, with caution, from written accounts of the colonial period, since the shrines probably came into use after *ca* 1470 and, therefore, the lapse of time is relatively short. Yet it should be recognised that there are lacunae in the historical documentation and that the archaeological material studied here provides evidence for alternative interpretations.

A useful source on Inka religion was written by Father Bernabé Cobo in the seventeenth century, although it relied heavily upon manuscripts of the sixteenth century (Cobo 1990). It has been said that Cobo wrote about the Inkas with 'clarity and good judgment' (Rowe 1990, p. ix). However, we should recognise that the work conformed to the scholarly standards which prevailed at the time. In fact, the work is organised according to the Aristotelian or scholastic divisions employed in natural philosophy. Cobo himself mentioned that his account of Inka deities followed these divisions:

'Descending in the order that we are following here to the things that are in the closest and most familiar to us, such as those that are made up of the elements that we call perfectly mixed, both animate and inanimate, the fact

that these Indians had specific gods for every kind of creature or thing within this whole category or list of perfectly mixed things – from the noblest of these creature, which is man, to the lowest of them all’ (Cobo 1990, p. 35).

The translator and editor of an edition of Cobo’s work used here has appended a footnote to explain that the Aristotelian or scholastic divisions to which Cobo alluded were divided into two basic categories: simple bodies or elements and perfectly mixed elements (Hamilton 1990, p. 254). He presents them in the following paradigm:

ELEMENTS

I.	Simple: air, water, earth and fire
II	Perfectly mixed
	A. Inanimate: stones, metal etc
	B. 1. Plants
	2. Animals
	a. Rational: humans
	b. Irrational: all others

As this study of the Inka clothed figurines will show, the thematic treatment of the iconography and the contexts in which the figurines are found refer to the ‘simple elements’, using the contemporary European classification: air, water, earth and fire (including lightning). The figurines themselves are made from ‘perfectly mixed’ elements, but we should note that a cross-cutting of the European categories occurs. Shell and metal were both used in making the bodies of the figurines, respectively products of water and earth. However, the clothing with which these bodies were wrapped are products of the animate world (camelid fleece, bird feathers and, to a lesser extent, plant fibres). This suggests that Inka natural philosophy would have been based on a significantly different classificatory basis than the one employed by Cobo.

A Question of Value

In the west, a distinction is made between precious and base metals, the latter being negatively defined as non-precious. However, different values are attributed to various metallic elements.² These concepts of worth are value laden; it might be questioned whether the preciousness of gold and the nobility of platinum are inherent properties of these metals, as are the ductility of platinum or the electrical conductivity of aluminium. The meanings which may be attributed to such value systems vary cross-culturally. The Chambers dictionary entry for arsenic is illustrative of how attitudes in the west have changed through time; it traces the derivation from the Greek term for yellow orpiment which, according to the Chambers gloss, betrays the ‘fanciful’ belief held by alchemists that ‘metals have sex’ (Chambers 1975). The implication for

modern readers is that it is reasonable to assign noble status to metal, but that it is utter nonsense to differentiate the elements according to sex.

In the Inka empire, gold and silver are understood to have formed part of a state monopoly, with the rulers retaining the right to distribute objects made of these metals to members of the nobility (Bray 1990, p. 313). It is often suggested that gold was regarded as the 'sweat of the sun' and silver as the 'tears of the moon', a dual concept associated with the idea of sexual distinctions, since the Sun and Moon were considered to be male and female, respectively. In fact the Inka emperor and empress claimed divine descent from these heavenly bodies. However, the materials used in the figurines studied here confound such easy one-to-one relationships since male and female figurines occur in both metals, and also in alloys.

Whereas precious metals in western scholastic thought were attributed to an inanimate sphere, the Inkas would have been mindful of the matrix from which the minerals were mined. One of the most important Andean deities of the past and present was, and is, the Pachamama, a term which means in the Quechua and Aymara languages 'Time/Earth mother'. It is relevant to note that according to early seventeenth century dictionaries in both languages, the word *mama* also referred to metal:

mama. Metal en piedra: collque, vel choq mama: metal de plata o de oro en piedra, no fundido (Bertonio 1612 [1984], p. 212).

Mama. Veta, o caja de todo metal como curimama veta de oro &c. (González Holguín 1609 [1989], p. 225).

A detailed study of prehispanic metallurgical traditions by Heather Lechtman focuses on a series of alloys made into objects which were treated to obtain a surface silver or gold colour (1979). Such surface enrichment effects were developed over a considerable period of time in the Andes. Binary alloys of copper-gold and copper-silver, when hammered and annealed into thin sheet, lose copper at the surface through a process of oxidation and diffusion (Lechtman 1979, p. 27). The achieved effect is of an object with a surface enriched in either gold or silver.

By the Late Intermediate Period on the north coast of Peru, highly skilled Chimú metalsmiths exploited this technique to make large golden mummy masks from a ternary alloy of copper, silver and gold, depleting the surfaces of copper and silver in order to create an appearance of gold. According to Lechtman, Chimú sheet 'gold' may contain as low a concentration of gold as twelve per cent by weight (Lechtman 1979, p. 31).³

Whereas copper-silver alloys may result from naturally occurring mineral combinations, copper-gold alloys must be mixed. This latter combination,

known as tumbaga, was widely adopted by different cultures where it was exploited according to the local traditions of handling metals – forging was favoured in Peru and founding in Colombia (Lechtman 1979, p. 31). While the use of tumbaga might be said to be more economical as far as the gold is concerned, for Lechtman, this does not constitute a sufficient explanation which would account for ‘the intimate association between technology and idea systems’ (Lechtman 1979, p. 32). She argues that the invisible gold inside the tumbaga object must have been regarded as an essential physical presence. Equally, the gold appearance produced by surface enrichment was there, but all too often was hidden beneath superimposed overlays of other metals, precious stones and red paint. In Lechtman’s words, ‘The essence had to be present though invisible’ (1979, p. 32).

The composition of many of the Inka metal figurines in museum collections has not been analysed, and we have to be cautious in our identifications.⁴ Yet, if we accept Lechtman’s interpretation, it would seem that these figures embody the minerals silver, copper or gold in human form, even though the brilliance and colour of the metal were hidden under the garments with which they were wrapped.

Not all the figurines are metallic; shell was another material employed. It is usually identified as *Spondylus princeps*, the spiny bivalve harvested from tropical waters off the coast of Ecuador. When carved, it may retain its rosy red colour from the outer layer of the shell. *Spondylus* was a high status material, presumably as ‘noble’ as silver or gold, and the trade routes controlling its supply were jealously guarded (Paulsen 1974). Among the Inkas, shells were regarded as ‘daughters’ of the Mother Sea (Mama Cocha). According to Martín de Murúa, ‘it was said that the seashells were the daughters of the sea, mother of all waters’ (cited in Silverblatt 1987, p. 48).

The Figurines

Most of the surviving metal figurines vary between about 50mm and 150mm in height, weighing between 7.8g and 56.8g (Appendices A and C). There are some taller ones, such as a male figure in the Royal Museum of Scotland, Edinburgh, which is 228mm tall (Idiens 1971), and a female figurine from near Lauramarca in the region of Cuzco (now in the Museo Arqueológico, Cuzco), which is 245mm in height and weighs 524g (Doering 1952).

Many of these figures are hollow. They were assembled from metal sheets, soldered at the sides. Typically, the figures stand with the feet apart, and with the arms bent towards the midriff or chest (figures 1 and 2). Female figurines often have the face and hair outlined in relief; the hair is divided into two braids, and hair fastenings are sometimes indicated. The hands of both male and female

examples are usually empty, but a hammered gold female figurine illustrated by Benson (1981, p. 153) holds a full spindle in the right hand. Male figurines are represented with stretched earlobes, although the earspools which indicated the status of the noble Inka men who wore them, are not usually present. Other features associated with males are a protuberance in one cheek (often the left), as though the figurine were masticating a quid of coca. They also wear a conical, Inka style hat which is flat on top.

In general, metalwork made by hammering and cutting out sheets of metal in order to produce three-dimensional objects was preferred over methods favouring the castability and malleability of metal in the geographical area comprised by Ecuador, Peru, Bolivia, Chile and northwestern Argentina (Lechtman 1979, p. 31). However, cast Inka figurines are also known (Appendix C). These figurines adopt similar postures to their hollow counterparts.

The Inka empire expanded to the north coast of Peru in the latter part of the fifteenth century, and it may be that Chimú metalworkers had a role in the production of Inka figurines. However, there are, in museum collections, cast figurines inset with inlays of substances which have not always survived. The inlays form horizontal bands at the level of the cheekbones, shoulders, midriff and elbows or waist, hips, thighs or knees, and lower calf or ankles. This use of inlaid material is considered to be an Inka innovation (Bray 1990, p. 310). Both female and male figurines have been published with inlaid transversal bands (Rivero and Tschudi 1851: Plate XLIV; Kelemen 1956: Plate 204). Another type of figure has the upper part of the body cast in one metal or alloy, and the lower part in another (Rivero and Tschudi 1851: Plate XLIV). To date, such figurines have not been reported from high altitude shrines.

Carved shell figurines are less often described in the published literature. Perhaps this relative lack of interest betrays Western preoccupations with precious metals. The examples of shell are presented in a similar standing posture as their metal counterparts, but they seem to be much smaller in size. The male shell figurines from Cerro Taapaca and Cerro Las Tórtolas only measure 35mm and 40mm in height, respectively.

The Clothed Aspect

Dressed figurines have been found at various high altitude shrines. These include Nevado de Pichu Pichu in Peru, Cerro Taapaca, Volcán Pili, Volcán Copiapó and Cerro El Plomo in Chile, and Cerro Gallán, Cerro Las Tórtolas, Mercedario and Aconcagua in Argentina (figure 3).⁵

When the shell and metal figurines are found with their clothing intact, the dress follows standardised conventions (figures 4 and 5). Female figurines are clad in a rectangular cloth, wrapped round the body and fastened with pins of 'silver'. These pins, known as *tupu*, have a long shaft and a flattened, semi-circular top. Typically, the top is pierced, and a pair of pins are attached to an elaborately embroidered cord, from which two rectangular pieces of spondylus shell are suspended by two short lengths of braid, dyed deep red. An unattached third pin secures a second rectangular cloth, a shawl, which is folded in half and wrapped round the shoulders with the fold uppermost. A broad band, furnished with a tubular cord and a tassel at each end, is wrapped round the waist, above the first cloth and below the shawl. On the head is placed a cap, provided with a fringed flap which hangs down over the back. Both cap and flap are covered with feathers, either orange-red or white. Orange feathers are known on caps from Cerro Gallán, Volcán Pili, and Cerro Las Tórtolas. White feathers are associated with a second figurine from Las Tórtolas, as well as with figurines from Cerro Copiapó and the Diaguita area of Chile (Beorchia Nigris 1985; Museo Chileno de Arte Precolombino 1986; Reinhard 1992b, p. 88).

Male figurines wear a tunic, above which there is a rectangular shawl. This tends to be of a more oblong shape than the almost square cloths worn by the female figurines. It is knotted by the corners under the chin. In addition, male figurines may be equipped with a long, narrow plait of black camelid fibre and a small feather plume. Sometimes they are provided with a bag which has a shoulder strap. All these accessories are present in the costume of the male shell figurine from Volcán Pili (Appendix B).

Inka Women's Dress

The miniature garments are tiny versions of items of dress worn by women and men in Inka times known from museum collections and archaeological excavations. A high quality full-sized woman's garment in the Textile Museum, Washington D.C. (T.M. 91.366) measures 1.27m by 1.68m (A.P. Rowe 1977: Figures 81 and 82). As analysed by Ann Pollard Rowe, the pattern bands are executed in a complementary-warp weave. In this weave, warp threads travel over three and under one weft threads, with the three-span floats occurring in alternating alignment (Rowe 1977, p. 71). The design consists of zigzag motives with an 'eye' at each end, and further 'eyes' within the triangular background spaces (figure 6). Hence both the structural characteristics of the weave and the design motives employed in the Textile Museum piece are comparable with the miniature garments from Cerro Gallán (items numbers 1 and 4 in the Appendix B) and Volcán Pili (item number 13). This zigzag imagery, presenting an iconographic rendering of lightning, will be discussed further below.

However, a difference may be noted in the fibres used. The Gallán and Pili garments are of an all-camelid construction, but the Textile Museum piece has camelid fibre in the warp and cotton in the weft. In this respect, the full-sized garment is similar to a miniature example, half of which has survived, in the Museum of Mankind, London (figure 7, item number 22 in Appendix B). Because cotton is used in the Textile Museum garment, Rowe suggests that it may have been woven on the coast, although there is no question that stylistically the piece is classically Inka (Rowe 1977, p. 71).

Further examples of full-scale women's garments are known from Pachacamac on the central coast of Peru (Uhle 1991, pp. 89-93), and Cerro Esmeralda, northern Chile (Checura Jeria 1977, pp. 136-9). At Pachacamac, a burial ground was found in the first terrace at the southeast of a stepped architectural complex known as the sun temple. Max Uhle (1991, p. 84) reported forty six burials in the undisturbed, eastern portion of the terrace. All the bodies were identified as adult women. Since some of the heads display signs of strangulation, Uhle designated the terrace as 'the cemetery of the sacrificed women' (Uhle 1991, p. 85 and Plate 18, figure 13).

The garments worn by these women consisted of a large, nearly square cloth wrapped round the body, held in place by two belts binding the waist, and by a pin at each shoulder. They also had a shawl, a headband, and sandals. Some women wore a folded cloth or *ñañaka* on the head (Uhle 1991, p. 89). Uhle characterised the textiles as being of either camelid fibre or of medium-weight cotton, with dark colours including brown or black predominating over other colours. The large square cloths which constituted the main garment (*aqsu*) are executed in plain weave. Most of them, whether of camelid fibre or cotton, are brown in colour (Uhle 1991, p. 90). However, one of these garments differs in that it is white and has a patterned stripe running near the edge on two sides. While the broad white areas are executed in cotton, the pattern stripes are of red and yellow camelid fibre. The design motif consists of a zigzag motif with 'eyes' at each end, and also in the triangles in between, repeating alternately red on yellow and yellow on red (Uhle 1991, p. 92 and Plate 19, figure 8).

In general the Pachacamac shawls are nearly square, but are smaller in size than the *aqsu* or main garment. Most are striped; broad outer bands of one colour flank a central area of another colour. This central area may be subdivided into several narrow stripes (Uhle 1991, p. 91). One of the shawls recovered by Uhle has a design similar to the main garment with red and yellow patterning. It was noted by Uhle as being exceptional, on account of the silkiness of the camelid fibre, as well as for its 'beautiful technique and ornamentation' (Uhle 1991, p. 92 and Plate 19, figure 6). The design layout comprises three broad colour areas, red on the outside and white in the middle. The red areas are embellished with a triple vertical pattern stripe containing a zigzag and 'eye'

motif. Red and yellow are used in the outer pattern stripes, and black and red in the centre.

In contrast with the Pachacamac garments, made either of camelid fibre or cotton, two Inka women found on the summit of a low hill known as Cerro Esmeralda, near Iquique, Chile, are clothed in garments of an all-camelid fibre construction. It is reported that the bodies were found in the foetal position; one is of a girl approximately nine years old, and the other is of a young adult about eighteen to twenty years of age (Checura Jeria 1977, p. 125). The older woman is reported as wearing a large cloth with vertical stripes, the middle section being white in colour. There are eighteen pattern repeats in the red and yellow lateral stripes, with brown and green appearing as subsidiary colours. The design motif consists of zigzag lines with accompanying 'eyes'. In technique (the use of plain weave in the areas of solid colour and complementary-warp weave in the pattern stripes), material (all-camelid warp and weft), and design (the use of plain broad bands and narrower pattern stripes with distinctive motives), this garment resembles the miniature versions worn by the female silver figurines at Cerro Gallán and Volcán Pili.

Other points of comparison between the finds from Cerro Esmeralda and the clothed miniature figurines may be seen in a feathered headdress and an embroidered cord with *tupu* pins suspended from the ends. The young adult from Cerro Esmeralda wore a cap which was covered with white feathers. In addition, a back flap hanging from the nape of the neck was covered with green feathers. This flap was finished with a fringe at the bottom (Checura Jeria 1977, pp. 136, 139). The woman also had a polychrome cord, embroidered with rhombus motifs executed in red and yellow, outlined in black (Checura Jeria 1977, p. 138). A *tupu* pin was attached at each end of the cord. It is interesting to note that the yarn used for attaching the silver pins at the end of the embroidered cord was made from vegetal fibre in the examples from Cerro Esmeralda, Cerro Gallán (item number 9 in Appendix B) and Volcán Pili (item number 16).

Where the costume of the young adult woman from Cerro Esmeralda differs from the miniature versions is in the use of an item identified as a pubic covering by Checura Jeria (1977, p. 137). This consists of a double ring of camelid fibre around the upper part of the thigh. The rings on each side were joined by a narrow piece of leather covering the genital area.

Inka Men's Dress

Inka male garments most commonly represented in museum collections are tunics and bags provided with a shoulder strap. Full-sized tunics of presumed classic highland manufacture have been observed as belonging to one of four

standardised categories (J.H. Rowe 1979). The first type, known as 'black and white chequerboard' consists of alternating black and white squares with a plain red area round the neck opening. This type is known in miniature from the garments worn by the shell figurines from Cerro Aconcagua and Cerro Las Tórtolas (Naville 1958, p. 5; Schobinger 1986, p. 317). A further miniature example, of unknown provenance, is in the American Museum of Natural History (Morris and Von Hagen 1993, p. 171).

Rowe designated his second type the 'Inka key chequerboard', named after a square motif which consists of a diagonal line with an 'eye' at each end, and with two 'eyes' arranged diametrically in the other corners. This motif is executed in alternating colour schemes, in a panel above a series of broad horizontal lines. It is presumably related to the zigzag designs more commonly represented in the dress and shawls worn by female figurines. A miniature version of this type, in the American Museum of Natural History, has been illustrated by Morris and Von Hagen (1993, p. 171).

The third and fourth categories, the 'diamond waist band' and the 'toqapu waist band' have patterned bands across an otherwise plain tunic. However, I am not aware of any published examples of miniature versions of these types. The tunics from Cerro Gallán and Volcán Pili are plain black and plain yellow, respectively.

From a study of the technical characteristics of highland Inka tunics by A.P. Rowe, it can be seen that the warp was oriented horizontally when the wearer donned the garment. Thus the tunics were woven from side to side in a weft-faced plain weave structure, with a high weft count (A.P. Rowe 1978, p. 7). The miniature versions included in Appendix B (items 11 and 18) do not follow this method of construction, since they were woven in a warp-faced plain weave, with a high warp count. This means that the warp is oriented vertically in the garment as worn by the figurines. However, the stitching of the miniature tunics corresponds very closely to that of the full-sized versions. The side seams are joined with closely worked laced (or figure of eight) stitching, the neck slot is overcast, and the armholes and the bottom edge are embroidered with cross-knit loop stitching. These are all features of full-sized tunics (A.P. Rowe 1978, p. 7). In addition, the miniature versions have multiple rows of zigzag embroidery executed in a series of straight stitches immediately above the bottom edge. This characteristic feature is prominent in some of Guaman Poma's early seventeenth century drawings of Inka men (Guaman Poma 1989, p. 320).

A male garment which is conspicuous by its absence in the dress of the figurines is the breechcloth. Since this item was accorded much importance in historical accounts of ceremonial rites of passage, its absence is surprising. According to the chronicles, young Inka boys and girls were said to undergo a kind of initiation. Part of the ceremonies for the boys involved ear piercing and

the ritual investiture of a breechcloth (Molina 1947, pp. 92-3, 95-6). The fact that the miniature male figures do not wear such a garment, nor are their ear lobes provided with spools, suggests a certain immaturity, despite the adult appearance of their outer garments.

The Archaeological Context

Many of the figurines found at high altitude shrines have been located by climbers or miners. All too often, the archaeological context has been damaged before the archaeologists have had the opportunity to examine the site (Linares Málaga 1969, pp. 273-5; Beorchia Nigris 1987, *passim*). Undoubtedly, there are severe operational constraints on conducting archaeological investigations at altitudes in excess of 5,500 m asl. However sufficient information is available regarding the find spots of the figurines to explore some symbolic aspects of the contexts in which they are found.

It should be stressed that Inka metal and shell figurines, in both human and animal form, have been found at a variety of sites, in addition to high altitude shrines. Human figurines were reported from Isla de La Plata, Ecuador, by George A. Dorsey, who dug a site overlooking the Bahía de Drake in 1892 (Dorsey 1901). One silver, one copper and one shell figurine, and at least two gold figurines were recovered from the site (McEwan and Silva 1989, p. 169). The exact find spots of these items are not known, but a double burial was also found, several metres below the land surface. Dorsey thought that much of the sand and gravel covering the burial had eroded down from the hillside above, but it is clear from his report that archaeological materials were contained in the fill above the human remains (Dorsey 1901, p. 255). The burial consisted of two skeletons, which were not recovered due to their poor state of conservation. McEwan and Silva (1989, p. 167) comment that no indication of the sex or age of the skeletons has survived. However, it may be suggested that the individuals were female because six *tupu* pins were found by Dorsey (McEwan and Silva 1989: figure 14). Reliable evidence that Inka women wore three *tupu* pins (one at each shoulder to hold the dress in place, and a third to secure the shawl) is provided by various miniature figurines (e.g. Mercedario, Gallán and El Plomo), as well as by the adult burial from Cerro Esmeralda, as discussed above. Further support is given by the presence of three such pins worn by the so-called *momia de los Quilmes*, the remains of a woman aged about twenty-five to thirty years, who was probably interred on Nevado Cajón in Salta, Argentina (Beorchia Nigris 1987, p. 41).

Inka figurines have also been found underwater in Lake Titicaca, from a site 130m north-east of a small island known as Khoa. A cuboid stone box with a lid contained two gold male and two silver male figurines, while a cylindrical stone box held a gold male figurine, a gold plaque (perhaps this would have been

attached to clothing which has not survived), and a silver camelid figure (Reinhard 1992c, p. 431). Three miniature gold *tupu* pins were found in yet another box, but the figurine itself was missing (Siñanis 1992, p. 448). Reinhard suggests that a gold female figurine, 60mm tall, found south of the rocks where the archaeological material was discovered may have been dropped by a looter (Reinhard 1992c, p. 433). These figurines from Lake Titicaca provide useful confirmation for the same-sex groupings suggested by the Isla de La Plata material. Pairs of female figurines have been reported from Sajsawaman, Cuzco (Valcárcel 1935, p. 180), and recently, with clothing and feathered caps intact, from excavations at Túcume, northern Peru (Heyerdahl et al, forthcoming). The Lake Titicaca finds also demonstrate the occurrence of single human figurines, a pattern better represented by the evidence from the high altitude shrines.

Perhaps the greatest detail concerning the location of figurines at high altitude shrines has been provided by recent excavations on Volcán Copiapó (Reinhard 1992a, pp. 157-63). A silver female figurine with a white feather headdress was found at a depth of 1.30m to 1.35m in fine gravel and sand, facing eastwards, in a structure designated as platform A. In the same platform, at a depth of 1.60m to 1.65m, a shell male figurine was also recovered. He had a black feather plume, and a red and black tunic. Similarly he faced towards the east. However, the surface of the platform was marked differently; above the female figurine a rectangle of stones was laid, while a circle of stones seemed to indicate the location of the male figurine. These two stone alignments served to isolate the two figurines, but the symbolism of the outlines is obscure since in Lake Titicaca, male figurines were found in both cylindrical and cuboid stone boxes.

Elsewhere, figurines are found in separate structures. At an altitude of over 6,000m, various archaeological features were encountered on the northern face of Cerro Mercedario. The silver figurine from this site was found beneath a tumulus measuring 2m in diameter. It was next to a bag covered with white feathers, containing chopped leaves tentatively identified as coca (Beorchia Nigris 1987, p. 127). At a slightly higher altitude there was a group of three dry stone structures, circular in plan, which were built against the incline of the mountain. One of these contained a shell female figurine (Beorchia Nigris 1987, p. 126). In a similar fashion, the three figurines from Cerro Gallán were found in separate drystone structures, but these are described as being square in plan and measuring 1.30 by 1.60m (Rebitsch 1967, pp. 54-5). It is interesting to note that the smallest figurine, the shell male, was found in the largest structure.

It has been suggested that miniature figurines served as a substitute for human sacrifices (Schobinger 1986, p. 303). However there are some instances when figurines and human sacrifices have been reported at the same site. Shell and metal figurines, of which the whereabouts are not known at present, were said to accompany the young woman and girl found on Cerro Esmeralda (Beorchia

Nigris 1987, p. 83). Besides this possible case, three further sites have yielded evidence for the presence of both miniature figurines and sacrificed persons on the same summit. These are Nevado de Pichu Pichu, Cerro Aconcagua and Cerro El Plomo. The skeletal remains from Pichu Pichu have been identified as probably those of a young woman, but the finds were not recovered by archaeologists (Linares Málaga 1969, p. 290). Equally, there are problems in accounting for the find spots of the material from El Plomo. The well preserved body of a boy, aged about eight or nine years, dressed in clothing attributed to the Lake Titicaca area, and a silver female figurine, with clothing intact, are in the collections of the Museo Nacional de Historia Natural in Santiago, Chile (Mostny 1957). Several other figures have been mentioned as having come from El Plomo, including a hollow gold male figurine, a cast silver figurine (said to have weighed three kilograms) and a dressed shell female figurine (Medina Rojas 1958, p. 49). In an article by Medina Rojas (1958, p. 54), there is some confusion regarding the location of these items in relation to the sacrificed boy. However, Grete Mostny clearly states that the dressed silver figurine now in the Museo Nacional was found in the same walled structure as the boy, but was not buried with him (Mostny 1957, p. 46).

It is only in the case of a boy aged seven or eight years from Cerro Aconcagua that there is an unambiguous report concerning the presence of three male figurines directly associated with a human sacrifice. They are described as being in the same fill as the boy (Schobinger 1986, p. 298). This prompted Juan Schobinger (1986, p. 303) to suggest that the figurines served as companion figures for the sacrificed child. If the two women from Isla de La Plata were sacrificial victims, then the female figurines reported from the site may also have been seen as companion figures.

Variations on a Theme

According to Cobo (1990, p. 240) weavers and metallurgists counted among the very few specialists in the Inka empire whose occupation caused them to dedicate 'their entire lives ... in the service of the nobility'. If this is the case, it would account for the apparent standardisation in both the figurines and their clothing. These specialists would have been responsible for producing figures in a range of sizes. Surviving documents of records of plunder taken by the Spaniards in the wake of the conquest, as well as existing figurines in museum collections, suggest that the output of the specialists responsible for making human figurines was large.⁶

Yet the apparent standardisation should not lead us to over-emphasise the similarities between the various items of dress worn by the figurines, as some writers have tended to imply (Beorchia Nigris 1987, p. 395). A study of the clothing of the female figurines suggests that different categories may be

represented, on the basis of variations observed in the pattern bands and the colours employed in the garments. The closest similarities may be seen in the dress of the female figurines from Cerro Gallán and Cerro Mercedario. In these garments, white predominates in the plain weave areas and the red/yellow combination in the pattern bands. The design motives closely resemble the double-headed serpent and 'eye' of the full-sized garments from Cerro Esmeralda, Pachacamac (especially textile no 3 in Uhle 1991, p. 92) and the Textile Museum, Washington, D.C., as discussed above (figure 6). One of the shawls from Cerro Gallán (see Appendix B, no. 3 and figure 4b) has a counterpart to that worn by the shell figurine from Cerro Mercedario (Beorchia Nigris 1987) in that the outer plain areas are red, and the pattern band consists of a continuous zigzag line with 'eyes' in the triangular background spaces. The main difference between these two sets of figurines is that the Gallán figures have feathered caps (with orange-red plumage), but the Mercedario figures lack headdresses.

In contrast with the Mercedario and Gallán clothing are the garments from Cerro Las Tórtolas and Volcán Copiapó. The dress of the three female figurines from these two summits is closely related, in that the main garment is executed in natural colours (white, dark brown, black and tan). Unlike the Gallán and Mercedario garments, in which the colour bands are ordered bilaterally around a central axis, these natural colours are arranged in an asymmetrical fashion. In all three figurines neither the main garment nor the shawl bears a complementary-warp weave pattern band, but one of the shawls from the Las Tórtolas has a narrow stripe of little horizontal bars formed in plain weave running along the length of each side selvedge (Beorchia Nigris 1987). However, zigzag imagery and pattern motives are present in the belts (Reinhard 1992b, p. 89). Another feature of the shawls from these two sites is that they are more rectangular in shape, unlike the nearly square garments of the Gallán and Mercedario figurines. In fact, their proportions are nearer those of the shawls worn by the male figurines and also by some of the full-sized shawls from Pachacamac (Uhle 1991: figure 107).

It would seem that the Cerro El Plomo silver figurine belongs to an intermediate category between these two extremes, since the natural colour banding of the main garment is asymmetrical like those of Las Tórtolas and Copiapó (compare illustrations published in Lothrop 1964, p. 218 and Levenson 1991: catalogue no 442). The shawl does have pattern bands, executed in complementary-warp weave, but in this garment the design is reduced to a simple zigzag. Two pattern areas are inserted between the plain weave areas, which are brown at the edges and white in the centre. Each pattern area is subdivided into three narrow stripes, with red and yellow zigzags on the outside and red and purple inside. In this central stripe, there is a terminal area at one end in which the complementary-warp weave is abandoned and plain weave takes over, forming little horizontal bars. Evidently the El Plomo silver figurine

differs from the shell figurine discovered in 1922 on the same summit, since a black and white photograph published by Medina Rojas (1958: figure 2) shows that the shawl of the latter has bands with double-headed serpents and ‘eye’ motives.

Less easy to categorise are the garments from Volcán Pili and the half shawl in the British Museum, as they are incomplete. The female figurine from Pili lacks her outer shawl, but the main garment is embellished with a V-shaped double-headed serpent and ‘eye’ motif in the pattern bands. Red, mauve and white are used in the plain weave areas. Although the British Museum shawl has pattern bands which are closely comparable with the Mercedario and Gallán miniatures, as well as with the full-sized garments, the colouring of the plain weave areas is different. Dark chocolate brown predominates with red separating the patterned areas, which are flanked by red and green stripes.

The range of colour and pattern combinations present in the clothing of the female figurines is paralleled by a somewhat similar range in the full-sized garments from the cemetery explored by Uhle in the first south-east terrace of the Sun temple (Uhle 1991, pp. 90-3). Given that most of the clothing studied by Uhle was of cotton, rather than of camelid fibre, the Pachacamac garments have a more coastal character, since the extensive use of camelid fibre is usually considered to be a feature of the highlands. Nor did the Pachacamac women wear feather headdresses. However, Uhle did mention that a few of the women had the head covered with a *ñañaka*, and he commented that this item was worn by women of high status, implying that women of different rank were buried in the cemetery (Uhle 1991, p. 89). He equated the different colours in clothing with a fourfold classification of the *acllakuna*, the ‘chosen women’ who served the state cults of the Inkas. The four classes were *yuraj*, *wayruru*, *paqu* and *yana*, which Uhle (1991, p. 92) equates with the colours white, red, reddish-brown and black. After reviewing the historical material available at the time of writing – 1903 – Uhle proposed that the white *acllakuna* would have been dedicated to the sun, the red *acllakuna* would have served the Inka emperor, the brown *acllakuna* the local ethnic rulers, and the black *acllakuna* commoners (Uhle 1991, pp. 92-3). An early seventeenth century account written by Santa Cruz Pachacuti mentions these four categories of women in connection with Topa Inca Yupanqui, the emperor who is traditionally regarded as having brought the lands where high altitude shrines are situated into the ambit of the Inka empire. Santa Cruz Pachacuti listed the people and non-human resources that the Inka emperor took to Cuzco after a victorious campaign as far north as Quito; included were the *yurac aclla*, *uayruc aclla*, *paco aclla* and *yana aclla* ‘for the maidens of the *Coya* [the empress Cocamama Anaguarque], and principally [for] the *acllacuna* of Ticci/capac/virancocha/pachayachachi [the Creator]’ (Santa Cruz 1968, p. 302).

The application of such classification systems to archaeological materials is made complex by the fact that *paqu* may be used to designate a range of hues from yellowish to reddish brown (as in the undyed vicuña colour of camelid fleece). Hence an early seventeenth century Quechua dictionary glosses the term *ppaccu* as

cosa bermeja rubia roxa (a bright reddish, golden or ruddy, red thing) (González Holguín 1989, p. 271).

In addition, the term *wayruc* is related to the Aymara word for a bean with a distinctive red and black colouring (Middendorf, cited in Uhle 1991, p. 92).

R. Tom Zuidema has discussed the categories of chosen women in relation to colour and also in the light of data presented by Guaman Poma concerning different age grades (Zuidema 1990, pp. 56-8). In this classification, the *wayruc acla* (twenty to thirty years of age) are assigned the most noble status in the colour and age based hierarchy. They served the Sun, the Moon, the Stars and Thunder. Zuidema suggests that the importance of the age-ranking was due to a requirement that the *wayru acla* should belong to the same genealogical rank as that of the Inka emperor and empress. In his model, the women at the bottom of the hierarchy were admitted at the age of fifty and above in order to serve the cults of the Moon, the Stars and other *wak'as* (holy places). Yet, according to Guaman Poma (1980, p. 301), this class of *acla* was entrusted with the all important task of weaving belts, straps for coca pouches and bags. Belts have traditionally been accorded much ritual significance in the Andes, hence Zuidema's characterisation (1990, p. 58) that 'they were only allowed to weave belts and strings' because they were on the bottom rung of the hierarchy makes one suspect that other interpretations may also be relevant. Belts worn by Inka women were broad, offering a wide field in which geometric designs were repeated (Uhle 1991, figure 106; Desrosiers 1986). In a similar fashion, the shoulder straps of Inka bags were wide and embellished with geometric motives. This is a feature of the miniature bags (see no 19 in Appendix B). Post menopausal women may have been responsible for weaving such items if taboos prevented younger women from doing this task. In the figurines from Cerro Las Tórtolas and Volcán Copiapó, the belt is the only garment which depicts elaborate design motives, so the importance of this item of dress should not be underestimated.

Another point in relation to age-based hierarchies was made by Max Uhle when he referred to the seventeenth century *Relación Anónima de las Costumbres Antiguas de los Naturales del Pirú* to the effect that probationers in the 'convents' wore grey garments described as being 'very quiet' in colour (cited in Uhle 1991, p. 93). Hence the colours worn may reflect different stages in the career of the wearer.

Therefore it may be suggested that the female figurines belonged to different social categories, which may be related to the garments of the *acllakuna*, or the chosen women. The use of white in the central band of the shawls, or as the main colour in female garments, is noteworthy. That the clothing of the Las Tórtolas and Copiapó figurines does not share this characteristic, and additionally displays less dyed colour, imparts an impression of junior status in relation to the female figurines of the other mountain peaks.

An anomalously dressed figurine of unknown provenance was offered for sale at Sotheby's, New York (catalogue no 35, 15 November 1994). The *aqsu* and the shawl are executed in mainly natural colours, and the shawl is much longer than it is broad, hence the clothing might be said to most closely resemble that of the Las Tórtolas and Copiapó figurines. Characteristic Inka stitching in red, yellow and green bordering the shawl corresponds with the equivalent cross-knit stitching of the Copiapó shawl (Reinhard 1992b, p. 88). Yet the use of pink (combined with brown in little alternating bars) in the *aqsu*, and blue in the belt are unusual. The figurine is equipped with three *tupu* pins, two of which are joined by a bi-colour two-ply yarn, rather than an embroidered cord. There are no red braids with spondylus plaques. Similarly, the woven section of the belt has lengths of bi-colour two-ply yarn attached to each end, rather than the plaited cords and tassels of the miniature belts from high altitude shrines. The use of simple plied yarns (in brown and white) in place of elaborate, colourful cords constitutes the most anomalous feature of this dressed figurine. Therefore the sale of this item on the art market without provenance is of inestimable loss to our understanding of the contexts in which such artefacts were used. The absence of a feathered headdress also contributes to an impression of junior status conveyed by the figurine.

Feather Headdresses

Whereas male figurines are equipped with a small feather plume, the female figurines are, with the exception of the Mercedario pair, provided with a much more resplendent headdress. That the Cerro Esmeralda adult woman wore similar headgear highlights the special character of the item. The women in the all-female cemetery at Pachacamac were not provided with such headdresses. It should also be noted that Uhle (1991, p. 88) stated categorically that no gold or silver objects were recovered from the graves of the cemetery. This means that although some of the women were sacrificed before being placed in the south-eastern terrace of the temple, they were not accompanied by miniature figurines. The findings help corroborate the supposition that the feathered headdresses were only used in special contexts.

There are few parallels for this headgear from other contexts. Headdresses consisting of a plumed cap and a feather-covered dorsal piece, hanging over the

shoulders of the wearer, are known from later prehispanic times in the Chimú area (A.P. Rowe 1984, p. 178-83). However, they are based on a cap made from a woven fabric, whereas a looped structure was employed in the caps of the miniature female figurines (figure 4). Other distinctions have to do with the iconography, which is figurative, and stylistically late Chimú in character. They also formed part of men's attire.

Strangely, the Inka women's feathered headdresses more closely resemble headgear known from a lowland South American ethnographic context (Spix and Martius 1831). In the nineteenth century the Mundurucu of Brazil made feather-covered caps, which, like the Inka examples, are constructed on a closely worked looped foundation. However, they lack the feather-covered woven back flap, although there is a neck piece formed by long flight feathers to cover the nape of the neck. Like the Chimú headdresses, these were worn by men.

Yet in the Andes women were frequently accompanied by birds; Uhle (1991, p. 87) mentions the presence of parrots among the grave goods of the women in the Pachacamac cemetery. An iconographic association was made by both Guaman Poma and Martín de Murúa in their illustrated manuscripts. Guaman Poma includes another detail of great interest in his portrayal of the succession of Inka empresses from the first, Mama Uaco Coya, to the last independent empress before the Spanish invasion, Mama Chuqui Llanto Coya. This is a feathered parasol held over the head of the monarch by attendants who may be young women, elderly women or female dwarves. Five of the empresses are depicted with the plumed parasol. They are the first, Mama Uaco, the eighth, Mama Yunto Cayan, the tenth, Mama Ocllo, the eleventh, Mama Raua Ocllo and the twelfth, Mama Chuqui Llanto (Guaman Poma 1980, pp. 120, 134, 138, 140, 142).

Feather clothing is also associated with the Virgin Mary in a painting by an anonymous artist of about 1700 (Damian, in press: figure 6). In the painting, the feather garment is tunic-like rather than a head piece. The history of this type of representation is unclear, however the use of feathers to cover or to crown divine personages highlights the celestial associations evoked by the bird feathers. It should be remembered that the Inka empresses claimed descent from the celestial bodies of Sun and Moon. Furthermore, the iconography of the Christian Virgin emphasised lunar associations.

In terms of the raw material used to dress the figurines, feathers with aerial connotations cover the head, and camelid fibre, with its terrestrial connotations, the body of the wearer. These two materials would seem to express the elements air and earth, but the underlying symbolic associations were probably far more complex. Ethnographic work in the Andes has demonstrated that Quechua and Aymara herders often name their llamas and alpacas after water birds (Flores Ochoa 1978; Dransart 1991, pp. 139-40). This is a feature which occurred in

Inka terminology as well; Cristóbal de Molina observed that certain camelids were called *huarcapaña*, named after a white egret (Molina 1947, pp. 52-3; Dransart 1991, pp. 235-6). The terminology suggests that the Inkas considered camelid fleece and feathers to belong to a similar category.

On another level, contemporary herders also make a parallel between plants and fleece, in a constant cycling of elements which results in both substances. A Quechua speaker from Pinchimuro, in the Department of Cuzco, said of Pachamama, the time/earth divinity,

[I]nside the earth she lives From her, hair grows, that is pasture and that is wool for the animals. The animals are nourished with that pasture (Gow and Gow 1975, p. 154).

Here, plants and animal fibre are being conceptually linked. It is therefore intriguing to note that in the Inka miniature figurines, yarns made from non-cotton plant fibres are used in the looped structure of the cap, which means that the vegetal substance intervenes between the hair of the wearer (in this case metal or shell, the substance of the figurine itself) and the feathers of the outer surface. The yarns used to attach the *tupu* pins to the embroidered yarns are also of vegetal fibre. They too have an intermediary position between the metal of the pins and the brightly dyed camelid fibre yarns of the main part of the cord. The choice of different substances (camelid fibre, feathers, cotton and non-cotton vegetal fibres) appears to be deliberate and it is likely that the combinations of various materials expressed symbolic values. These values have to do with the elements earth, water and air.

Cultural Dimensions of Inka Practices

Given the interest the colonial extirpators of idolatry expressed in the religious observances of Andean peoples, it is surprising that there are few recorded references to the use of figurines among the Inkas. In a sixteenth century account, Polo de Ondegardo mentioned that *saramamas* or 'maize mothers' were maize stalks dressed in fine shawls (cited in Silverblatt 1987, p. 25). According to Father Pablo José de Arriaga, an extirpator of idolatry, one type of *saramama* was doll-like; it was made from maize stalks clothed as a woman wearing dress, shawl and silver *tupu* pins (Arriaga 1968, p. 204). People danced to and with stalks of maize as part of the observances to Lliviach, the deity of thunder and lightning in central Peru. Irene Silverblatt says that this was done to ensure a good harvest, and she suggests that *saramamas* were believed to engender maize in abundance (Silverblatt 1987, pp. 25-7). It seems that the figurines found at high altitude shrines would have served a different purpose than the *saramamas* observed by Arriaga, which were used in a more homely and agricultural context. However, it should be remembered that maize was used to make a

fermented drink known as *chicha* by the *acllakuna*, the 'chosen women'. They presented it to warriors in their military campaigns (Pizarro 1978 [1572], pp. 210-2). Hence locally based agricultural production incorporated many different communities into a larger project, the goal of which was imperial expansion.

There are some indications from historical sources which cast light on the symbolism of the design motifs and colour combinations of the miniature clothing. It is the use of colour, or perhaps the dyestuffs themselves, which introduces the fourth element of fire. In a collection of Quechua myths known as the Huarochirí narratives, shining red and yellow birds appear (Taylor 1987, p. 47). The myths also tell of a deity called Pariacaca, who turned himself into a storm of yellow and red hail which devastated the landscape, breaking up the land into valleys and casting up mountains (Taylor 1987, p. 125). Another episode deals with a battle between Pariacaca and a second deity called Huallallo Carhuincho. In the form of a bird, the latter deity flew inside a great rocky peak and hid there. Pariacaca and his brothers lashed the rock with thunderbolts and Huallallo Carhuincho fled. To counter the thunderbolts of Pariacaca, Huallallo Carhuincho caused an enormous double-headed serpent to rise. Infuriated, Pariacaca plunged a gold rod through the middle of the serpent, and thus transfixed, the serpent was transmuted into rock (Taylor 1987, pp. 259-61). Although recorded after the Spanish invasion of the Andes, these myths combine the elements of lightning, the colours red and yellow (or gold), and a serpent motif, which constitute the recurrent features of pattern bands in the miniature dresses and shawls. This is also the imagery of male tunics with the Inka key chequerboard design, and, in abstract form, the zigzag embroidery at the hems of the male tunics and at the bottom of the feathered neck flaps worn by female figurines.

The Huarochirí myths recount inter-ethnic struggles. Although they come from an area which was incorporated into the Inka empire, they do not purport to tell Inka history. They demonstrate that the Inkas did not have a monopoly over iconography involving serpent imagery and red and yellow colour schemes. This colour combination is characteristic of archaeological textiles attributed to the Chimú, Chancay and Ica peoples of the later prehispanic period. However, it was the military prowess of the Inka people which enabled them to maintain their hierarchical position over other peoples, and to take Inka iconography as far as the central valley of Chile.

When the Spanish chroniclers wrote on Inka religion, there was a tendency to present the Sun as the main Inka deity. In fact the Inka rulers, Empress and Emperor, considered themselves to be the daughter and son of the Father Sun and Mother Moon. However these divinities were complex figures. Accounts written by Martín de Murúa and Father Bernabé Cobo also include lightning as one of the Inka deities. They reported that lightning was known by three names: Chuquiuylla, Catuyilla and Intiyllapa (Murúa 1946, p. 167). Cobo provides a

translation for the first of these three names: *resplendor de oro*, or 'golden brilliancy' (Cobo 1956, p. 160). Sun, Moon and Lightning were all worshipped in the famous gold-clad interior of the imperial shrine known as the Quri Kancha in Cuzco. However, it is not clear in these accounts what was the exact relationship between the sun (*inti*) and thunder-lightning (*illapa*). It should be emphasised that the third name listed by Murúa and Cobo combines both *inti*, Quechua for the sun, and *illapa*, or lightning.

In his manuscript, Guaman Poma made some interesting comments which highlight the association between Illapa and death. He said that the lightning deity was also known as Curi Caccha, which too has been translated as 'golden brilliancy' (Adorno and Murra in Guaman Poma 1980, pp. 267, 899). He commented that anyone who entered the 'blaze of gold' in the imperial shrine in Cuzco, the Quri Kancha, 'appeared like a corpse', because the features of that person took on the colour of the metal (Guaman Poma 1980, p. 390). Interestingly, Guaman Poma also informs us that the Inka emperor, who in life was considered to be the son of the Sun and Moon, was called *yllapa* (thunder-lightning) when he died (Guaman Poma 1989, p. 290). In contrast, ordinary mortals were merely called *aya*, or corpse.

Clearly Illapa was an ambiguous divinity responsible for the fertilising rains, as well as the thunderbolts of death. The figurines found at high altitude shrines may well have been considered the children of Mother Earth or Sea and of Lightning. Such an interpretation would support the suggestion that they were symbols of fertility. Due to the prevailing aridity of many regions in the southernmost parts of the Inka empire, the snow-covered peaks of the Andes constitute important features which feed the river systems. The placing of figurines (and also a human sacrifice) on the summit of Cerro El Plomo near the source of water which feeds into a network of rivers including the Mapocho, was seen to be highly significant by Beorchia Nigris (1987, p. 179).

It is also significant that the boy who froze to death on the top of El Plomo had his face painted with a layer of red pigment (red ochre) and four yellow diagonal lines (highly poisonous orpiment or arsenic sulphate) running from his cheekbones to the nose and corners of his mouth (Mostny 1957, p. 31). These, are of course, precisely the colours in the zigzag motives of the miniature shawls.

One of the most detailed accounts of human sacrifice to have survived was recorded at Aixa, near Ocos, central Peru, in 1621 (Hernández Príncipe 1923). The extirpation of idolatry included the exhumation of the remains of a girl who had been sacrificed by her father in the days when the so-called *capacocha* was celebrated every four years. Hernández Príncipe (1923, pp. 60-1) explained that four children from ten to twelve years of age were selected from the four parts of the Inka empire. The children were sent to Cuzco, where festivities were

celebrated. They were then taken back to their communities of origin, where their fathers had their governorship formally confirmed. In Aixa, Caque Poma dedicated his only daughter 'to the sacrifice of the sun' (Hernández Príncipe 1923, p. 61). She was taken to a high mountain, about a league from Aixa, on the boundaries of Inka territory, where she was walled into her resting place. Hernández Príncipe made the difficult ascent to her shrine, and emptied the shaft of her tomb. The girl was revealed, accompanied by splendid grave goods of small vessels, silver *tupu* pins and charms, 'which the Inca [emperor] had given to her as gifts' (Hernández Príncipe 1923, p. 62).

Hernández Príncipe (1923, p. 63) instructed extirpators of idolatry to enquire how local governors received their status, to find out whether their governorship was validated by a human sacrifice. Irene Silverblatt (1987, pp. 94-5) has pointed out that Tanta Carhua's sacrifice and subsequent deification granted her father formal recognition by the Inkas as lord of his community. She also draws attention to the fact that it was only because Tanta Carhua was dedicated to the solar cult of Cuzco that so much information was recorded. Hernández Príncipe dismissed women's worship as comprising a moon cult, and apparently made no enquiries as to whether sacrifices, human or otherwise, were made to the moon (Hernández Príncipe 1923, p. 63). This constitutes a lacuna in the historical data. A sixteenth century document by Cristóbal de Molina considered aspects of the rituals performed at Cuzco at the time of the *capacocha*. In this account, the children who were to be sacrificed walked round statues of the Creator, Sun, Moon and Lightning. Molina added that when the children were buried in the ground, they were accompanied by 'persons of gold and silver' (Molina 1947, p. 133).

A final comment should be made on the Hernández Príncipe report, to a section dealing with Recuay. Hernández Príncipe sometimes specifically mentioned whether human sacrifices were made to the central Andean thunder deity (Lliviác), or to the sun (Hernández Príncipe 1923, pp. 27, 30). As discussed above, the Inka emperor claimed to embody both deities, the sun during his lifetime and thunder-lightning in death. After death, the mortal remains of Inka monarchs were preserved, and cult was rendered to them. The integrative role assumed by Inka rulers is emphasised in Hernández Príncipe's account when he listed the places to which human sacrifices were made in the community of Chaupis Churi: Quito, Cuzco, Titicaca and Chile (Hernández Príncipe 1923, p. 41). Thus the *capacocha* ceremonies also served to link Quechua communities of the central Andes with newly conquered lands which included the peaks of Cerro El Plomo and Aconcagua.

Conclusions

This study of dressed Inka miniature figurines found at high altitude shrines in the southern parts of the Inka empire has demonstrated that archaeological and historical data written in the early colonial period are not always congruent. The sixteenth century account of Miguel Cabello Valboa (1951) attributed the Inka expansion southwards into Chile to the emperor Tupac Yupanqui, followed two decades later by Huayna Capac, who consolidated and extended Inka control as far as the north bank of the River Maule. It was remembered in Cuzco that Huayna Capac stayed in Chile for a year before going back to Cuzco in order to organise other expeditions, including major campaigns to Ecuador and Colombia (Iribarren Charlín 1978, p. 443). Hence it is possible that the high altitude shrines were used not long before the arrival of the Europeans in the 1530s. The double burial at Isla de La Plata in Ecuador, which produced the figurines discussed above, may well date from the reign of one of these emperors. It is interesting to note that spondylus shell used to make some of the figurines discussed here came from the tropical waters off the coast of Ecuador. Also Cabello Valboa credited Topa Ynga (Tupac Yupanqui) with making ‘profound adoration’ on seeing these waters in Ecuador, acclaiming them as Mamacocha, which Cabello Valboa added, ‘means mother of the lakes’ (1951, p. 322).

It is less easy to accommodate other details which have come down to us in the surviving documents. Juan de Betanzos reported that when Inca Yupanqui (later known as Pachacuti Yupanqui) was instituted as emperor, sacrifices of boys and girls were made. They were buried alive, well dressed, ‘in pairs male and female in each pair’ (Betanzos 1987, p. 84). This story refers to events that predate the reigns of Tupac Yupanqui and Huayna Capac, under whose auspices the events at the high altitude shrines and on Isla de La Plata were probably conducted. Moreover, the archaeological record does not support it, as demonstrated above.

Perhaps the Inkas conceived of certain peaks as having affinal relationships, since marriage between anthropomorphised peaks is a characteristic theme in contemporary myths of various Andean peoples. These myths feature hills such as Licancabur and Quimal, near San Pedro de Atacama, and Cerro Esmeralda, on which high altitude shrines are located (Checura Jeria 1977; Le Paige 1978). An Inka model for kin and affinal relationships has been proposed by Thomas Patterson, between the oracle of Pachacamac and related branch oracles. The latter were considered to be a wife and children of the important oracle housed in the Temple of Pachacamac, with which Tupac Yupanqui entered into a relationship in order to further his aims of expanding the Inka empire (Patterson 1983, p. 166). Hence it is possible that mountains and hills were thought to belong to a network of such relationships. Nevertheless the fact remains that human sacrifices at these mountain shrines take the form of single interments or

same sex pairings. This pattern is reinforced by the miniature figurines, which are found singly or in same sex groupings.

The sacrificed boy on Cerro Aconcagua was directly associated with three male figurines, and the two burials identified as women on Isla de La Plata may have been accompanied by female figurines. Cobo said that Inka noblemen had a statue made of themselves of metal, wood, stone or other materials; the size varied from small to large. He observed that these statues were known as *gauaque*, or brother, and were considered to have 'the same powers as the bodies of their owners while they were still alive' (Cobo 1990, pp. 37-8). There is no hint in Cobo's account whether the miniature figurines found at high altitude may have served as 'brothers' or 'sisters' to real people. In fact, Cobo does not mention whether women possessed a sibling statue, nor is there any explanation which might account for the multiplication of figurines at Aconcagua. Another awkward fact is that documented instances of figurines and existing examples in museum collections indicate that female figurines outnumber their male counterparts.

Yet the archaeological record has provided evidence for an unexpected richness in the symbolism of high altitude shrines. Where there is surviving evidence, it can be seen that the figurines are associated with circles and rectangles, or cylindrical and cuboid structures, irrespective of gender, at both high altitude shrines and in stone boxes in Lake Titicaca. If further sites are excavated by archaeologists, the patterning which underlies these symbolic associations may become clearer.

The relationship between the symbolic structures on the mountain tops, barely penetrating the permafrost, and a type of grave known as a shaft-tomb (Zuidema 1977-78) should be examined further. Polo de Ondegardo's sixteenth century account of such a tomb in Cuzco indicates that it was square in shape, built of high quality stonework, and filled with sand from the coast (Zuidema 1977-78, p. 155). The grave contained a single body, said to be that of Mama Ocllo, wife of Tupac Yupanqui in some of the accounts.⁷ Since the feather headdresses of the female figurines are indicative of high status, it is interesting to note that the structures in which they were placed above the peaks of mountains may have been paralleled by comparable underground structures of high status individuals.

This study of the dressed aspect of the figurines has yielded information which supplements what is known from the historical sources. Although dress provided an outward marker of gender among the Inkas, in other respects the female and male figurines embody both a mixing of exactly the same elements from which they are composed. In terms of the raw materials employed, the metallic alloys, shell, animal and plant fibre, and feathers, there is no symbolic expression of gender dichotomy. The difference is expressed in the outward forms of the different garments worn by each sex.

One of the clearest symbolic themes expressed both in the materials used in the figurines and in the iconographic content, concerns the four elements. The miniature metal and shell bodies of the figurines were products of the earth and sea, but their inner qualities may well have been perceived as being set alight by the dangerous flashes of lightning as expressed in the dyes used to produce the woven and embroidered designs which they wore. The high mountain peaks on which they have been found contribute greatly to the hydrology of the area. In lands newly conquered by the Inkas, the choice of certain significant summits as sites for Inka worship undoubtedly carried with it a political message, one of total control over the elements, as well as over mortals. Hence a study of the dressed aspect of the figurines which feature so prominently at such sites tells about the natural philosophy of the Inkas and their attitude to the elements: earth, water, fire and air. The figurines were also used in a manner which expressed Inka religious beliefs and military aspirations.

Notes

1. In recent times, Irigaray has tackled the theme of the four elements in relation to female and male, stating that her approach was 'to interrogate the philosophical tradition, particularly from the side of the feminine' (1981, p. 43). Her expressed aim was

'to make a study of our relation to the elements: water, earth, fire, air. I wanted to return to these natural materials which constitute the origin of our body, our life, our environment, the flesh of our patterns.... We still live our everyday lives in a universe which is composed of and is described in terms of the four natural elements: air, water, fire, earth. We are made of them, and we live in them. They determine, more or less freely, our attractions, our affects, our passions, our limits, our aspirations' (1987, p. 89, cited in Whitford 1991, p. 8).

This study of female and male among the Inkas is conceived in a somewhat similar vein, bearing in mind that the philosophical tradition of the Inkas was different from that of the west.

2. Some examples of dictionary definitions are as follows (all are extracted from Chambers 1975):

Aluminium – a silvery metal, remarkable for its lightness and good electrical conductivity (Al, atomic no 13).

Arsenic – a metallic element (As, atomic no 33); a highly poisonous compound of this metal and oxygen. Greek *arsenikon*, yellow orpiment fancifully associated with *arsen*, male, and the alchemists' notion that metals have sex.

Copper – a reddish metallic element (Cu, atomic no 29).

Iron – a metallic element (Fe, atomic no 26).

Gold – a precious metal (Au, atomic no 79).

Platinum – a noble metal, steel grey, malleable and durable, very heavy and hard to fuse (Pt, atomic no 78).

Silver – a white metallic element, capable of a high polish (Ag, atomic no 47).

3. Following recent archaeological work in the Lambayeque area of Peru, such funerary masks would now be recognised as belonging to the Sicán culture (Morris and Von Hagen 1993, p. 223).

4. Two metal female figurines from the high altitude shrine of Pichu Pichu in southern Peru have been identified as being made from a silver-copper alloy and a gold-silver alloy (Linares Málaga 1969, p. 281). The silver figurine from Cerro El Plomo was identified as comprising 94.4% silver, 5.1% copper, less than 0.4% gold and traces of tin (Oberhauser and Fuhrmann in Mostny 1957, p. 81).

5. Details of the figurines from these sites are listed in Appendix A. An analysis of the garments worn by the figurines from Volcán Pili and Cerro Gallán is given in Appendix B. Summary descriptions of the clothing worn by the male figurine from Cerro Las Tórtolas and the figurines from Cerro Gallán have been published by Millán de Palavecino (1965; 1967a; 1967b). A detailed analysis of the clothing of the figurines from Cerro Mercedario is presented by Michieli (1990, pp. 19-28).

6. An inventory dated April 1538 made by Capitán General Blas Núñez Vela included among other items '12 figures of women, large and small, of silver ...' (*Libros de cuenta y razón pertenecientes a la Tesorería de la Casa de Contratación*, años 1535-1649, Estante 39, Cajón 3, legajo 3/1 in *Revista de Archivos de Cusco* no 5, p 267). Another inventory of the same year listed twenty-four figures of women and one of a man in gold wearing a headdress (Diego de Fuentmeyer, *Libros de cuenta y razón*, p. 270). I am grateful to Carol Damian for this information.

7. It should be noted that not all sources agree on this point. In Santa Cruz Pachacuti's account cited above, the empress of Tupac Yupanqui is given as Coca Mama Anahuarque.

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Figure 1
Inka Male Figurine, gold. 58 mm high. National Museums on Merseyside



Figure 2a

Inka Female Figurines, silver, from Sajsawaman. 58 mm high.
After Valcárcel (1935)

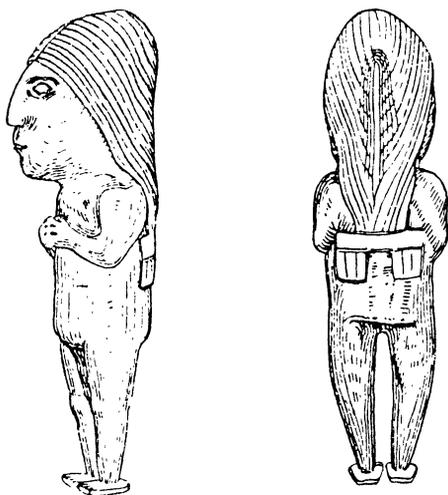
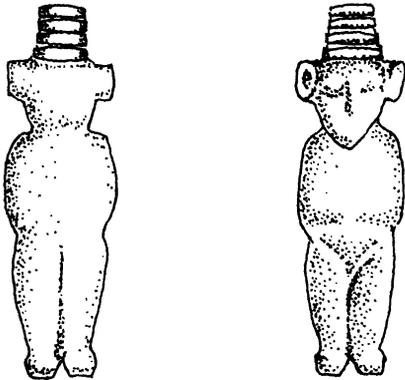
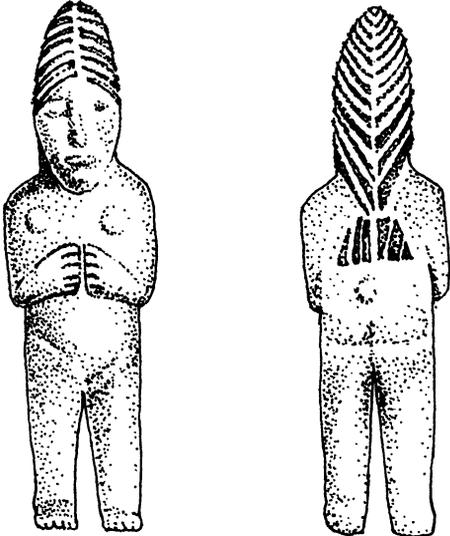


Figure 2b

Inka Shell Figurines, female and male. After Iribarren Charlín (1962)



Scale: 10 mm

Figure 3

Map of Southern Peru, Highland Bolivia, Northern Chile and Northwestern Argentina, showing sites mentioned in the text

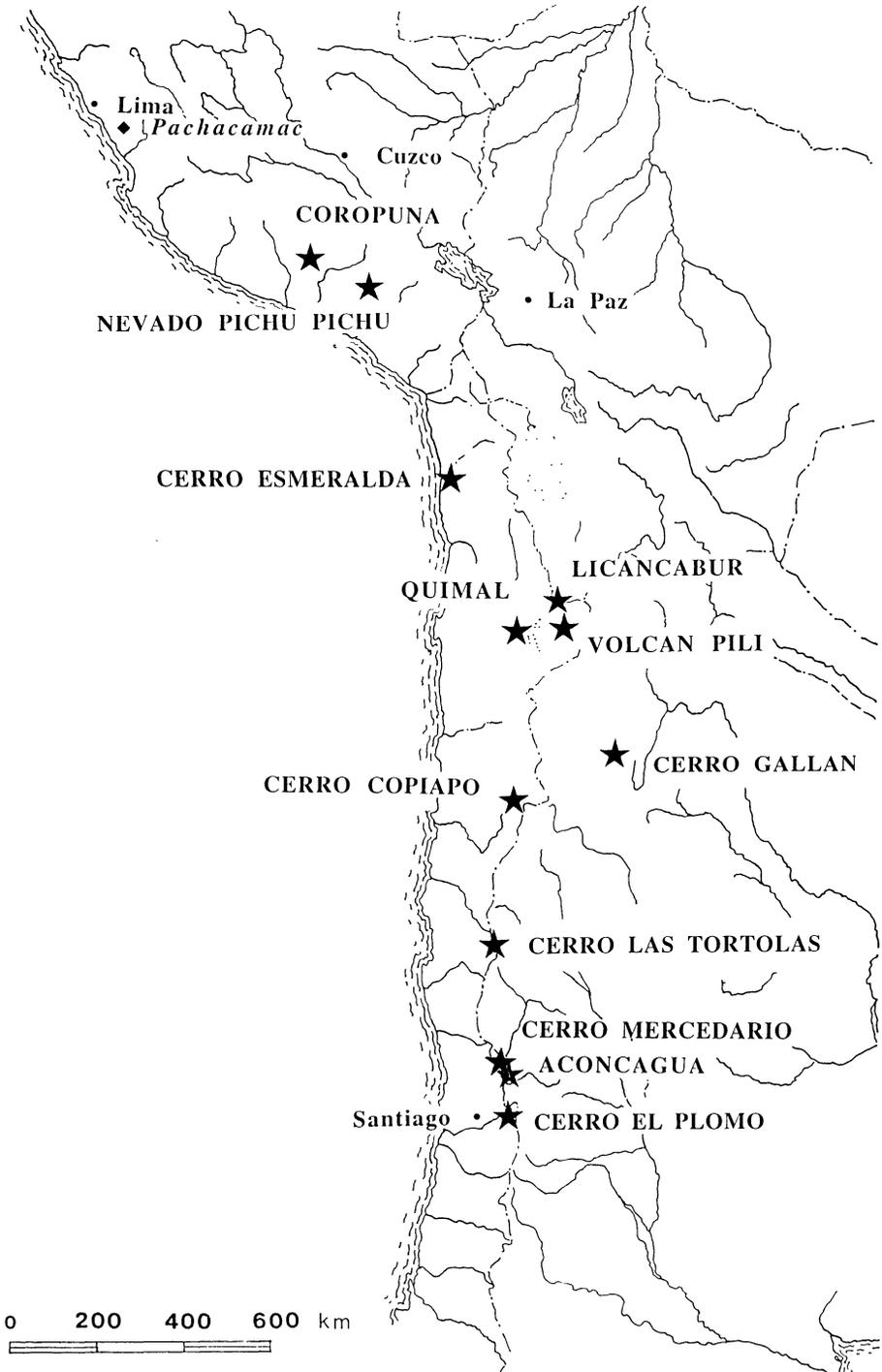
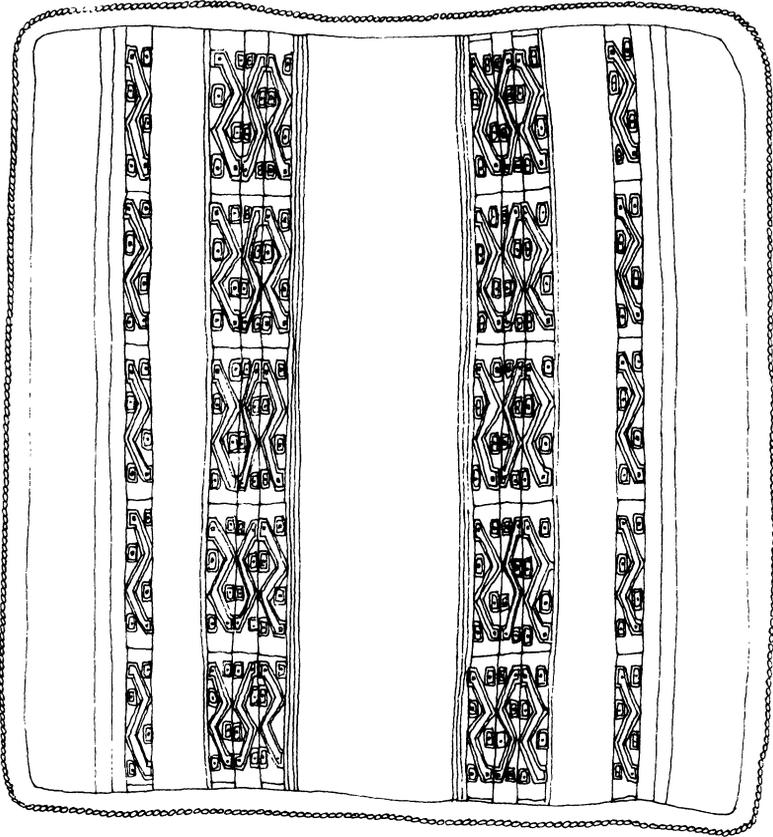


Figure 4

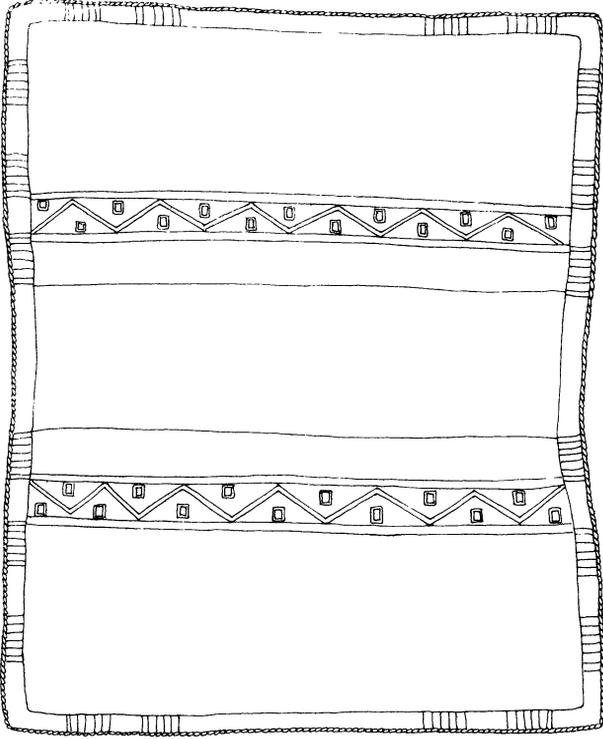
Miniature female garments from the silver figurines found on the summit of Cerro Gallán. Museo Etnográfico, Buenos Aires

4a



Scale: 10 mm

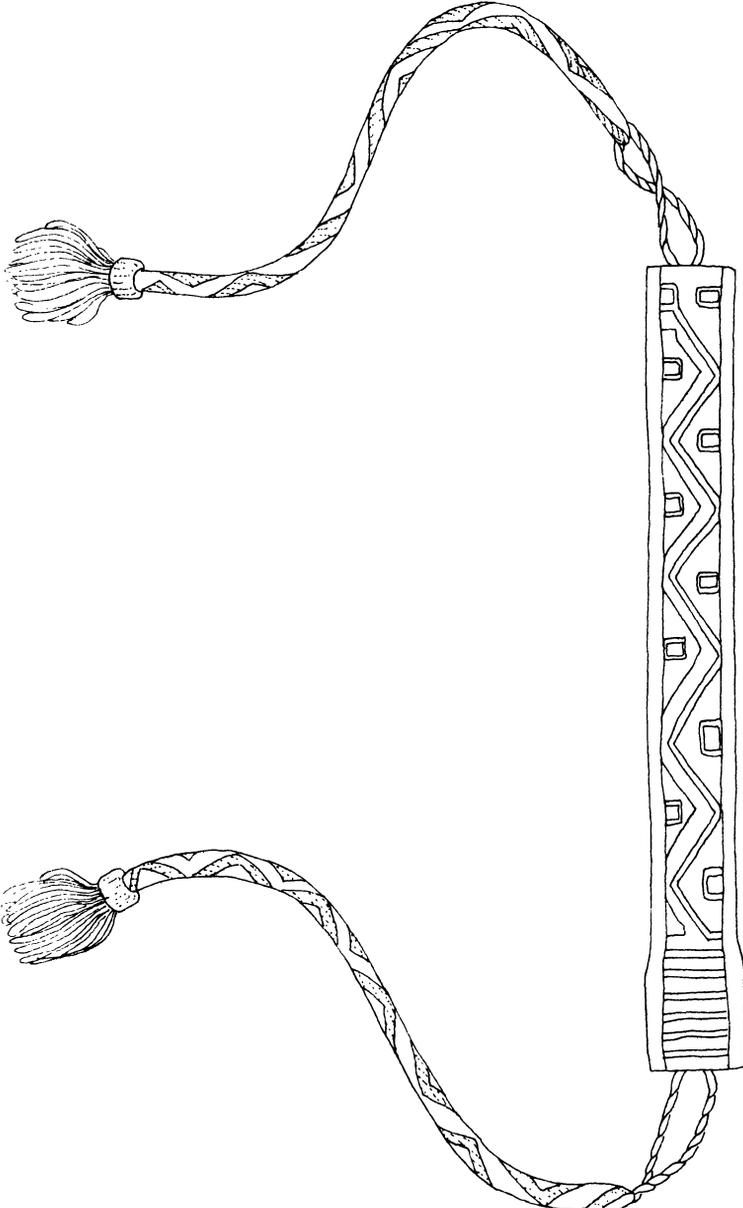
Figure 4b



Scale: 10 mm

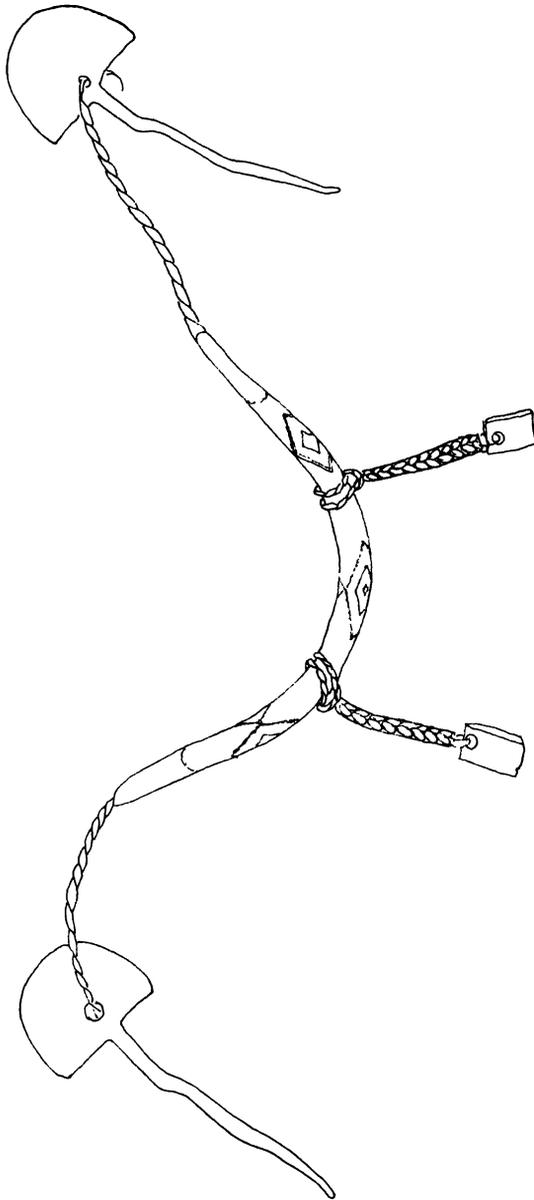


Figure 4c



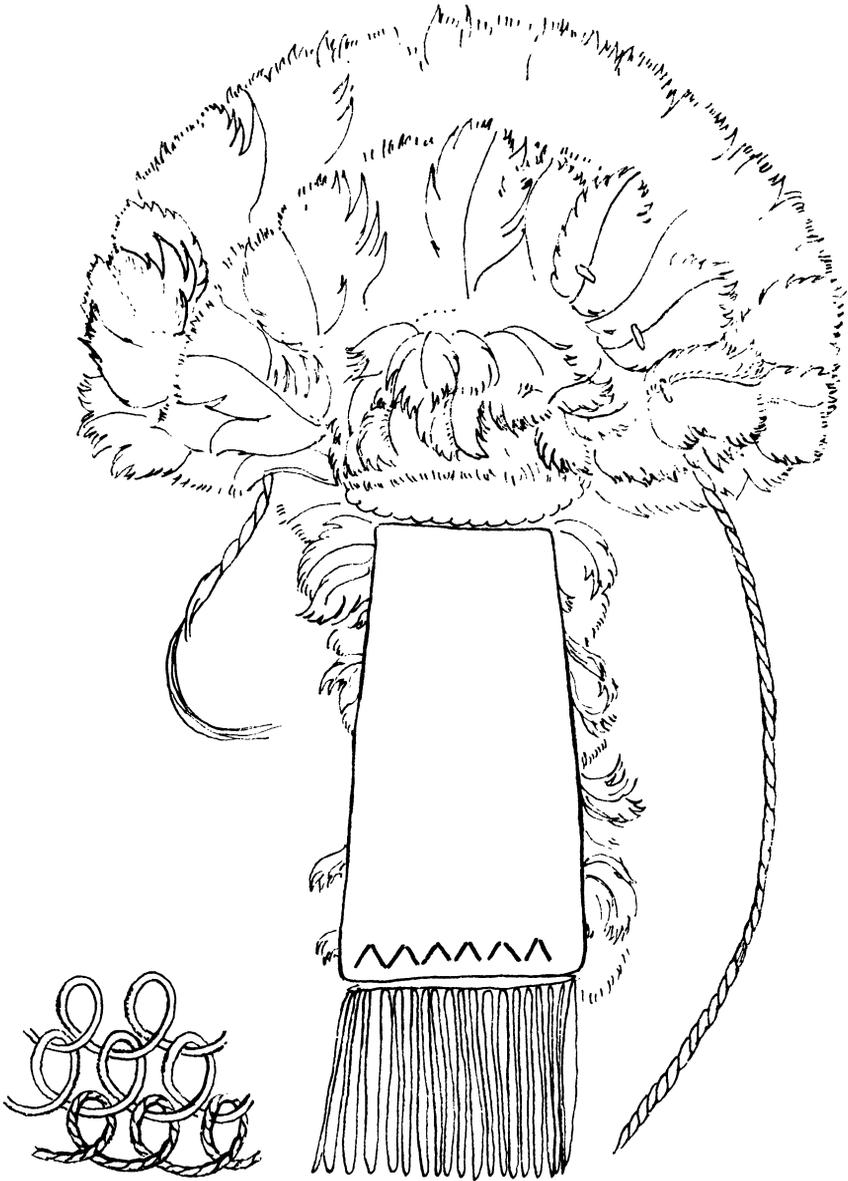
Scale: 10 mm

Figure 4d



Scale: 10 mm

Figure 4e



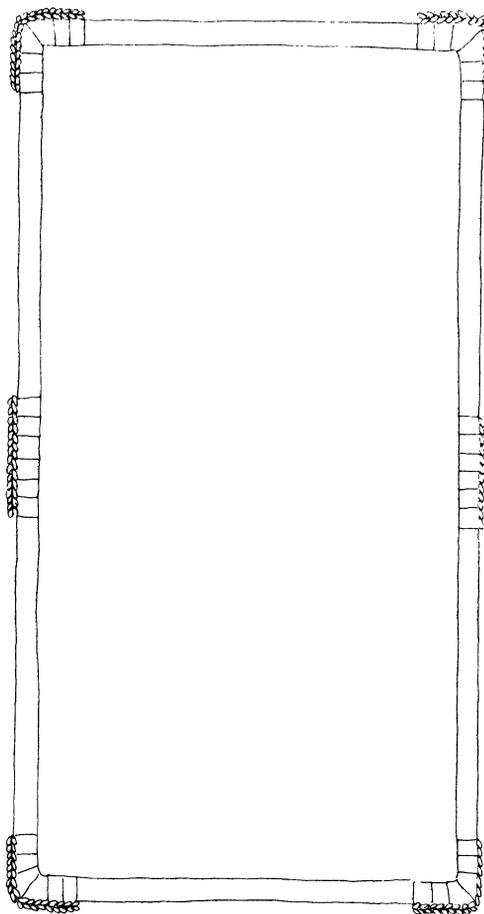
Scale: 10 mm



Figure 5

Miniature male garments from the shell figurine found on the summit of Volcán Pili. Museo Gustavo Le Paige, S.J., San Pedro de Atacama, Chile

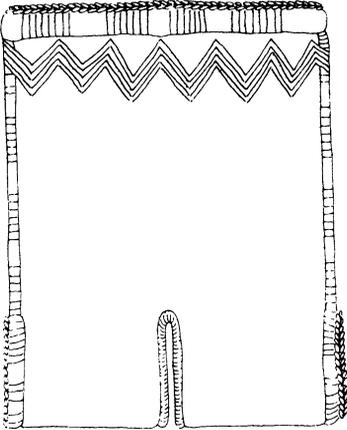
5a



Scale: 10 mm

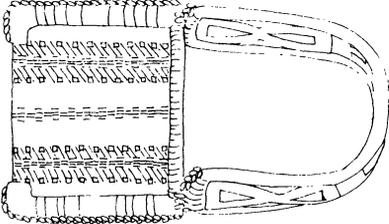


Figure 5b



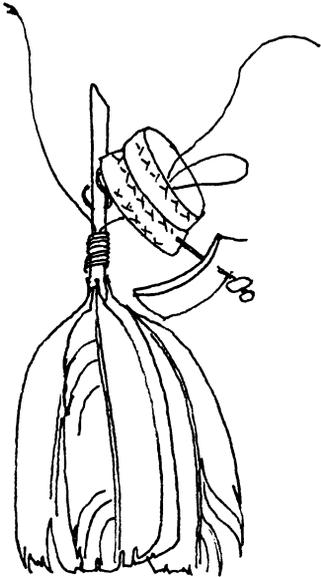
Scale: 10 mm

Figure 5c



Scale: 10 mm

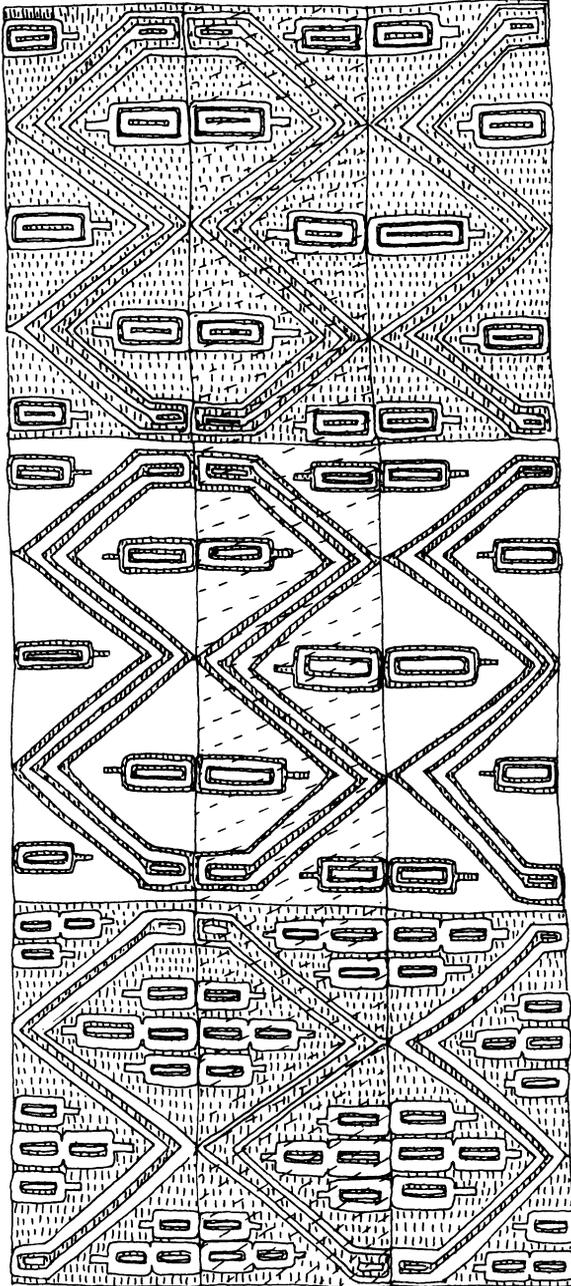
Figure 5d



Scale: 10 mm

Figure 6

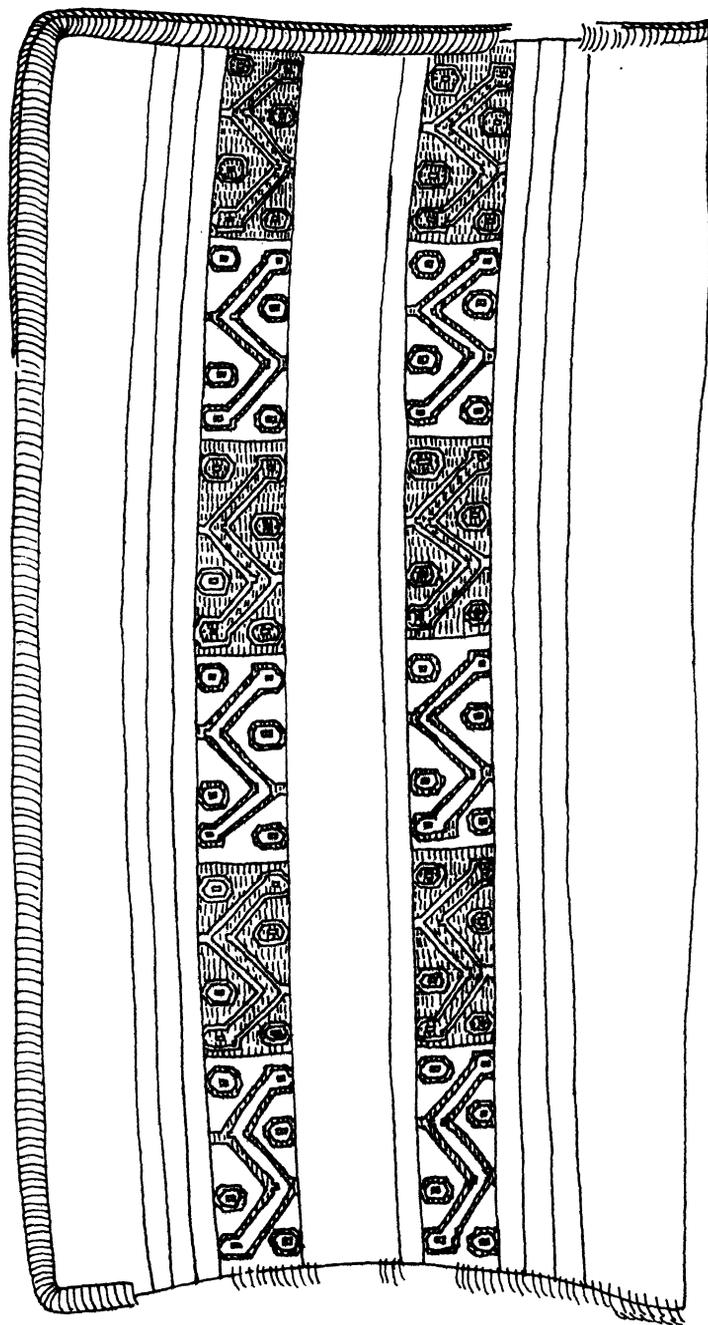
Detail of complementary-warp weave pattern band on an Inka female garment in the Textile Museum, Washington D.C. (accession number 91.366). After Rowe (1977)



Scale: 10 mm

Figure 7

Miniature garment in the Museum of Mankind, British Museum, London
(accession number 1862.6-11.2)



Scale: 10 mm



Appendix A: High Altitude Mountain Shrines with Surviving Human Figurines

Volcán Mismi	5,596m	15° 31' S 71° 41' W
No clothing has survived		
1. Gold female figure Hollow (Beorchia Nigris 1987)	80mm	-
 Nevado de Pichu Pichu	 5,634m	 16° 26' S 71° 14' W
1. Silver female figure Hollow (silver-copper alloy)	143mm	56.780g
2. Gold female figure Hollow (gold-silver alloy)	80mm	15.584g
3. Stone female figure ?travertine (Linares Málaga 1969)	63mm	29.380g
 Cerro Taapaca	 5,815m	 18° 07' S 69° 30' W
1. Shell male figurine (Beorchia Nigris 1987)	35mm	-
 Volcán Pili	 6,060m	 23° 17' S 67° 38' W
1. Silver female figure	55mm	-
2. Shell male figure (Le Paige 1978; Beorchia Nigris 1987)	45mm	-
 Cerro Doña Ana (probably)	 5,690m	 29° 46' S 70° 07' W
No clothing has survived		
1. Silver female figure (Toribio Medina 1952, figure 133; Beorchia Nigris 1987)	-	80g

Cerro Gallán	5,650m	25° 55' S 66° 52' W
1. Silver female figure Hollow	60mm	-
2. Silver female figure Cast	55mm	-
3. Shell male figure	-	-
Cerro Las Tórtolas	6,323m	29° 56' S 69° 55' W
1. Silver female figure	-	-
2. Silver female figure	-	-
3. Male shell figure (Naville 1958; Beorchia Nigris 1987)	40mm	-
Cerro Los Puntiudos (probably)	2,000m?	-
No clothing has survived		
1. Gold male figure Hollow	55mm	7g
2. Silver female figure Hollow	100mm	36g
3. Alloy female figure Cast, ?silver-copper	37mm	22g
4. Shell female figure	53mm	-
5. Shell female figure	43mm	-
6. Shell male figure (Iribarren Charlin et al 1962)	40mm	-
Volcán Copiapó	6,072m	27° 16' S 69° 08' W
1. Silver female figure Cast	80mm	-
2. Shell male figure (Reinhard 1992a)	40mm	-

Nevado Mercedario	6,770m	31° 59' S 70° 07' W
1. Silver female figurine Cast	ca 30mm	-
2. Shell female figurine (Beorchia Nigris 1987)	ca 30mm	-
Cerro Aconcagua	6,959m	32° 39' S 70° 02' W
1. Gold male figure Hollow	59mm	-
2. Silver male figure (silver-copper alloy)	52mm	-
3. Shell male figure (Schobinger 1986)	47mm	-
Cerro El Plomo	5,425m	33° 14' S 70° 13' W
1. Silver female figure Hollow	100mm	-
2. Shell female figure	-	-
3. Gold male figure Hollow (Medina Rojas 1958, p.54; Levenson 1991: catalogue no 442)	-	-

Appendix B: Analysis of the Garments

Cerro Gallan

1. Dress (aqsu), 150mm x 144mm (figure 4a).

Complete and in very good condition.

Structures: 1) Warp-faced plain weave and 2) complementary-warp weave pattern bands with 2-span diagonals, some 3 and 5 span floats and a horizontal colour change which interlaces 3/1. There are two wide and two narrow pattern bands, containing a double headed serpent and 'eye' design which repeats on an alternating colour ground (alternating between red and yellow or purplish black and red). The edges of the shawl are stitched with over stitching and cross-knit loop stitch.

Warp: S plied camelid fibre with medium ply angle. The warp used in the pattern band is Z2S, with a looser ply angle than that of the plain weave stripes. Colours: white, red, black, green, yellow, purplish black.

Weft: not visible, as it is obscured by the densely packed warp; probably medium brown in colour. There are 52 warp threads per 10mm in the plain red stripes, but 80-88 warp threads per 10mm in the white areas. There are 12 weft picks per 10mm.

Stitching: The yarn in the stitching round the edges is of camelid fibre, Z2S, with a loose ply angle; it is white. This yarn is used single in the over stitching and double in the cross-knit loop stitching.

2. Dress (aqsu), 135mm x 152mm.

Complete and in very good condition.

Structures: 1) Warp-faced plain weave and 2) complementary-warp weave pattern bands with 2-span diagonals, and some 3 span floats; the 'eyes' are executed in a 1/1/1 interlacing. There are two narrow pattern bands consisting of a zigzag line with an 'eye' in each triangular space. The edges of the shawl are stitched with over stitching and cross-knit loop stitch.

Warp: S plied camelid fibre with medium ply angle. The warp in the pattern bands is Z2S, with a looser ply angle than that of the plain weave stripes. Colours: white, red, yellow, black.

Weft: not visible, as it is obscured by the densely packed warp threads; it seems to be dark brown in colour. There are 56 warp threads per 10mm in the plain red stripes, but 65 warp threads per 10mm in the white band. There are 12 weft passes per 10mm.

Stitching: The yarns used in the stitching round the edges of the shawl are of camelid fibre, Z2S, with a loose ply angle. This yarn is used double in the cross-knit loop stitching. Black, yellow, red and green are used in a repeating pattern of narrow and broad bands round the margins; the ends of the broad white band in the centre of the shawl are bound with white, and the top and bottom ends of the pattern bands are bound with red. The four corners are all red, and medium sized blocks of green are placed opposite similar blocks of black.

3. Shawl, 84mm x 99mm (figure 4b).

Nearly complete, apart from two deteriorated areas at opposite sides of the shawl, at or near the side selvages.

Structures: 1) Warp-faced plain weave and 2) complementary-warp weave with three-span floats and two-span diagonals; the 'eyes' are executed in 1/1/1 interlacing. There are four pattern bands in total, two closely spaced on each side, separated by a broad white band. There are narrower plain weave bands at the edges, with white nearest the side selvages and red on the inside. The pattern bands are flanked by narrow greenish-black plain weave stripes. They contain a zigzag design with small rectangular 'eyes' in the triangular spaces; this design is red on a yellow ground. The edges are finished with over stitching and cross-knit loop stitching.

Warp: The S plied yarn was made from two Z spun components of camelid fibre; medium ply angle. The warp used in the pattern bands is also Z2S, but with a loose ply angle. Colours used are white, red, green, black and yellow.

Weft: Z2S, with a loose ply angle; white camelid fibre. There are 56 red warp threads per 10mm, but only 48 white warp threads per 10mm. There are 8 weft picks in 10mm.

Stitching: The yarns used in the over stitching and cross-knit loop stitching are of white camelid fibre, Z2S, with a loose ply angle. In the cross-knit loop stitching, the yarns are used double.

4. Shawl, 64mm (warp direction) x 94mm.

Complete, but some deterioration of the wefts has occurred.

Structures: 1) warp-faced plain weave and 2) complementary warp-weave with 3-span floats, 2-span diagonals and some horizontals which interlace 1/1/1. There are two pattern bands in red and yellow, each flanked with narrow stripes of black. These are separated by broader stripes of red and white plain weave. The design consists of schematic double headed, V-shaped serpents with 'eyes' in the triangular spaces left by the repeated V shapes. The edges of the shawl are stitched with over stitching and cross-knit loop stitching.

Warp: Z2S, medium ply angle, camelid, in red, white, black and yellow.

Weft: Z2S, fairly dark brown camelid. It is used double for about 6 passes near the centre of the textile; this may represent a terminal area. There are 48 red warp threads in 10mm, but only 40 white warp threads per 10mm. There are 7 weft picks per 10mm.

Stitching: The yarns in the over stitching and cross-knit loop stitching are camelid, Z2S, with a loose ply angle, used double, in black, brown, yellow, red and green (this green is paler than the one used in shawl no 3). White is also used in the stitching. It is Z2S yarn re-plied in the Z direction, and it is used singly. The colour repeat sequence in the stitching is somewhat similar to shawl no 2, in that small blocks alternating green, yellow, red, yellow are separated by longer blocks of colour. White appears at the top and bottom, above and below the white band at the centre of the shawl, while black is used in the middle of each side. Three of the corners are black, but the fourth is brown.

5. Belt with braids and tassels, overall length 474mm. The woven section measures 158mm (warp direction) x 16mm or 17mm (figure 4c).

Complete and in very good condition.

Structures: 1) Warp-faced double weave and 2) plaiting. The woven section bears a schematic snake design, with an 'eye' in the triangular spaces between the zigzags of the snake. This design is executed in yellow and green, with plain red along each side selvedge. There is a terminal area at one end of the band, with the green and yellow warp forming horizontal stripes while the red warp threads are used in pairs. The braids attached at each end have a zigzag design in red and yellow, and are bound with white at the end, leaving the yarns to form a tassel. These braids are approximately 3.5mm in diameter.

Warp: Camelid fibre, Z2S, with a tight ply angle.

Weft: The weft is barely visible, it is mid brown in colour. There are approximately 28 warp threads per 10mm in the double weave, but the density is greater in the terminal area with a warp count of 36 per 10mm, and 6 weft picks per 10mm.

Stitching: The yarns used to attach the braids to the band are spun in the S direction and plied Z (i.e. in opposite directions than is normally the case); one strand is yellow and the other is red. The yarns used in the braids are Z2S, loosely re-plied Z (i.e. Z4S2Z). Like the red and yellow yarn, they are of camelid fibre.

6. Belt with braids and tassels, overall length 365mm. The woven section measures 68mm (warp direction) x 12 to 15mm, with the terminal area 18mm wide. Complete and in very good condition.

Structures: 1) Warp-faced double weave and 2) plaiting. The design in the woven section is a simple zigzag outline with an 'eye' in the triangular spaces left at each side; it is executed in yellow and green, with plain red at the side selvedges. There is a terminal area at one end, but it is mottled and the colours are not arranged as in band 5. The braids at each end have zigzag lines in yellow and green; they are similar to those on band 5, but are 2.5mm in diameter. Like band 5, these braids are attached to the woven section with an S2Z camelid fibre yarn, but here the strands are yellow and green in colour.

Warp: Camelid fibre, Z2S, with a tight ply angle.

Weft: Camelid fibre, Z2S, mid brown in colour. It is largely obscured by the warp.

7. Headdress: overall length is approximately 145mm, the maximum width of the cap is 100mm (figure 4e).

This item appears complete and is in very good condition, apart from the ends of the two yarns used for attachment, which have the ends missing.

Structures: 1) Warp-faced plain weave and 2) simple looping. The headdress consists of a looped cap, covered with feathers, with an attached rectangle, also covered with feathers on the outside, which hangs down the nape of the neck and back of the wearer. The structure of the cap is only visible in the inside. It appears to be made from white camelid fibre yarns, Z2S, but the lowermost row is of red yarn; the looping crosses right over left. On the outside, the cap is completely covered with orange-red feathers, with a round of yellow feathers at the bottom. A trapezoidal cloth is sewn to the lower part of the cap. It is of warp-faced plain weave, measuring 58mm long, with a maximum width of 30mm.

Warp: Camelid fibre, very light brown in colour, Z2S, with medium ply angle.

Weft: not visible, but probably of the same colour as the warp. There are 44 warp threads per 10mm in the wider part, narrowing to 48 warp threads per 10mm. There are 8 weft passes per 10mm.

Stitching: The feathers are stitched to this cloth in horizontal rows, using a white camelid fibre yarn, Z2S. The stitches are pulled through along the weft of the fabric, so that they are invisible from the inside of the fabric. There is a single row of straight stitches at the bottom of this cloth, forming a zigzag line, executed in camelid fibre yarn, Z2S, with a loose ply angle and dyed red. A fringe is applied below this, it is dark blue in colour made from Z2S yarns re-plied Z, with a loose re-plied angle. The loops of the fringe were not cut. The yarns used for attaching the headdress are white in colour, on the left 9 Z-spun strands were plied S (Z9S), but on the right there are the remains of a Z2S yarn and fragments of another.

8. Headdress: the overall length is approximately 180mm, the maximum width is 110mm. This item is somewhat deteriorated, there are feathers only on the cap, and one of the lower corners of the back piece is missing. The fringe is unravelling.

Structures: 1) Simple looping and 2) warp-faced plain weave. The cap is made from simple looping which crosses right over left in a medium brown colour. There are two rows of red at the bottom. A thick yarn with the ends knotted and tucked inside the cap runs round the outside and top of the cap; it is S plied (probably of Z spun strands). White Z2S yarn is used to stitch the scarlet coloured feathers to the cap. A trapezoidal cloth 75mm long is stitched with overstitches to the bottom of the cap using a Z2S brown yarn. It is woven in warp-faced plain weave.

Warp: Z2S, with a medium ply angle, there are warp threads 40 per 10mm.

Weft: Z2S, with a loose ply angle, 8 passes per 10mm. Both warp and weft are of white camelid fibre, and the weft yarns are used double in the first three passes at the bottom and the last three passes at the top of the piece. The fringe is dark beige in colour, of Z2S yarn re-plied Z, with a loose re-plied angle.

9. Cord with two silver pins and two shell pendants: approximately 180mm long. Maximum diameter is 50mm (figure 4d). The broadest part of the cord is stitched using coloured yarns which obscure the foundation. The design consists of lozenges on a red ground (at left and right) and lozenges on a purple ground (in the centre). Yellow, dark purple and red are used in alternation within the lozenges. The ends of this patterned area are white and tapering. From them, at each end, emerge an off-white yarn, Z2S, to which the pins are tied. Round the broad part of the cord are two round braided cords, red in colour, 20mm long and 3mm in diameter. They are attached to the cord with off-white Z2S yarns, and rectangular shell plaques with a circular perforation hang from each braid.

10. Shawl 50mm x 115mm. Complete and in very good condition.

Structure: Plain weave. Since the stitching is intact, it entirely covers the selvages, making it impossible to determine in which direction the warps run. This may be a warp-faced plain weave. If this is the case, the warp is S plied, with a medium ply angle. It is of white camelid fibre. The weft is not visible. There are 76 warp threads per 10mm and 12 weft passes per 10mm.

Stitching: The edges are stitched with overstitching and cross-knit loop stitching, the latter being reserved for the four corners and the middle section of each long side of the shawl. The yarns used

are camelid, Z2S, with a loosely ply angle. They are used double. In the overstitched sections, long blocks of red are placed opposite black on the other side of the shawl, while in the cross-knit looped stitched sections, black and red alternate.

11. Tunic 78mm long x 64mm wide (69mm at the arm openings).

Complete and in very good condition.

Construction: a piece of fabric 156mm long with a long neck slit was folded in half and seamed at the sides. Structure: Warp-faced plain weave (interlacing 1/1).

Warp: S plied, tight ply angle, of black camelid fibre.

Weft: not visible. There are 72 warp threads per 10mm and 10 weft picks per 10mm.

Stitching: At neck and armholes, overstitching and cross-knit loop stitch (only at the base of the neck slot), in camelid fibre yarn which is Z2S, with a tight ply angle. These yarns are used double in the cross-knit loop stitching. Black is used round the neck, but the colours employed round the arms are in keeping with those of the side seams. Side seams: laced stitch, in Z2S camelid fibre yarn with a loose ply angle. The pattern repeat used in the side seams and round the lower border of the tunic (overstitching and cross-knit loop stitching) consists of small blocks of colours, e.g. green, yellow, red, yellow, red, black separated by broader blocks of red, white, green or black. Immediately above this hem is an embroidered zigzag line executed in straight stitches, stacked red, yellow, green, yellow, red.

12. Braid, 398mm long, 3mm wide. Complete and in good condition. Made from black camelid fibre yarns, Z2S, with a loose ply angle. The braid is flat in cross section, made from at least ten elements. There is a loop at one end which the elements are formed into two groups which are woven, figure of eight fashion, with densely packed Z spun camelid yarns dyed red.

Volcan Pili

13. Dress (aqsu); the piece is deteriorated and in a poor condition, therefore exact measurements were not taken. One edge, running in the direction of the warp measures approximately 116mm. *Structures:* 1) Warp-faced plain weave and 2) Complementary-warp weave with 3/1 interlacing, 2-span diagonals and some 5-span floats. The plain weave stripes vary in width and are white, red and mauve in colour. There are at least three pattern bands, all of which are flanked by red plain weave on one side and mauve on the other. The pattern bands are executed in red and yellow, with a V-shaped double headed motif, and 'eyes' in the triangular spaces of the background.

Warp: Z2S, with a medium to tight ply angle; camelid fibre, in white, crimson red, mid-brown with a reddish cast ('mauve'), bluish green and yellow. There are 56 warp threads per 10mm in the white areas, and 48 threads per 10mm in the red and mauve stripes.

Weft: Z2S, with a loose ply angle; camelid fibre, light natural brown. In one area where the weft interlaces with the bluish green warp, it is darker brown in colour. There are 12 weft picks per 10mm.

Heading cord: Z2S, with a medium ply angle; camelid fibre. It is white in colour and resembles the warp yarn. This yarn is used in bundles of seven threads as the first two passes of the weft.

Stitching: Yarn similar to the warp - Z2S, medium ply angle, camelid, white - is used fourfold in the cross-knit loop stitch round the edges.

14. Belt in good condition. The woven section measures 125mm long, and its width varies from 16mm to 22mm. A braid is attached at each end, measuring 131mm and 118mm in length, respectively.

Structures: 1) Warp-faced double weave and 2) plaiting. The woven part of the band has, within a red border, a pale green long zigzag motif with an 'eye' at each end; there are further 'eyes' in the triangular spaces of the yellow ground. There is no terminal area, but where the band is narrowest, there is a series of long warp floats. The braids are round in cross section, with red lozenges on a yellow ground. They terminate in a tassel which is bound with white yarn.

Warp: Z2S, with a tight ply angle. The fibre is camelid, and the colours are red, yellow and pale green.

Weft: Z2S, with a loose ply angle; light brown camelid fibre. In places, an extremely fine S spun, unplied red yarn may be observed in the weft.

Stitching: There is a row of cross-knit loop stitching at each end of the woven part of the band. The yarns are of camelid fibre, Z2S, with a loose ply angle, used quadruple. They are red and yellow in colour, but the former is finer in diameter. The yarn used to bind the tassels is Z2S, with a medium ply angle, white camelid fibre. In the red and yellow tassels, the loops of the yarns are not cut.

15. Headdress; the back flap has become detached from the cap, but otherwise it is fairly complete. The maximum width of the feathered cap is 103mm, the inner width of the cap being 35mm. The detached piece is 67mm long, excluding fringe. The width is 23mm at the top, and 32mm at the bottom.

Structures: 1) Simple looping, crossed right over left and 2) warp-faced plain weave. The yarn in the looping is of mid brown vegetal fibre, Z spun and S plied, apart from the lowermost round, which is of red camelid fibre, consisting of three Z spun strands with a medium spin angle. A vegetal yarn, similar to that used in the looping, runs round the outside and over the top of the cap as in headdress No 8 from Cerro Gallán. The feathers have the lower part of the spine splinted are wrapped with an unidentified material. On the crown of the cap, they are sewn in place with white Z2S cotton yarn. The uppermost feathers are scarlet-orange, round the base of the cap they are yellow.

Warp: Z2S with a medium ply angle, camelid fibre, beige colour.

Weft: Z2S, with a loose to medium ply angle, camelid fibre, similar in colour to the warp. There are some warp floats on the inside surface, probably caused by problems in changing the shed during weaving. The fringe is of Z2S camelid fibre, with a medium ply angle; it is faded blue in colour. There is a line of embroidered straight stitches forming a zigzag at the bottom of the woven section, above the fringe. It is fairly irregular in diameter, Z2S, with a loose ply angle, of camelid fibre dyed red. The feathers are sewn in place with fine white Z2S cotton yarn.

16. Cord; the embroidered part measures 78mm long, with a maximum diameter of 5mm. The cord is in good condition, with a 'silver' pin at each end. However, only one red subsidiary braid is in place, and the spondylus plaque is missing. An accompanying, unattached braid retains its shell plaque. The foundation is of dark brown camelid fibre, and the broader part of the cord is embroidered with camelid fibre yarns, Z2S, with a loose ply angle in red, yellow and yellowish-green. The design is based on lozenges inset inside one another, with yellow outlines. As the cord tapers towards each end, the camelid fibre yarn is replaced by white vegetal fibre, worked over the foundation in straight stitches in a spiral direction. The very ends of the cords are formed by vegetal fibre yarn, Z3S with a loose ply angle. This yarn is used to attach the pins, one of which is 13mm wide and the other 14mm. From the main part of the cord, a red four-strand braid of camelid fibre is attached by means of a white vegetal fibre, Z2S with a loose ply angle, which passes through the end of the braid and makes four turns round the main part of the cord. The unattached four-strand braid is of red camelid fibre; it is 30mm long and has a shell plaque sewn to the end using white vegetal fibre. The plaque measures 9mm by 4mm.

17. Shawl in very good condition. It measures 62mm by approximately 114mm (figure 5a).

Structure: Warp-faced plain weave. The piece is very evenly woven, but there is one warp float (probably cause by a problem in changing the shed during weaving) which confirms the warp and weft direction given here.

Warp: Camelid fibre, Z2S, with a loose ply angle. Mid-brown vicuña colour.

Weft: Not visible.

Overstitching and cross-knit loop stitching: Z2S camelid fibre, red with a loose ply angle, and Z2S camelid fibre, dark purple with a tight ply angle and a finer diameter. The unused colour is carried underneath the stitches formed by the other colour.

18. Tunic; in very good condition; it measures 54mm long and 44mm wide (47mm wide at the arm openings) (figure 5b).

Structure: Warp-faced plain weave.

Warp: Camelid fibre, Z2S, medium ply angle; yellow.

Weft: Details are not visible, it is pale yellow in colour.

Overstitching at neck: Camelid fibre, Z2S, with a loose ply angle; pale yellow.

Laced stitching (at sides) and cross-knit loop stitching (at lower edge): Camelid fibre, Z2S most of which have a loose ply angle, but yellow resembles that of the warp, and the black also has a medium ply angle. Yellow, black, red, green, dark brown.

Embroidery: Camelid fibre, Z2S with a loose ply angle apart from the yellow yarn, which has a medium ply angle and red, which has a variable medium to loose angle. Rows of straight stitches form zigzag blocks of red, yellow (stronger in colour than in the main weaving), green, yellow, red.

19. Bag; in very good condition. It is 23mm tall by 27mm wide, excluding the handle (figure 5c).

Construction: A warp-faced plain weave rectangular piece was folded in half transversally and stitched at the sides. A handle of warp-faced double weave was stitched to the top opening.

20. Plume. This consists of a ring-shaped braid to which feathers and a plaque of copper are attached. The complete item measures 60mm in length (figure 5d). Six feathers have the ends of the spine bent back and are bound to a piece of wood with a single ply vegetal fibre yarn and a length of unidentified material. This piece of wood, and the copper plaque with a pink bead, are attached to the braid ring by another vegetal fibre yarn (Z2S, light beige in colour). The ends hang loose and are knotted.

21. Braid; the braid measures 4mm in width, it is of dark blue yarn and is made from threads which are doubled back on themselves, forming a small loop at one end. This loop has been woven with red yarn (Z2S). There is a piece of copper, 24mm long, with a slightly curved profile attached to the loop.

Museum of Mankind, London

22. Shawl; 146mm x 81mm (figure 7)

Registration number: 1862. 6-11.2

Half has survived; the piece presumably deteriorated along the fold and has been cut. A row of pin holes is visible near the cut edge. There are three selvages present.

Structures: 1) Warp-faced plain weave and 2) complementary-warp weave pattern bands with 3-span floats and 2-span diagonals, and a 3/1 horizontal colour change. Two pattern stripes, separated by a plain area of red, are flanked on the outer edges by narrow stripes of red and green, beyond which there are larger areas of chocolate brown. The design motif is executed in red and yellow, and consists of double-headed zigzags with 'eyes' in the triangular background spaces. The motif alternates between red on yellow and yellow on red.

Warp: S plied camelid fibre, tightly ply angle. There are 72-96 threads per 10mm (the red is the finest).

Weft: S plied cotton, probably Z3S. Two weft threads were used and there are 18 picks per 10mm.

Heading cord: Three picks of yarn with a coarser diameter were used as weft at the top and bottom of the weaving, but the details are not visible.

Cross-knit loop stitching: S plied camelid fibre, used double.

23. Cord with two silver pins: overall length approximately 230mm. A central core (not visible) is wrapped spirally with white cotton yarn. This foundation is embroidered using stem stitch in camelid fibre yarn. A length of vegetal fibre yarn (Z2S) is attached at each end, and the silver pins are knotted at each end. The embroidered design consists of a diamond within a diamond which is repeated, rotated through ninety degrees in each subsequent register. There are the remains of stitching in two places round the cord, indicating where the braids and shell plaques would have hung.

Appendix C: Selected Examples of Inka Figurines in Museum Collections

Number	Sex	Material	Technique	Height	Weight
MUSEO ARQUEOLOGICO DE LA UNIVERSIDAD NACIONAL SAN ANTONIO DE ABAD, CUZCO					
- (Bray 1990)	F	'silver'	cast	-	-
MUSEO ARQUEOLOGICO, CUZCO					
- from Hualla Hualla, near Lauramarca, Cuzco region (Doering 1952)	F	'gold'	-	245mm	524g
INSTITUTO ARQUEOLOGICO DEL CUZCO (?)					
1-381	F	'silver'	hollow	58mm	9g
1-382	F	'silver'	hollow	58mm	9g
(Valcárcel 1935)					
MUSEO 'ORO DE PERU', LIMA					
V-33/67	F	'gold'	-	151mm	101g
V-33/66	M	'gold'	-	118mm	28.5g
V-33/65	F	'gold'	-	105mm	23g
V-33/64	M	'gold'	-	125mm	37g
V-33/63	F	'gold'	-	125mm	35.5g
(Coutts 1990)					
ROYAL MUSEUM OF SCOTLAND					
1951.210 (Idiens 1971)	M	'silver'	hollow	228mm	-
BRITISH MUSEUM					
7082	F	gold/silver	hollow	57mm	10.4g
1927.10.7-6	F	'gold'	hollow	57mm	8.05g
1847.5-27.2	M	gold alloy	hollow	52mm	7.82g
(Coutts 1990)					
CAMBRIDGE MUSEUM OF ARCHAEOLOGY AND ANTHROPOLOGY					
1924.237	M	'gold'	-	-	-
1924.238	F	'silver'	-	-	-
1924.239	F	'gold'	-	-	-
1928.235	M	'gold'	-	-	-
Z.30000	F&M	'silver'	-	-	-
NATIONAL MUSEUMS ON MERSEYSIDE					
1965.77.2	M	'gold'	hollow	58mm	8g

UNIVERSITY OF EAST ANGLIA

1949 UEA 151	F	'gold'	-	60mm	-
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(Sainsbury 1978)

MUSEUM FÜR VOLKERKUNDE, MUNICH

-	F	'silver'	hollow	150mm	-
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from Isla del Sol, Lake Titicaca (Doering 1952, plate 43)

AMERICAN MUSEUM OF NATURAL HISTORY, NEW YORK

-	M	'silver'	cast/inlaid	-	-
-	F	'silver'	cast/inlaid	-	-

(Kelemen 1956)

B/9608	F	'silver'	hollow	157mm	-
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from Island of Coati, Lake Titicaca (Morris and Thompson 1985; Levensen 1991, catalogue no. 444)

Appendix D: Some Published Examples of Dressed Inka Figurines

MUSEO PACHACAMAC, PERU

- M 'gold' hollow - -
(Bray 1990; Levenson 1991: catalogue no 448)

MUSEO CHILENO DE ARTE PRECOLOMBINO

0002 F 'silver' - 145mm -
wearing garments 0004, 0246, 0251 (including white feather headdress); from Diaguita area of Chile (Museo Chileno de Arte Precolombino 1986)

AMERICAN MUSEUM OF NATURAL HISTORY

41.2/902 M 'gold' - - -
wearing garments 41.2/904, 41.2/903, 41.2/905
(Morris & Thompson 1985)

PRIVATE COLLECTION

- F 'silver' hollow 71mm -
garments include red & yellow feather headdress (Levenson 1991, catalogue no. 443)

MUSEUM REITBURG, ZURICH

- M 'gold' hollow 110mm -
only yarn wrapped round head remains
(Levenson 1991, catalogue no. 446)



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