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The use of trapezoidal tunics with curved warp borders as a means to define the Pica Tarapacá cultural group of Northern Chile (900-1200 AD)¹

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Introduction

When the circulation networks implemented by Tiwanaku in the South Central Andes broke down, there began a process of political disintegration that materialized into a series of village-level territorial and political units competing for resources – a process with significant social and economic consequences (Schiappacasse et al. 1989).

It has been suggested for the Late Intermediate Period (1000-1450 AD), that the Tarapacá region was united and controlled by a socio-political unit that reformulated the social and geographic landscape. The reformulation incorporated resources from different ecological zones by means of a dispersed settlement pattern and llama caravanning practices, all of which would in turn involve multi-ethnic encounters between the local population and people from neighboring Arica, Atacama and the Bolivian plateau (Núñez & Dillehay 1979; Núñez 1984).

Known as the Pica Tarapacá Complex, this socio-political unit was initially defined by Núñez (1984) as Tarapacá people who occupied the space between the rivers Loa and Camiña, from the Pacific coast to the low and middle inland valleys – up to 2500 m.a.s.l. that developed during the Late Intermediate Period, 1000-1450 AD. This intermediate occupation between Arica and Atacama forms a “Complex” of different types of sites with a shared local material culture owing to intense interregional traffic and exchange, within the territory crisscrossed by Arica, coastal, mountain, plateau and Atacameño components,



Figure 1. Map of South Central Andes with indications of primary sites.

¹This work is the result of Proyecto FONDECYT 1030923: “El Complejo Cultural Pica-Tarapacá: Propuestas para una Arqueología de las Sociedades de los Andes Centro-Sur (1000-1540 DC)”.

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Two rivers that flow into the Pacific mark this territory's boundaries: the Camarones to the north, and the Loa to the south. The waterways in-between dry up before reaching the ocean, pouring into the Pampa del Tamarugal. The Camiña is the last river to empty into the Pacific; from the Camiña, the so-called "coastal desert" unravels southward to the Loa. This region's highlands border the Southern highlands where the salt flats of Coipasa and Uyuni are located (Fig. 1).

The material analyzed in this paper belongs to this period and to the so-called Pica Tarapacá Complex.

The archaeological indicators of this population are Pica Charcollo and Pica Chiza ceramics (Uribe et al. 2007), along with characteristic agricultural staples from the semitropical complex (like maize, cucurbita, capsicum, phaseolus, algarrobo, molle and tamarugo pods), leather quivers and cuirasses, bows and arrows, wooden knives, andesite shovels and hoes, twig helmets, and characteristic textiles (Núñez 1984).

For Núñez, both the absence of such indicators in the highlands and their occasional occurrence up to 3000 m.a.s.l., suggest that we are dealing with lowland communities that scarcely reached the highlands. Yet, because spinning and weaving implements have been found both on the coast and in the lower sections of the intermediate valleys, it is obvious that camelid fiber was brought from the highlands, later to be spun and woven following the particular style of the region.

The absence of studies undertaken in the bordering highlands prevents us, however, from confirming the geographical extension of this Complex; but Núñez, considering the popularity of Tarapacá textiles, suggests that Pica Tarapacá would also have controlled and incorporated a few highland territories where there were camelids and foraging grounds.

Alongside clearly local elements, some sites on the coast of Pisagua (Cemetery C) and Iquique (Bajo Molle site) evidence material from the Pica Tarapacá Complex – such as Pica Charcollo and Pica Chiza ceramics. This material would suggest a Pica Tarapacá presence along the coast (Uhle 1922; Núñez 1984; Sanhueza 1985; Moragas 1995; Agüero 2008).

The Pica Tarapacá textiles

Because they were used by all Tarapacá populations, woven clothes and other artifacts are instrumental in ascertaining the identities and socio-political processes of increasing complexity in the region.

Our first analysis of regional clothing from the Late Intermediate Period used reference material from the Pica-8 burial ground – textiles that have characteristic details that set them apart from those of the Arica and Atacama regions (Agüero 2007).

Considering the concept of "style" in its technical, formal and decorative dimensions, the Pica Tarapacá style includes pieces like the trapezoidal tunics with curved and straight warp borders and warp face decorations organized in polychrome lateral bands. When embroidered, decorative motifs are mainly cross-knit loop stitched, with some occurrences of satin stitch. *Chuspa* and belt-bags are decorated with floating and complementary warps, and domestic bags (*costales*, *talegas*, *wayuñas*) are decorated with monochrome bands. All these pieces use a continuous weft element that is also present – along with the other elements mentioned here – in Arica textiles.

The presence of these combined elements reaffirms the inclusion of the Pica Tarapacá Complex within the Valleys Occidentales Tradition (Agüero 2000). The curvature of the warp borders on the tunics is the region's most outstanding technological innovation, to which we can add twig and sea-wolf skin helmets and textile hats.

Adding weight to our study, Horta's analysis of the decorative motifs on Late Intermediate textiles from Arica indicates that they were placed inside vertical bands that stand out in contrast to a monochrome or more finely striped background (Horta 1997, 1998). Pica textiles, on the other hand, have decorations all over the surface, and avoid showing the background color. The types of motifs are also different: Azapa (Arica) textiles have basically figurative (anthropomorphic and zoomorphic) motifs, while Pica textiles have neither figurative elements nor complex geometrical patterns, but rather, emphasize "simple" geometrical motifs.

Examining pieces from various sites in the region where the Pica Tarapacá Complex would have developed helped to determine that such textiles existed throughout a wide territory – from the desert coast of Tarapacá down to the lower end of the intermediate *quebradas* to the east, to the Camiña River to the north, and to the Lower Loa to the south (to the Chacance site) (Agüero 2007). Judging from context and available absolute dates for the sites under consideration and for some of the pieces ascribed to the Pica Tarapacá style, the geographic extension of this style occurred during the first half of the Late Intermediate Period, during the Tarapacá Phase (*ca.* 800-1200 AD) (Núñez 1976; Agüero et al. 1999; Agüero 2007; Uribe et al. 2007).³

The trapezoidal tunics with curved borders

The types of textiles described above characterized the Pica Tarapacá Complex, corresponding to Group A of tunics dated 968-1270 cal. AD (Agüero 2007). This group of tunics is most representative of the oasis of Pica. They have not generally been found in other areas (Table 1, below).

The trapezoidal form is achieved by spacing the warps in the ground loom and also inserting warps into the center of the textile (which corresponds to the shoulder area.) A polished curved stick with an unknown use stands out in some of the contexts of these tunics (Zlatar 1984). It was probably used in the loom on which they were made, as the stick dimensions coincide with the lower part of the tunic's width. So, to the special technique of making trapezoidal tunics, we can add the curved warp border technique (Fig. 2). Contexts connect these tunics to other pieces like *chuspas* and *inkuñas* from occidental valleys, as well as to a majority of Tarapacá ceramics and (many fewer) ceramics from Atacama, Arica and the Highlands.

³ The Pica-8 collection is found in the Instituto de Investigaciones Antropológicas de la Universidad de Antofagasta; also in the Museo Regional de Iquique, en el Museo de Calama y en el Museo Chileno de Arte Precolombino (MCHAP). Additionally some surface collected pieces are in the Colección Manuel Blanco Encalada (CMBE) stored in the Museo Nacional de Historia Natural (MNHN), in Santiago. Also there are pieces from the coast, from the site of Bajo Molle, which were found in the Museo Regional de Iquique, and from the Cementerio C de Pisagua, in the MNHN. In addition, the textiles from the cemetery of Chiu Chiu en el Museo Arqueológico San Miguel de Azapa (MASMA) were studied, and those from the cemeteries of Quillagua (Qui-01, Qui-02 y Qui-03), which we excavated during 1995 and 1996; those materials are now stored in the Museo Arqueológico R. P. Gustavo Le Paige, s. j., in San Pedro de Atacama. Finally, also included are textiles from the Colección Latcham from Quillagua in the MNHN and from the cemetery of Chacance-1 in the Museo Municipal de María Elena. In summary, 333 tunics and textiles from the ten archaeological sites were included in the study. (see Agüero 2007).

Group A Type	Pica-8	Bajo Molle	Quillagua 1	Quillagua 2	Quillagua 3	Col. Latcham	Chiu Chiu	Chacance	Pisagua-C	Total
1	9.75	-	5.06	-	2.19	9.09	-	4.54	-	3.6
2	2.43	-	1.3	-	-	18.18	-	-	2.43	1.50
3	2.43	-	-	-	-	-	-	-	-	0.30
4	2.43	-	-	-	-	-	-	-	-	0.30
5	2.43	-	-	-	-	-	-	-	-	0.30
6	9.75	-	-	-	-	-	-	18.18	-	2.40
7	7.31	-	-	-	-	-	-	-	-	0.90
8	2.43	-	-	-	-	-	-	-	4.87	0.90
24	-	-	-	5	-	-	-	-	4.87	0.90
Total partial	38.96	-	6.36	5	2.19	27.27	-	22.72	12.19	11.11
Group B	41.37	50	34.36	25	4.38	54.54	-	36.36	34.14	25.82
Group C	14.58	50	39.26	55	64.77	9.09	72.22	13.63	46.34	44.74
Atypical	-	-	-	-	2.19	-	-	-	2.43	0.90
n/i	4.87	-	19	15	26.37	9.09	27.77	27.27	4.87	17.41
Total general	100	100	100	100	100	100	100	100	100	100

Table 1. Percentage and distribution of tunics in Group A, in relation to the number of total tunics analyzed.

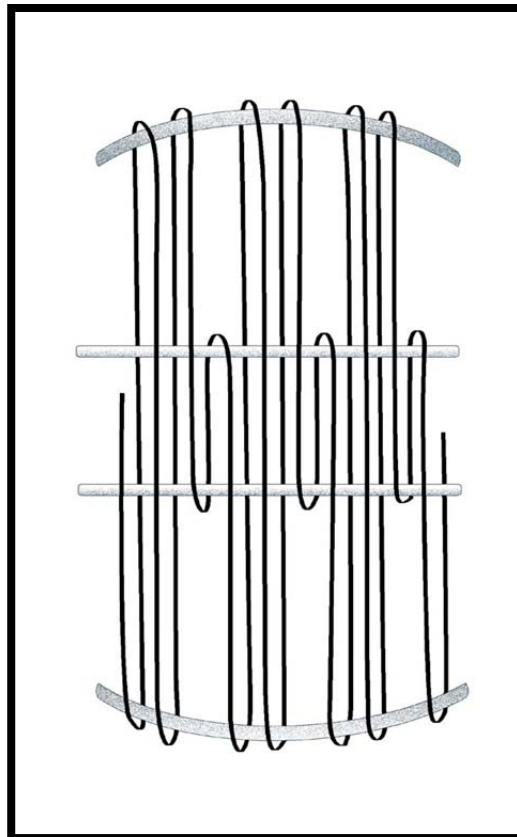


Figure 2. Figure modified from Minkes (2005), showing the wooden spacers (the two in the center) and the ‘augmented warps’ necessary for making the trapezoidal tunic. The curved loom bars create the curved warp selvage.

I have identified the following types of tunics with curved warp border technique (Fig.3):

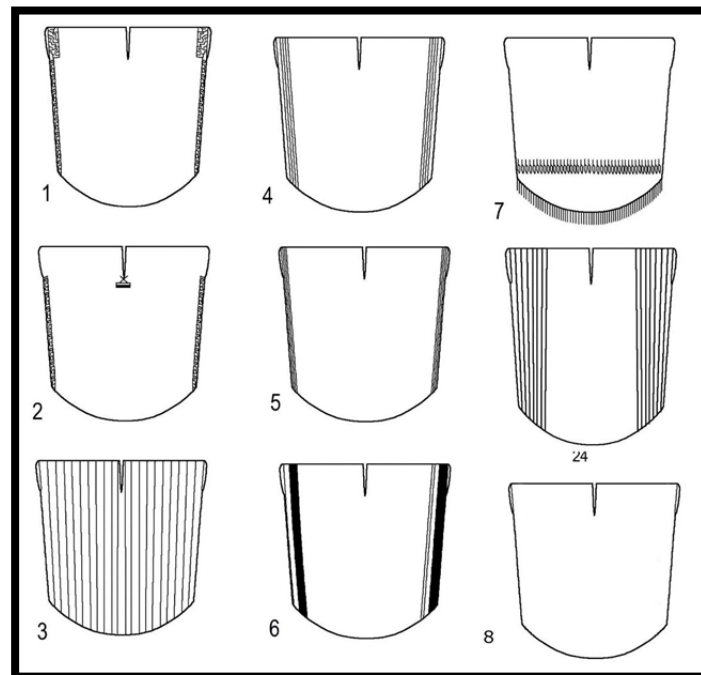


Figure 3. Types of trapezoidal tunics with curved warp borders

1. Beige tunics with narrow lateral cross-knit loop and satin-stitched embroideries (Fig. 4a). The arm openings were satin-stitched to create a broader fringe (Fig. 4b). They have the following decorative motifs:

- a) Straight-lined 'S' with its upper end to the right, simple and doubled, in green and purple on a dark brown background.
- b) A six-axed radiated rhombus in series of three modules: yellow with a blue centre against a dark-brown background, red with a blue centre against blue, and blue with a red centre against dark-brown.
- c) Straight-lined 'S' with hooked appendices in dark brown, green, blue and pink.

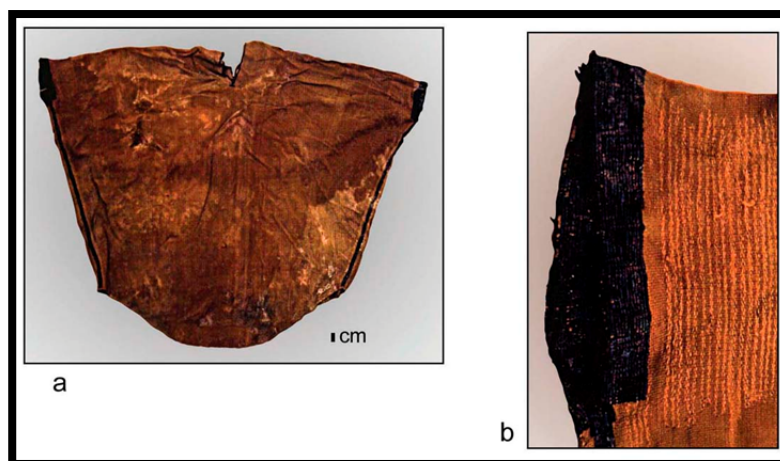


Figure 4. Type 1 tunic.

2. Beige tunics with narrow lateral satin stitched embroideries making 'S' motifs in dark-brown, green and blue. Embroideries do not reach arm openings. The neck opening is strengthened with a curved 'X' in cross-knit loop-stitched white cotton, and by an equally cross-knit loop stitched 2.5 x 1 cm rectangle, divided into blue and green halves.

3. Tunic fully striped in dark brown, green and blue. Side selvages are sewn with a simple dark brown stitch.

4. Pale rose tunic with lateral stripes in red, blue and green against a dark brown surface (Figure 5). Only the threads forming the lateral striping are from camelid fiber, the rest being made out of cotton. The striping consists of four very fine red, blue and green stripes at regular intervals.



Figure 5. Type 4 tunic

24. Tunic with a blue *pampa* (wide plain) and a lateral section with alternating, thin blue and reddish-brown stripes on a red surface. Lateral seams are sewn with an '8' stitch, alternating sections of blue, red and sky-blue. The neck opening has white satin stitch embroidery.

5. Tunic with narrow lateral stripes in reddish-brown and yellow on a pale rose surface. There is a 4 cm cross knit-loop-stitched section on both extremes of the neck opening.

6. Tunic with a beige wide plain and a lateral section with two stripes of equal width, flanked by very fine stripes of the opposite color (Fig. 6a). The stripes are greenish blue and dark brown, and on occasion, at shoulder height, stripe colors are inverted through discontinuous warp (Fig. 6b). The lateral seams may be sewn with a simple stitch or with an '8' stitch alternating the colors of the stripes by sections. Warp borders and arm openings are cross-knit loop-stitched. Each warp selvage is half blue and half dark brown. The extremes of the neck opening may be strengthened by means of a half blue, half dark brown, cross-knit loop stitch. Sometimes the neck area is further reinforced by a curved 'X' made of cotton.

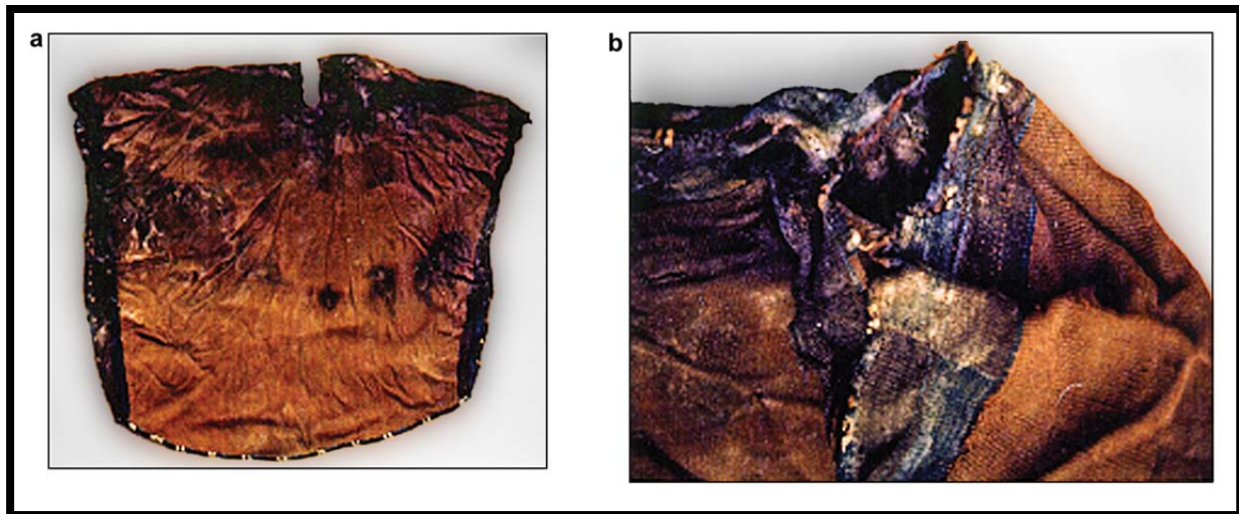


Figure 6. Type 6 tunic.

7. Tunic red dyed after weaving, to which a red fringe was added, and in some cases, horizontal white feathers. The fringe was made by inserting thick cords densely into the warp borders and later, twisting and knotting them.

8. Beige tunic without decoration.

Discussion

Group A or trapezoidal tunics with curved warp selvages, represent 11.11 % of the total of 333 tunics studied (see note 3 and Table 1). Group B or trapezoidal tunics with straight warp borders represent 25.82 %; and finally, Group C or quadrangular tunics make up 44.74 % of the total.

The distribution of Group A tunics is geographically restricted, with a majority of occurrences in Pica – followed by Quillagua and Chacance sites in the Loa river, and Pisagua on the coast (in equal proportions). The most common occurrence is Type 1 (with characteristic embroideries in the seams and arm openings) found in Pica, Quillagua, and Chacance, with an incidence of 3.6%. The next most common tunic is Type 6 (with lateral stripes in standardized colors), found in Pica and Pisagua, with an incidence of 2.4%. In the context of Pica, this type shows many associations with the Occidental Valleys, particularly Arica, as well as with Tarapacá and the Highlands (Zlatar 1984). In fact, its decorative elements are similar to a type of tunic of the Maytas Chiribaya style of Arica (see Minkes, this volume). This type follows Type 2, (also with characteristic lateral adornments), found in Pica, Quillagua and Pisagua, with an incidence of 1.5%. Next are types 7, 8 and 24 (red with feathers and fringes, without embroidery), found in Pica, Quillagua and Pisagua, with an incidence of 0.90 %. And finally, we find Types 3, 4 and 5 only in Pica, with an incidence of 0.30 %. Summing up, the most standardized types were found in Pica and at the borders of the Pica Tarapacá Complex, in the Mid and Lower Loa, and on the coast in Pisagua.

The relationships between the representations and the distribution of the types of tunic that form this part of my study enabled me to determine that they were restrictively used in the “nucleus” of the area, and in the border zones of the Pica Tarapacá Complex, in Pisagua and Quillagua.

The cemetery of Pisagua and the cemeteries of Quillagua were occupied during the first half of the Late Intermediate Period, and the presence of these tunics there suggests the strengthening of regional identity (Agüero et al. 1999; Agüero 2008).

In this sense, the great variety of rupestrian elements (rock carvings) in contemporaneous settlements of the area would indicate that a series of strategies to manage social relations differentially were at play at the time.

In Jamajuga, in the Tarapacá Valley, the presence of three rock carved motifs of trapezoidal tunics with curved warp borders (Fig. 7) strengthens our argument, as the site has been dated to 1160-1290 cal. AD (Agüero 2007). Adding to the strength of our argument is a stone panel of rupestrian art recently found in Pachica (Brandt 2008 Ms), near by the Tarapacá Valley, showing a considerable number of trapezoidal tunics with curved borders.

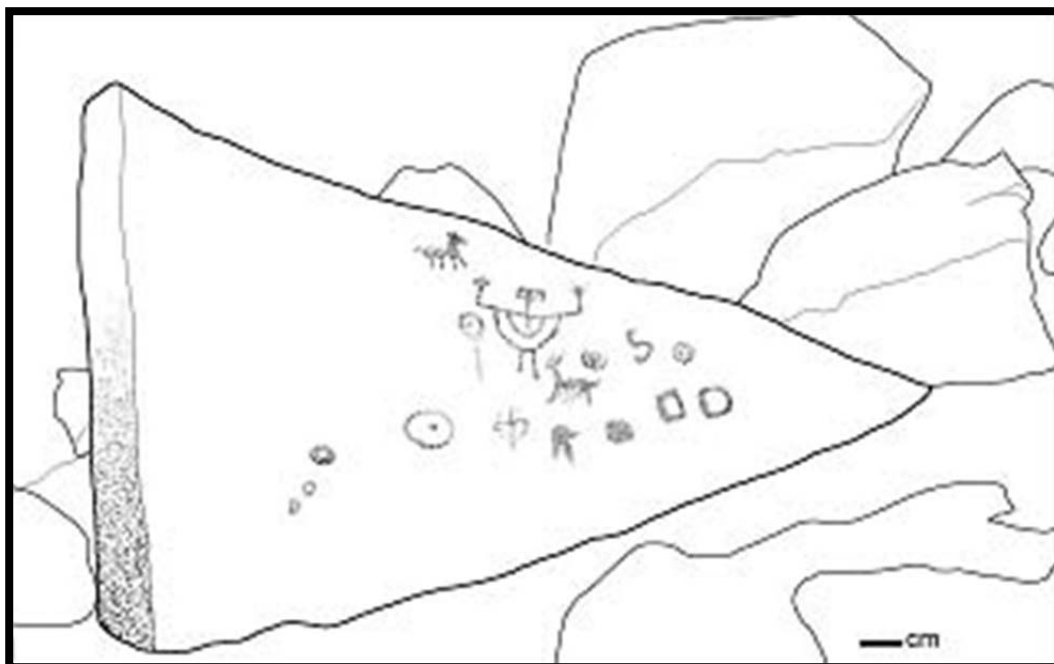


Figure 7. *Rupestrian art of Jamajuga site. The illustration shows an anthropomorphic figure wearing a trapezoidal tunic with curved borders (Vilches & Cabello 2006 Ms).*

The fact that the shape of the tunics is easily distinguishable from afar brings to mind Wobst's observation on the usefulness of stylistic elements in communicating group affiliation (Wobst 1977). Our results support this view, especially if we consider the distribution of Group A tunics in the valleys that empty into the Pampa del Tamarugal, and in the alleged frontiers of the Complex. This distribution indicates that these tunics were created and used, precisely, to demarcate the cultural identity of the territory at a macro level.

In this sense, the style of these textiles – or the way individuals from the Pica Tarapacá Complex produced this type of material culture – actively formed part of the way this cultural group defined itself.

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