PREHISTORIC ETHNICITY AND STATUS BASED ON TEXTILE EVIDENCE FROM ARICA, CHILE

Vicki Cassman*

Several scholars have hypothesized the existence of chieftain and multiethic stratified social systems in the prehistoric coastal oases of Northern Chile. The present research, using textiles associated with 436 mummies from three sites (AZ-140, AZ-71 and PLM-9) in Arica, Chile, has allowed for a reevaluation of the social organization and the development of a new chronology. Textiles associated with the mummies were analyzed for yarn characteristics, weave, dyes, surface embellishments, form, repair and overall style. Also, a quality score was calculated for each textile. Contrary to expectations, the textiles, especially shirts, indicated the individuals studied were not ethnically diverse, since an assortment of shirt styles was found at all three sites, and many individuals had a variety of these styles. Status was evaluated using textile quality scores and qualities of non-textile grave goods. Status differences were evident but were not extreme, and it is suggested that achieved status existed but not ascribed rank. Finally, based on thirty-two new radiocarbon dates it appears the cultures once known, respectively as Cabuza, Maitas, San Miguel, Loreto Viejo and Regional Development were not successive temporally, but represent overlapping styles of the same group of people living in Arica from AD 900 to 1400.

Key words: Bioarchaeology, precolombian textiles, ethnicity.

Diversos investigadores han postulado la existencia en la prehistoria de sistemas sociales estratificados y multietnicos en las áreas costeras del norte de Chile. El presente estudio, utilizando los textiles de 436 momias de tres sitios (Az-140, Az-71 y Plm-9) en Arica, Chile, ha permitido una reevaluación de la organización social y el desarrollo de una cronología nueva. Los textiles asociados con las momias fueron analizados en cuanto a las características de la lana, el tejido, las tintas, los embellecimientos de las superficies, la forma, la reparación y el estilo. También se calculó un puntaje de calidad para cada texto. Al contrario de las expectativas, los textiles, especialmente las camisetas, indicaron que los individuos estudiados no eran únicamente diversos, debido a que se encontró un surtido de estilos de camisas en los tres sitios y muchos individuos tenían una variedad de estilos. El estatus fue evaluado usando la calidad de textiles y las cantidades de bienes funerarios no textiles. Las diferencias de estatus fueron evidentes, pero no extremas, sugiriendo que existía el estatus adquirido, pero no el rango adscrito. Finalmente, a base de 32 fechas radiocarbónicas, parece que las culturas conocidas como Cabuza, Maitas, San Miguel, Loreto Viejo y Desarrollo Regional no eran sucesivas temporalmente, sino que representan estilos superpuestos del mismo grupo de gente en Arica entre 900-1400 DC.

Palabras claves: Bioarqueología, tejidos precolombinos, etnicidad.

The modern city of Arica, in northern Chile, and neighboring coastal oases have been cited frequently as examples of prehistoric Andean multi-ethnic enclaves from the formative period about 500 B.C. through Spanish contact. Based mostly on the existence of several ceramic styles Andean scholars such as Aguero (this volume), Focacci (1983); Mujica et al. (1983); Mujica (1985); Murra (1975); Muñoz (1983, 1993), and Rivera (1975) have all made reference to the multiethnic characteristic of prehistoric Arica in terms of highlanders versus locals. Until, recently there have been no systematic studies of artifacts to back up this up. In addition, based on ethnohistoric data, Rostoworowski (1986) has suggested that Pacific coastal oases were most likely divided into groups based on different subsistence practices, namely maritime folks versus agriculturists.

In the present study textiles from three previously excavated sites from the collection of the Archaeological Museum of the Universidad de Tarapacá were chosen for size and completeness of their inventories. Two cemeteries were chosen from the valley and a third was chosen for its location at the coast. The sites are referred to as Azapa-140, Azapa-71 (valley sites) and Playa Miller-9 (coastal site). Mortuary remains predominate the more than thirty years of collecting, and textiles are the most prevalent grave good. In total 950 textiles from 436 mummies were analyzed in detail. Only recognizable garments were given full analyses. The other fragments were registered only.

According to the local literature these were three multiethnic contemporary Tiwanaku sites dating from A.D. 300 to about 1200. From the ceramic styles at least five cultures or cultural phases

* Department of Anthropology and Ethnic Studies. University of Nevada. Maryland Parkway. Las Vegas NV 89154-5012, U.S.A. E-mail: cassmanv@nevada.edu.
had been associated with these sites; namely Ca-
buza, Loreto Viejo, San Miguel, Maitas Chiribaya
and Desarrollo Regional (Agüero this volume);
Berenguer and Dauelsberg 1989; Espouey 1989;
the help of a NSF Dissertation Improvement grant thirty-three new C-14 dates, based on textile fragments, indicated the three sites dated instead to
approximately A.D. 900-1400 (using 1-sigma calibrated intercept dates). Therefore, the local
chronology, based on ceramics, needs to be revised
considering this new textile evidence.

For this research the following basic assumptions
were made:

1. Textiles are generally the most personal and
intimate artifacts of the social persona, and they
are likely the grave good that will be the most
sensitive social indicator (Arriaza 1988; Peters 1995;
Schevill 1986; Seibold 1995).

2. If a small oasis like Arica was multiethnic in
character, then ethnic groups would be competing
for limited resources, and would likely have ac-
tively signaled their ethnic differences as opposed
to sharing symbols (Femenias 1995; Owen 1992;

3. The definition of ethnic group used in this
study is that of Jones (1997: xiii): any group of
people who set themselves apart and/or are set apart
by others with whom they interact or co-exist on
the basis of their perceptions of cultural differenti-
tation and/or common descent.

Among the textiles analyzed, there were 575
shirts, 169 bags, 76 taris (a banana-like textile),
and 10 hats. Though textiles of many types were ana-
lyzed, only the shirt data will be discussed here,
since shirts made up the majority of textiles found
with the mummies. Shirts also would have been an
ideal medium for communicating ethnic differences
since they are highly visible garments and can be
seen easily from a distance.

The 575 shirts analyzed were divided into
seven visually distinct styles much as Ulloa (1981)
originally defined them. All styles were found at
all three sites. The vast majority of shirts (408 of
575) were plain or with narrow stripes and these
were found throughout the entire period, from A.D.
900 to 1400. The other shirts including the two-
fabric, striped and embroidered shirts were found
to cluster toward the middle of the range of dates
given above (Table 1).

<table>
<thead>
<tr>
<th>Table 1. Shirt Styles and Substyles</th>
</tr>
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<tbody>
<tr>
<td>I plain</td>
</tr>
<tr>
<td>II two fabric</td>
</tr>
<tr>
<td>III embroidered</td>
</tr>
<tr>
<td>IV narrow stripes</td>
</tr>
<tr>
<td>IVB Discontinuous Stripes</td>
</tr>
<tr>
<td>IVBW Trapezoidal Shape</td>
</tr>
<tr>
<td>V Wide stripes</td>
</tr>
<tr>
<td>VB Discontinuous Stripes</td>
</tr>
<tr>
<td>VBW Trapezoidal Shape</td>
</tr>
<tr>
<td>VB&amp;W Discontinuous Stripes and Trapezoidal Shape</td>
</tr>
<tr>
<td>VI Fully striped</td>
</tr>
<tr>
<td>VIBW Trapezoidal Shape</td>
</tr>
<tr>
<td>VII miscellaneous</td>
</tr>
</tbody>
</table>

From the shirt evidence it appeared unlikely
that these individuals represented a variety or even
two different ethnic groups since no styles were
found in isolation. Excluding plain shirts, which
were too common to be of analytical use for eth-
nicity, forty-three individuals or 10% of the popu-
lation had combinations that included all of the
various striped and embroidered styles (Table 2).
In other words, shirt styles were contemporary and
shared, and not found to be exclusive to some indi-
viduals. Therefore, the shirts could not be consid-
ered symbols of separate ethnic or archaeological
cultural groups. Instead, there were many shirt styles
to choose from and the variation could have repre-
sented a variety of social roles, such as clan mem-
berships, or variations in personal taste, but the
variation did not appear to be related to ethnicity.

It is interesting to note that the ceramic evi-
dence though more limited in numbers than the
shirts also indicated a mixture of ceramic types
within individual graves. At all three sites two or
more ceramic styles were commonly found with
single individuals. The explanation that a coveted
older or “antique” ceramic was placed with a later
one is too simplistic. Future ceramic studies need
to specifically address this issue.

| Table 2. Combinations of Different Shirt Styles
       Associated with Single Individuals |
<table>
<thead>
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<tbody>
<tr>
<td>Associated Styles</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>I</td>
</tr>
<tr>
<td>II</td>
</tr>
<tr>
<td>III</td>
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<tr>
<td>IV</td>
</tr>
<tr>
<td>V</td>
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<tr>
<td>VI</td>
</tr>
<tr>
<td>VII</td>
</tr>
</tbody>
</table>
Clark (1993) and Boytner (1991) have reported that the same shirt styles are found in the Osmore Valley, 200 kilometers to the north of Arica. Future studies of ethnicity during the period A.D. 900 to 1400 will need to assume a more regional perspective, including neighboring sites both north and south of Arica.

**Status**

Like the question of ethnicity, no systematic evidence for status had been previously sought and it was thought that perhaps different styles might have been related to status. To investigate status, quality scores for all textiles associated with the individuals from the three sites were calculated and analyzed. The quality score was calculated based on the number of textile production steps needed (Table 3).

The calculations for each textile found with an individual were added to give a total quality score for each individual. There was a range of total quality scores of zero to sixty-five.

First gender differences were examined. Men had significantly more decorated shirts 58% compared to women 40% but in the quality scores there were no significant differences found since finer quality fabrics were often used by women. Hairstyles, as previously reported by Arriaza et al. (1986) distinguished men and women in a dramatic way. Females commonly had lateral braids while men had a wide variety of complex styles to choose from. More dramatically than the shirts, men’s hairstyles indicated that males probably had a greater variety of social roles.

Surprisingly, individuals with high quality scores and many grave goods frequently had highly worn or highly repaired textiles among their possessions. This is contrary to expectations for a high status individual. The number of grave goods per individual was also compared to the textile data. The number of non-textile grave goods per individual ranged from zero to twenty-two. Individuals with high quality scores and many grave goods had the same types of textiles/objects as those with low scores, they just had more of them. Therefore, the status differences observed were more in line with achieved status with some individuals having greater wealth accumulation as opposed to ascribed status or formalized rank differences.

Another significant pattern for status differences was found in the intersite analyses. The individuals from the coastal site, Plana Miller 9, associated with a maritime subsistence had significantly more textiles of higher quality and had more grave goods than the people from the two sites associated with agricultural pursuits.

### Table 3. Textile Production Steps and Quality Scoring

<table>
<thead>
<tr>
<th>Quality Points</th>
<th>Production Steps</th>
</tr>
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<tbody>
<tr>
<td>Baseline</td>
<td>spun yarns</td>
</tr>
<tr>
<td></td>
<td>plied yarns</td>
</tr>
<tr>
<td></td>
<td>nonloom technique</td>
</tr>
<tr>
<td></td>
<td>loom woven fabric</td>
</tr>
<tr>
<td></td>
<td>but...</td>
</tr>
<tr>
<td></td>
<td>if loom woven &amp; one dimension &gt; 80 cm</td>
</tr>
<tr>
<td></td>
<td>if loom woven &amp; one dimension &gt; 130 cm</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional For</td>
<td>fabric density &lt; 1.4 *</td>
</tr>
<tr>
<td></td>
<td>one dyed color</td>
</tr>
<tr>
<td></td>
<td>two to five dyed colors</td>
</tr>
<tr>
<td></td>
<td>six or more dyed colors or five dyes and no natural colors</td>
</tr>
<tr>
<td></td>
<td>embroidery such as on seams but...</td>
</tr>
<tr>
<td></td>
<td>if embroidery wide i.e. seams &gt;5 rows</td>
</tr>
<tr>
<td></td>
<td>striped design with continuous warps but...</td>
</tr>
<tr>
<td></td>
<td>if there are discontinuous warp stripes</td>
</tr>
<tr>
<td></td>
<td>exotic items (i.e. feathers or shells)</td>
</tr>
<tr>
<td></td>
<td>complementary warp techniques</td>
</tr>
<tr>
<td></td>
<td>supplementary pile</td>
</tr>
<tr>
<td>Subtract For</td>
<td>1-10% repairs</td>
</tr>
<tr>
<td></td>
<td>11-50% repairs</td>
</tr>
<tr>
<td></td>
<td>&gt;50% repairs</td>
</tr>
<tr>
<td></td>
<td>reutilization (e.g. old hat now a bag, but no repairs)</td>
</tr>
</tbody>
</table>

*Fabric density was calculated using the following equation (see Cassman 1997 and 2000 for a discussion of the derivation of this equation): (warp diameter/warp/unit) + (weft diameter/weft/unit).
In conclusion the systematic study of mortuary textiles did not support the multiethnic hypotheses. Nor did the textiles indicate the existence of a complex chiefdom with formal positions of rank. Instead, there appeared to have been several contemporary communities belonging to the same ethnic group who had a variety of textile styles to choose from. The individuals who relied primarily on maritime resources as opposed to agriculture appeared to have been able to accumulate greater wealth, though there were some agriculturists who were able to accumulate wealth too. Finally, the clustering of the numerous radiocarbon dates from these textiles will require us to reconsider the late and post-Tiwanaku chronology in Arica.

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