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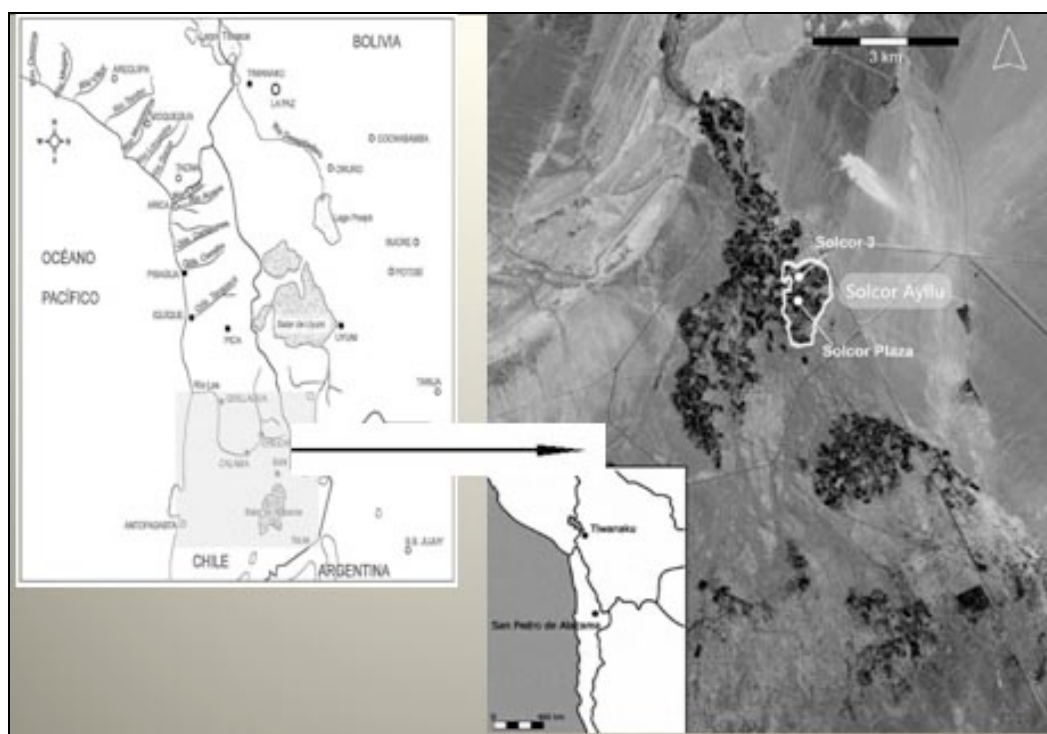
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## Rethinking the Tiwanaku Phenomenon in San Pedro de Atacama Through the Study of Textiles of Solcor 3 and Their Associated Contexts (400-1000 AD)

Carolina Agüero<sup>1</sup> and Mauricio Uribe<sup>2</sup>

In this opportunity we will talk about the Tiwanaku problematic in San Pedro de Atacama because the interpretations so far are not substantial, and also now we have new information which forces us to rethink this phenomenon. The current state of the investigation keeps a conservative and hegemonic idea about the relation between both entities giving us simple explanations about the social complexity, in which the History of San Pedro depends on the existence of Tiwanaku and the social development of a State project.

Keeping a critical position about it, we will focus on textiles of Solcor 3, which along with Coyo Oriente is one of the emblematic sites of the Tiwanaku impact in San Pedro. This analysis, the bioarchaeological and the pottery information allow us to question this link and then to understand a more unequal and heterogeneous social reality. This reality focused not only on a superior political entitie, was developed due to local tensions between dominant and subordinated groups which inhabited the Oases of Atacama.



**Figure 1.** Location of Solcor ayllu and Solcor 3 cemetery within San Pedro de Atacama. Image by the authors (left) and Nado et al. 2012 (right).

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Solcor 3 was excavated by Llagostera in the '80s, and the material is in the Instituto de Investigaciones Arqueológicas y Museo de San Pedro de Atacama. This cemetery is dated between 450 and 920 AD and like Coyo Oriente there were contextual associations, different but synchronic which allowed differences in one social group, or the relations between more than one of them using the same site. One of the groups shows a more powerful connection with the Altiplano through Tiwanaku objects, but always in the same social and local context (Figure 1).

Here, we will present 54 textiles corresponding to nine tombs of 150. This selection was based on the register of contexts with Tiwanaku or Tiwanaku Provincial cloths. Most of the textiles presented here were into the typologies based on qualitative and quantitative analysis such as Oakland (1986, 1986a, 1992; Agüero (1998, 1999, 2001; Agüero et al. 1997, 1999, and Cases 1997), which are used as spacial and chronological indicators.

Tiwanaku Style has been defined by Oakland in her thesis (1986), which has become an important reference. Textiles were weft faced, decorated with interlocked tapestry showing figures wich has their referents in the Tiwanaku lithic sculpture. Others are decorated with embroideries in cross knit loop stitch in side selvedges and openings, creating similar icons. There are also warp faced weavings decorated with stripes, with the use of one continuous weft. This warp version is mainly present in the Western Valleys as Azapa and Moquegua and, meanwhile in San Pedro de Atacama we found mainly tapestries and the Tiwanaku Embroidered Style. Tiwanaku Provincial style also has been defined by Oakland, and is represented by pieces whose supports have been made with local technologies or reinterpret Tiwanaku textiles programs.

On the other hand, the Atacameño Style is characterized by warp faced tunics with satin stitch embroideries in side selvedges and openings. The stripes can be decorated by floating and transposed warps, and always using multiple wefts. It is important to highlight that all the weavings in Atacama, not only San Pedro but also the Northwestern Argentina and El Loa region, share this attribute. There are also striped bags, plush bags to carry snuff kits, and furry hats. The furry and plush effects were frequent on tunics, and since 900 AD until the arrival of the incas, then, tunics and bags using transposed warps and interlocked tapestry techniques in red, blue, white and yellow were popularized.

### **About textiles**

We have:

- a) Hats, headbands and headdresses in: Local, Tiwanaku and Tiwanaku Provincial styles.
- b) Twenty tunics in Local and Tiwanaku styles.
- c) Eighteen bags in Local, Tiwanaku and Tiwanaku Provincial styles.
- d) Three mantles, two of them Local, and one Tiwanaku.
- e) Two Local belts: one of them was weaved and decorated with transposed warps and has multiple wefts.
- f) Fragments in Local and Tiwanaku styles, and also several pieces which not have the necessary elements for to referenciate. This is the case of two tunics, three hairbands and four bags.

Therefore only 13 garments out of 54 analyzed are suitable to be included in Tiwanaku, and Tiwanaku Provincial styles. So, we have 32 local pieces.

Tomb 2-3a: here Oakland (1986) registered a Tiwanaku style bag which we did not find. Along with the bag there was a local mantle and a tunic (Figure 2). This was a multiple burial with three individuals, at least two adults men, with coiled basket, black polished and red polished ceramics, bows, *Prosopis* sp. (*algarrobo*), *Zea maiz*, *Strophocheilus oblongus* (freshwater snail), two tubes of wood, a snuff tray, five arrows, an ax, a chisel, copper ore, bones of camelids, necklace beads, cordage and cucurbits. Tomb 2 is dated in 680±90 AD (Llagostera et al. 1988: 92).



**Figure 2. Textiles of Tomb 2-3a.**

Tomb 5: dated in 920±120 AD (Llagostera et al. 1988:92), and in 1060±120 (Tl; Torres-Rouff 2002:169), this tomb contained a male with two Tiwanaku bags registered by Oakland (1986) which we did not find. Two local tunics, a snuff tray and a tube with Tiwanaku iconography, a chisel, an ax, ceramic fragments, coiled baskets, a wooden case, necklace beads, cordage and a bone spoon (Figure 3).



**Figure 3. Textiles of Tomb 5.**

Tomb 10: here Oakland (1986) registered a Tiwanaku style bag which we did not find. It belonged to a woman with local textiles, one weaved in discontinuous warps with hooks and steps motifs, a fragment decorated with little combs (or *peinecillos*), a local tunic with multiple wefts (Figure 4) and a hat that we did not find. Also, coiled baskets, copper ore, black polished and grey ceramics, a simple snuff tray,



seeds of *cebil* (*Anadenanthera colubrina*) a wooden tube and spoon, a bone spoon, leather bags, and camelid bones.



**Figure 4. Textile of Tomb 10.**

Tomb 20: had two individuals with annular and tabular cranial modification, a headband weaved in complementary wefts with vizcacha (*Lagidium viscacia*) and archer motifs, and two local striped tunics (Figure 5). Also, a copper chisel, necklace beads, a lot of camelid bones, two wooden case and spoons, bone spoons, cucurbits, tubes, a snuff tray, cordage, *Zea maiz*, coiled baskets, bows, an ax, and a foreign ceramic with Tiwanaku motifs.



**Figure 5. Textiles of Tomb 20.**

Tomb 107: Dated in 1220±60 AD and in 1470±60 AD (Torres-Rouff 2002:169) this tomb had two individuals one with tabular cranial modification. It is special because it has three Tiwanaku style garments: fragments of a tapestry, a tunic, and a bag made of a fragment of a tapestry; a local belt with multiple wefts, decorated with transposed warps; a bag for snuff kits; two local tunics; and three plain braided headbands. Also, there were a “crown type” hat with chin strap, two feathered headdresses, a red velvety thread, a decorated basket and a spoon with Tiwanaku volumetric figures. The snuff kit is also special according to Llagostera et al. (1988). (Figure 6).

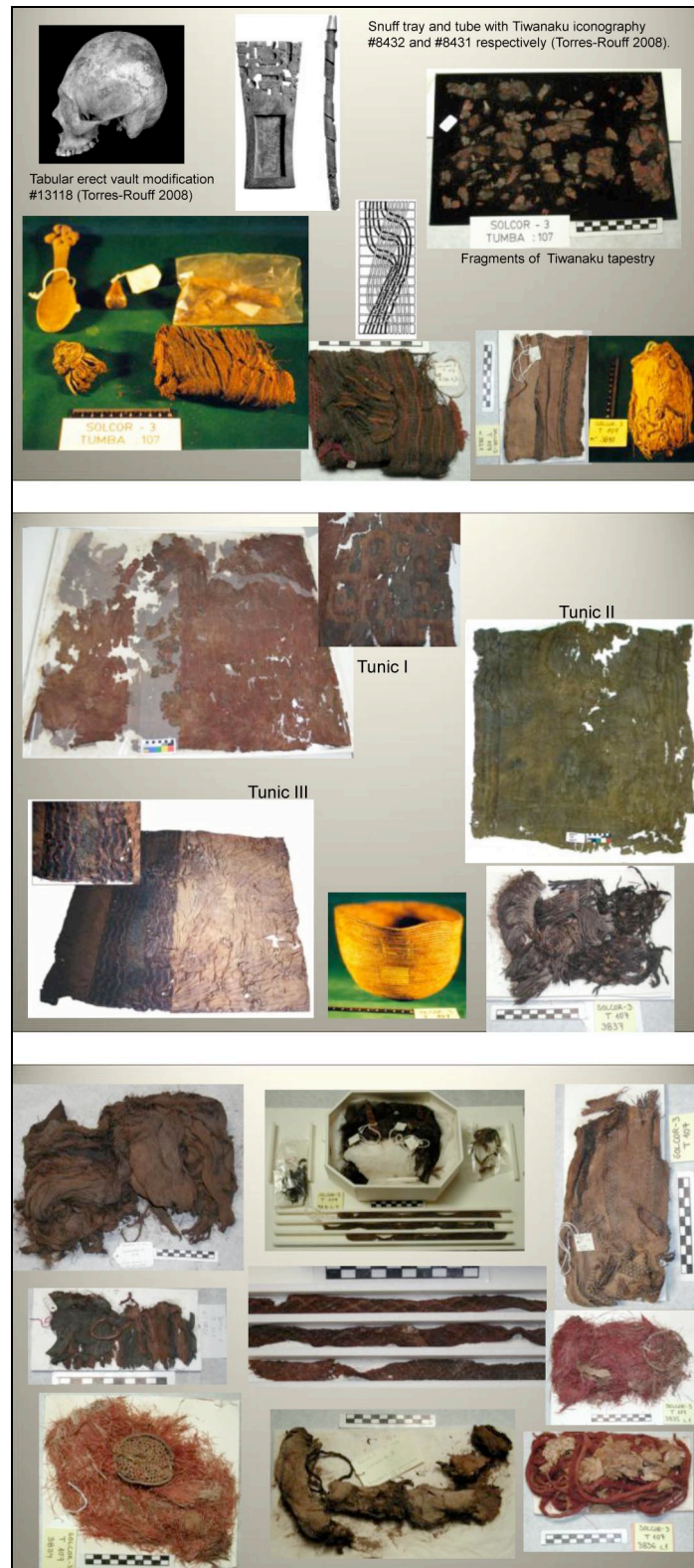


Figure 6. Materials of Tomb 107.

Tomb 109: This tomb was disturbed. Has one Tiwanaku mantle and a Tiwanaku Provincial bag, accompanied by a local tunic and a local mantle, necklace beads, spindle whorls and baskets (Figure 7).



*Figure 7. Textiles of Tomb 109.*

Tomb 112: had an individual with a Mizque (a style from Cochabamba Valleys) bag (#3900 A) associated to local bag with multiple wefts. There were also two local bags weaved using transposed warps with multiple wefts; a bag containing a snuff kit; two local tunics; a felted hat, red feathers, a warp faced mantle, an ax, a wooden bone and spoon, a snuff tray, copper ore, a bow, arrows and coiles baskets (Figura 8).



*Figure 8. Textiles of Tomb 109.*



Tomb 113: dated in 1380±60 AD (Torres-Rouff 2002:169) has a Tiwanaku style bag; a local tunic; a little box of bone with the Frontal Figure of the Sun Gate; and a wood box with a figure of El Sacrificador, a tube of bone, a metal disc, a spoon, three embroidered baskets (or *tipas*) from Northwestern Argentina, other baskets, a complete camelid, *Strophocheilus oblongus* (freshwater snail), and two domestic bags or *talegas* that we did not find (Figure 9).



**Figure 9. Materials of Tomb 113.**

Tomb 132: has a Tiwanaku style headband associated to a very fragile inner tunic; another local tunic with multiple wefts, two plush bracelets, a bag, two hats, a snuff kit, an atypical bag, and two more local textiles (Figure 10). Also, baskets, necklace beads, a spoon, a *kero* with Tiwanaku motifs, a bow, arrows and cucurbit.



**Figure 10. Textiles of Tomb 132.**

The data indicate that specially in graves 2-3a, 5, 10, 107, 109, 113 and 132, the presence of some Tiwanaku objects of great quality and iconography inside funerary local contexts, indicate that they were prestige goods, so these individuals may constitute a privileged group who maintaining special relationships with individuals and/or groups who moved these objects.

## About pottery

There is a local pottery tradition characterized by San Pedro black polished ceramics. Along with the local tradition also foreign ones started to be used, such as a *kero* with handle and red on black geometric figures, which is typical Tiwanaku but its manufacture is local. Other foreign traditions from the Middle Horizont come from Eastern Valleys, the Bolivian Altiplano and the Argentinian border through Yura, Tarija and Chichas ceramics. Only one Tiwanaku piece was identified which represents 0.4% (Uribe 2000).

In Coyo Phase, that is around 710-850 AD the differences increase in local society. Probably due to the intensification of the contact with foreign societies, the amount of Tiwanaku objects increased (Costa and Llagostera 1994; Thomas et al. 1985). This did not mean a break in the unity of Atacama society but was a result of the economic development, their material enrichment and their social complexity. This confirms that in the local society there were differences and tensions, probably caused by a hierarchization and inequality.

## About bioanthropology

There are new carbon and nitrogen stable isotopes analysis for 30 ribs and phalanges. The women hold the richest levels of nitrogen at comparing them with men's, therefore, they probably had bigger amounts of proteins. This situation was confirmed by Nado et al. (2012) after analyzing a sample of apatite from teeth enamel, which also suggests a tendency to diet variety not only with corns but also proteins. This situation was present not only during adulthood but also childhood. Nado et al' analysis detected two foreign individuals, and based on that the variability had been linked to genres. Taking that into account Costa and Llagostera's work (2014) is interesting because they detect leishmaniasis in five female skulls from Coyo Oriente, indicating that the vector was not present in the environment of San Pedro de Atacama. Based on this, those individuals were probably from the Eastern lands. The fact that all the skulls are female, suggest a patrilocal system in which there were marriage alliances. Foreign people buried in these cemeteries were not only passing by, but they settled down here integrating themselves to the everyday life probably through marriage links. This data questions the hypothesis of a raising altiplanic influence on the local diet during Coyo Phase.

Some recent studies carried out by Knudson and Torres-Rouff (2009) and Nado et al. (2012) have proposed a significant variability in the local society, enriching the idea that local groups managed in several ways the links with Tiwanaku, supporting hypothesis already formulated but darkened by the dominant model of a dependent and subordinated society under altiplanic State.

In mortuary contexts these studies have distinguished groups with rich offerings which incorporated Tiwanaku style objects. In comparison with other cemeteries, the tombs of Solcor 3 have a significant amount of Tiwanaku or valuable objects, such as metal artefacts, weavings and snuff trays. However, the correlation among tombs with these kind of goods is weak, that is to say, sumptuous burials do not have altiplanic pieces, so the tombs with Tiwanaku objects would be special cases of wealth accumulation

On the other hand, the studies about cranial modification indicate that the variability of shapes (annular and tabular) was a popular tradition, which shows local and foreign origins. Tabular modification had a long local development, standing out in Solcor 3, and annular could be altiplanic (Torres-Rouff 2002, 2008). However, in Solcor 3 none of these individuals with this skull modification was buried with Tiwanaku objects.

At the same time the strontium isotopes detected five individuals with levels which suggests origins at least from two different regions, one of them from the Altiplano and the other one different from San Pedro de Atacama or Altiplano. The strontium variation in the bodies is significant in relation to the local levels, suggesting diversity in populations and a wider area of mobility. Foreign objects and the variety of cranial modification are associated to local individuals, even tabular cranial modification dominant at local level was present in foreign skulls, although in these cases circular modification is high. However, in Solcor 3 none of these individuals was buried with Tiwanaku objects.

In line with this, the isotope results, specially strontium ones, indicate a more complex migration to San Pedro than the one been described so far, supporting the hypothesis which suggests that the Tiwanaku advance had made easier the migrations through different regions of the Southern Andes (Uribe et al. 2014). This agree with other analysis, such as Varela and Cociloyo's (2011), which have confirmed a bigger genetic diversity. For this reason these contexts show "flexibility" integrating foreign individuals, who assimilated local traditions. From this point of view, at least in death, they would not have been treated as foreigners but as part of San Pedro community. Therefore, they assimilated the local material culture and identity instead of keeping a foreign character through the monopoly of objects related to their place of origin.

Then the use of Tiwanaku objects would not be linked to the presence or identity of altiplanic immigrants but to the local society and its competitive dynamic to keep their validity, taking them to participate in the altiplanic periphery. In line with this, in tombs 2-3a, 10 and 132 the presence of Tiwanaku objects in local contexts and the quality of the iconography, lead us to think that they were valuable pieces and therefore they belonged to a important people that possibly were part of a group that had special relationships with those who carried or transported the objects.

Trying to interpret the information from other point of view, we propose that the interests to participate in a social link with Tiwanaku, was not in this entity, but in local society. Without putting aside the link, that it did not have an expansive character, and maybe reaching Southern regions and settling a point of control so far to the exchange were not a political project. This is supported by the lack of a settlement system to control areas far from the core as well as the strong, emblematic and homogeneous characteristics of their material culture, and local industries like textiles and pottery, show a local development which was not significantly affected by their influence.

So, it seems that in Solcor 3 were individual or familiar successes carried through their external linkages, who gained access to resources, but also to the accumulation and prestige. This situation would be more popular in the traditional structure and the differences and inequalities would increase in different areas of their social life. According to that it is not unusual that the contradiction between the social order and individual differences cause more inequality and internal violence. Cranial traumas analysis of adults in San Pedro cemeteries carried out by Torres-Rouff and Costa (2008) and Torres-Rouff (2011) show a high interpersonal violence index through all San Pedro sequence.



In short, this work resumed the alleged relationship between Tiwanaku and San Pedro de Atacama, specifically through the case of textiles, the iconic black polished ceramic, together with recent bioarchaeological data, all of which allows us to question this relation and move towards the understanding of a more heterogeneous and unequal society, which, rather than respond to a superior political entity, born from a strong tension between dominant and subordinate groups whom inhabited San Pedro. Indeed, it is now possible to think that San Pedro society experienced a strong tension and internal conflicts, facing the collective and the individual, to the tradition represented by shamanism and emerging subjects exemplified by those who had long distance contacts and access to foreign resources. It would be two expressions of the same male power of shamans and caravanners (Agüero 2003), expressions that faced for centuries for to gestate that we know as Culture San Pedro, but says little about their daily lives. This vision denied the participation of other actors, such as women and people without exceptional offerings. The recognition of all those actors who participated in the History of San Pedro will improve our understanding of local society and will help us to explain the change occurred around 950 AD, which led to the Late Intermediate Period, without using explanations like climatic changes, Tiwanaku collapse, migrations or cultural “impoverishment”.

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