

Scenes, camelids and anthropomorphics style variations in the north Chile's rock art during Archaic and Formative transition

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ABSTRACT: The stylistic study of two regions of northern Chile (southern Atacama Desert and north foothills of Arica Parinacota region) draws parallels artistic tendencies that we recognize in the rock art of southern Andes. Despite the apparent diversity of aesthetic figures and scenes between these two zones, this analysis allows to find the intrinsic mechanisms that vary uniformly human and animal representation. With the archaeological contexts or figures overlays features a chrono-stylistic description can be proposed for these rock art sites from Arica foothills, less known. A detailed reading of the change in the treatment of the main figures (camelids and humans) helps us to design the new perception of a group, of their environment and themselves. But relationships between man and animal shown in scenes allow us to understand simultaneously the emergence of new socioeconomic practices and changes in the artistic treatment of the various figures. This comparison is an important starting point for understanding the profound changes taking place in the symbolic sphere of Andean cultures. Stylistic mutations are indices of the overthrow of the system of representations probably linked to the new socioeconomic context of highland artists.

KEYWORDS: Chile's rock art, Scenes, Stylistic approach, Socio-economic and cultural context.

Introduction

The southern Andes form a vast region between southern Peru, eastern Bolivia, northern Chile and Argentina. This area is characterized by a large presence of rock art in the Andes foothills (2,500-4,000 m). Paintings or engravings that decorate the shelters show constant representation of camelids (Niemeyer 1972; Aschero 1996; Guffroy 1999; Klarich and Aldenderfer 2001; Berenguer 2004; Gallardo *et al.* 1999; Gallardo and Yacobaccio 2005, 2007). It is common to observe animals depicted on the run and scenes with anthropomorphic "hunters" are interpreted as hunting representation. But scenes refer also to different practices as confinement of animals, pastoralism and caravan traffic (Berenguer 2006). Scenes related to hunting practices are often described naturalist (Niemeyer 1972; Guffroy 1999; Gallardo and Yacobaccio 2005; Aschero 1996; Nuñez and Santoro 1988, 2001) and related

to the socio-economic transition taking place in the southern Andes between archaic (11000-3500 B.P.) and formative periods (3500- 1500 B.P.) has a transitional situation when several types of economy coexist (Gallardo 2001; Nuñez *et al.* 2006; Gallardo and Yacobaccio 2005, 2007). The acquisition of resources based on hunting is gradually replaced by pastoralism and the symbolic sphere of highland populations is deeply affected by this change.

In southern Peru, the first rock art site studied (Toquepala) profoundly influenced research in Andean foothills from northernmost of Chile, in Arica Parinacota region, our actual studies area. Archaeological excavations at the foot of the walls allowed Muelle and Ravines (1983) to propose an indirect dating of paintings over 7000 years BC. Later research questioned the antiquity of the paintings (Guffroy 1999) but the quality of these representations is the basis for the description of the naturalistic style (Guffroy 1999). Work in Llave valley several kilometers from Toquepala show occupancy of painted shelters from the Archaic and Formative periods (Klarich and Aldenderfer 2001). Populations of hunters and shepherds could be at the origin of these works as some stylistic differences are noted. The model proposed by Klarich and Aldenderfer (2001) tend to separate artistic events based on several criteria including the style of camelids representation. The naturalistic animals were attached to hunters, as schematic camelids defined the pastor's style. Coupled with other data, the style of camelids and anthropomorphic remains a reference for assigning a chronological stage.

Stylistic differentiation was also discussed to distinguish the appearance of wild or domestic camelids represented in other regions. In the Atacama Desert, specifically in San Pedro oasis region and the Loa river basin, socio-economic transition between hunter gatherer and pastoralist mode of production relies on the process of domestication of camelids (Nuñez 1981; Nuñez and Santoro 1988, 2011; Cartajena *et al.* 2007). According to stylistic criteria, some authors to recognize the type of animal represented: lamas or guanaco (Berenguer 2004; Gallardo *et al.* 1996; Gallardo and Yacobaccio 2005). Until now, these criteria served to precise three different style in naturalistic tradition: Kalina-Puripica, Taira-Tulan and Confluencia. Ethological criteria were also used to distinguish the wild or domestic animal character (Gonzalez 2002). The many rock art sites were considered an ideal material for approaching the symbolic dimension of the people who choose to represent images related to their socio-economic practices.

In the far north of Chile, Niemeyer's researches (1972) describe a rock art with naturalistic camelids in contrast to a stylized human figure. From this contrast he described all rock art painting from the high valleys of Lluta, Azapa and Tignamar basin (foothill area) as a stylistic unit called Sierra Arica (Niemeyer 1972; Mostny and Niemeyer 1983). But, later researches reveal a more complex situation with stylistic variations (Santoro and Dauelsberg 1985; Muñoz and Briones 1996; Sepúlveda 2008 and 2011; Sepúlveda *et al.* 2010, 2013; Sepúlveda and Guerrero 2014). For example, for naturalistic tradition we proposed recently two stylistic groups based on the dimensions and proportions between camelid and anthropomorphic changed. In first group camelids are generally more "realistic" with anatomic details and bigger than humans. With time, proportions size of the figures is more similar, and size of figures is generally reduced. Excavations carried out indicate two occupations of the sites one at the end of the archaic and

another during the formative, both styles have been reported to both occupations and naturalistic style seems to correspond to the time of hunters (Sepúlveda 2011; Sepúlveda *et al.* 2013).

In this study, we will return on naturalistic tradition from these two regions at Atacama Desert: in south, the Loa river basin and San Pedro de Atacama oasis, in north Arica foothills (Fig. 1). These two regions are generally described separately. However, we can recognize some similar form of representation. Results from San Pedro oasis and Loa River basin can help us to precise and compare some stylistic aspects from Arica foothills. The difference in treatment between camelids and anthropomorphic figures and his evolution is a first point to understand the human status change. Through the analysis of specialization of hunting's techniques, the scenes show the cultural change of human figure in relation with socio-economic development. We resume first studies done at Loa River basin and San Pedro of Atacama region. Information from this region contributes to discuss new results from Arica foothill.



FIG. 1. Map showing the location of the two research areas, the Lluta valley and the Loa valley which are part of the Atacama Desert.

Naturalistic traditions from Loa River Basin and San Pedro Oasis Region

Regarding the rock art of these two regions from south Atacama Desert, researchers identified three styles: Kalina-Puripica attributed to the Archaic period (8.000- 1.500 B.C.) Nuñez *et al.* 2006), Taira-Tulan and Confluence for the Formative period (1.500 B.C.-500 A.D.) (Gallardo 2001 and 2004; Gallardo and Vilches 1998; Gallardo *et al.* 1996 and 1999).

Kalina and Puripica are an engraved art that are characterized by camelids shown in absolute profile with two legs, one ear and tail usually raised up. The abdomens appear to be inflated (Berenguer 1999; Gallardo 2001; Nuñez *et al.* 2006), the bodies of these animals appear larger than the legs but often leaving the tracing of their ends open for forming the nails (Fig. 2). Human are in this case absent. This style is in the upper valley of the Loa and the region of San Pedro de Atacama (Nuñez *et al.* 2006). Although discovered in wide regional distribution, it is less presents that the Taira-Tulán style. Because of recoveries blocks and walls engraved by stratigraphy showing the hunter-gatherer occupations this style is attributed to the late archaic period (4.000-1.500 B.P.).

Taira-Tulán is characterized by large camelids engraving, whose silhouette is bounded by a line etched deep and thick, sometimes with red painted body. Each panel of this style includes many camelids that overlap or are juxtaposed, sometimes forming very complex sets (Fig. 3). The dynamic aspect of camelids, as well as the representation of the anatomical details like the shape of the body, the line of the abdomen, four legs showing all the joints and heads with mouths, noses, ears and eyes drawn, give the impression that Taira-Tulán's figures looks like a "naturalist style". The superpo-

FIG. 2. Engravings of camelids in Kalina and Puripica's style, Loa River Basin (Marcela Sepúlveda).





FIG. 3. Engravings and paintings in Taira's style, Taira site, Loa River Basin (Marcela Sepúlveda).

sition of several camelids and their representation in twisted perspective (which allows the reproduction of 4 legs, 2 ears and volume of the body; Gallardo, 2001: 89) identify a recurring use of perspective in the Taira Tulán style. Human figures and some birds are represented, but they are rare (Vilches 2005). Taira-Tulán style panels are usually located on cliff faces that define the deep valleys. The large size of the representations of camelids and their location on outdoor walls located, bathed in light, allow good visibility of these events (Gallardo 2001). Taira-Tulán representations are associated with sites of temporary habitat, except Taira site where the occupation seems a little more prolonged (Berenguer 1995; Vilches 2005). The panels are located near the confluence of rivers, or former rivers, now dry. Taira Tulán is an ample diffusion style in the Atacama region, which extends from the Alto Loa where is the eponymous site Taira (Berenguer 1999, 2004 and 2005; Vilches 2005) through the Salado basin (Gallardo 2001 and 2004), and ends south of the Salar de Atacama, in the Quesala valley (Valenzuela 2004) and the Tulán valley (Núñez *et al.* 1997). The contexts of the Alero Taira site that gives name to this style, have been dated between 800 and 400 B.C. (Berenguer 1999:24) or during the Early Formative (1.400 B.C. to the beginning of our era).

Confluencia consist of small figures (no more than 15 cm tall) painted in various colors: red or yellow, although some cases show the superposition of these two colors, and white. Unlike to Taira-Tulán, Confluencia style has almost as many human figures as camelids (Gallardo and Vilches 1998). Humans are generally richly dressed (fiber skirts and headdresses) and often carry objects interpreted as spears or thrusters (Montt 2004) (Fig. 4). Humans and camelids are always represented in very dynamic attitudes, respecting

FIG. 4. Paintings of anthropomorphic in Confluencia's style, Confluencia site, Salado River Basin (Marcela Sepúlveda).



the anatomical details of each species. Although some camelids are observed sometimes isolated, most panels Confluencia depicts several figures, forming hunting scenes (humans surrounding camelid moving in different directions), or other we might call “dance” (camelids standing on hind legs in dancing attitude). Humans are generally armed and dressed. Confluencia is a style with less visibility than the style of Taira Tulán. First of all, the figures are small and secondly, they are painted inside rock shelters with more restricted access. Excavations in shelters show the presence of activities related to the manufacture or maintenance of tools (waste and stone tools) and the slaughter of animals (camels and rodents Gallardo 2001; Gonzalez 2001). This style is defined, until now, only in the Salado basin on the eponymous site Confluencia or in the shelter of Ayquina, among others. However, the location of Confluencia style panels, located mainly within rock shelters whose occupation is attributed to the phase Río Salado (Sinclair 2004), suggests that their achievements are a little later than the figures of Taira-Tulán, or the Confluencia style continues longer than Taira style. Chronologically, this style is contemporary of the Taira-Tulán style. Indeed, several overlays can be observed from one style to another: Taira Tulán on Confluencia, or vice versa. One of these sites is Los Danzantes (2 Loa 47), whose occupation is dated 2620 +/- 90 BP or 925- 505 BC (95% probability; Gallardo, 2001). The Confluencia style is also attributed to the Early Formative.

More recent work combines a study of parietal representations and archaeozoological data showed that the Taira-Tulán style refers exclusively to domestic camelids, specifically llamas (Gallardo and Yacobaccio 2005 and 2007). From the comparative results of the dimensions and proportions of the members and body in camelid representation and in archaeological context, authors suggest that Taira-Tulán corresponded a shepherd art, related to pastoral activities, especially to the domestication of camelids that occurs during the Early Formative, until Confluencia style camelids illustrated wild

camelids. However these two style were contemporaneous, as authors observed the superposition of Taira Tulan on Confluencia representations. The contrary were also observed. Thus, these two styles referred to two different economic activities, but complementary in a time when the hunt continues and the pastoral activities begin to take more and more importance and referred to an important moment of transition and tension between two mode of production and life (Gallardo 2001).

Arica foothills, new results

In the northern most part of Chile, the Lluta valley includes two important rock art sites: Vilacaurani and Incani. Both have many overlapping elements with a stylistic variability which means the possibility of identify various stylistic stages. It's possible to draw a parallel between these sites and many other painting's sites located in the nearby valleys like Azapa or Tignamar (Niemeyer 1972; Santoro and Dauelsberg 1985; Sepúlveda *et al.* 2013), but these two sites are the most painted, as they show almost figure 5 and figure 6, respectively.



FIG. 5. Vilacaurani's main panel made up of paintings and engravings on several overlapping's levels (Carole Dudognon).

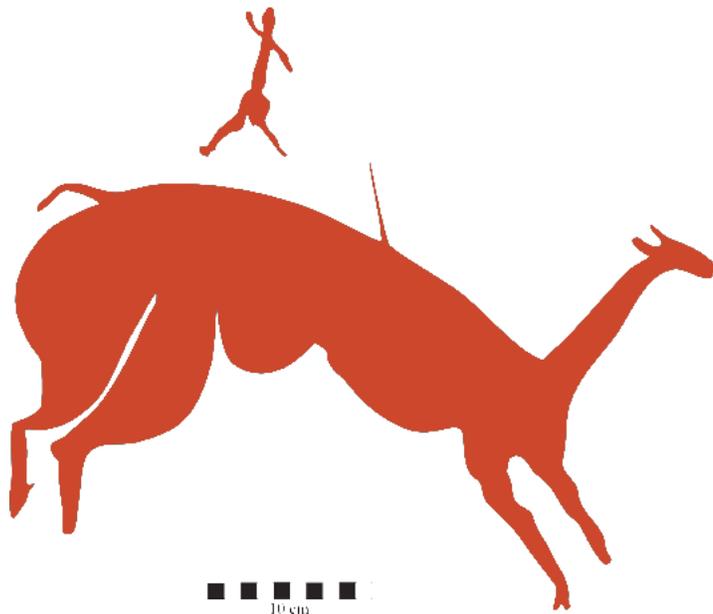


FIG. 6. Incani's main panel only made up of paintings on several overlapping's levels (Carole Dudognon).

The classic mode of naturalistic style is identified in the direct hunting scenes where the schematic anthropomorphic figure contrasts to the naturalistic camelid style. The symbolic aspect of these scenes is emphasized by the difference in size between a big camelid in front of a small hunter (Fig. 7). In the same stylistic vein, plenty of complexes scenes depict human figures side by side surrounding an animal (Fig. 8); a very schematic style is used to describe the anthropomorphic figure (Niemeyer 1972; Sepúlveda *et al.* 2010). These paintings are dispersed over a large geographical area and dating of the archeological context of different sites gives in the Late Archaic's occupation (4500-3500 B.P.) (Santoro and Chacama 1984; Santoro and Dauelsberg 1985; Sepúlveda *et al.* 2013). The collective hunting which had been linked to Chaccu (Niemeyer 1972; Santoro and Dauelsberg 1985) marks a turning-point in the economic exploitation of the region; this practice leads hunters to catch more animals, this may suggest a growing demand for camelid's derived products (Dudognon and Sepúlveda 2013). These kinds of representations are the most common in general in rock art of Arica foothill.

The stylistic change primarily affects the anthropomorphic figures. In a part of Vilacaurani panel, the human representation overlapping shows the arrival of anatomical details like foots and head; human beings are more detailed and the ratio between animal and human is changing. Some scenes represent this new human figure in more complex hunting techniques. The trap system, used to capture the animal alive, contains connecting several nooses and allows immobilizing wild animals (Fig. 9). This method requires a high level organization but there is no evidence to suggest social stratifi-

FIG. 7. A scene from Incani.
This direct hunting scene shows the difference of stylistic treatment between anthropomorphic and camelid (Carole Dudognon).



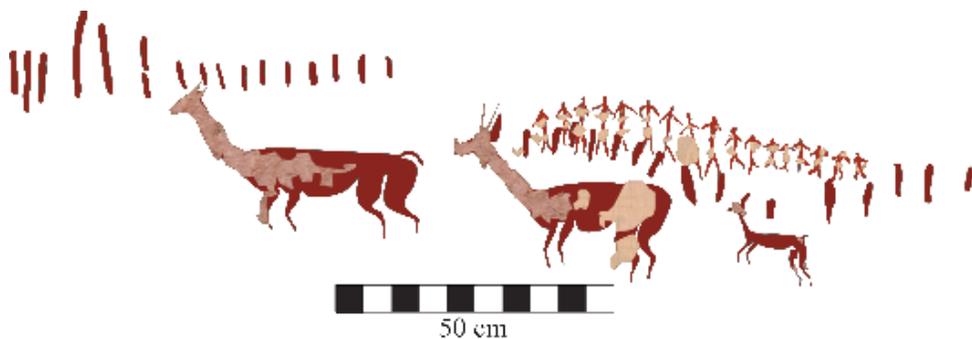


FIG. 8. A scene from Vilacaurani. An indirect hunting scene also show this imbalance stylistic (Carole Dudognon).

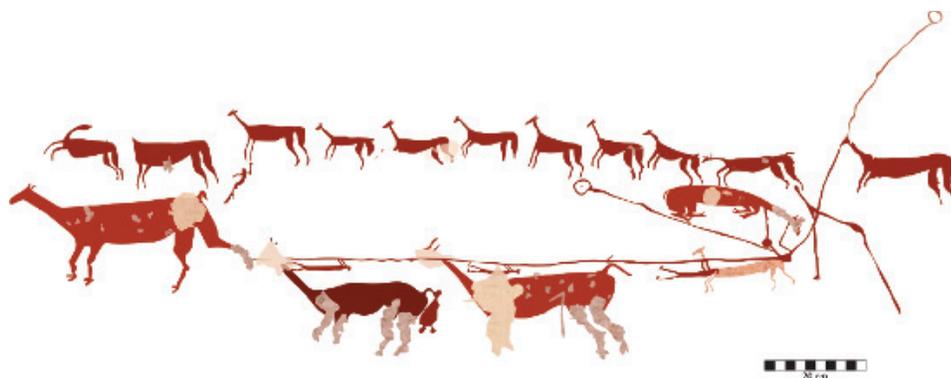
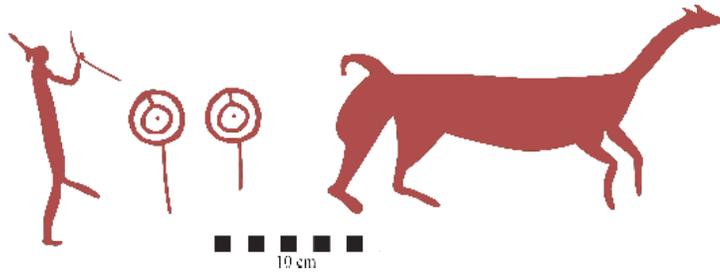


FIG. 9. A scene from Vilacaurani. A complex system of trap indicates a new stylistic treatment; the camelids are always in naturalistic style but the anthropomorphics are more detailed (Carole Dudognon).

cation in the anthropomorphic representation; a special care is taken for offering the same graphical representation of human being but development of hair ornaments indicates a cultural affirmation. It's important to note that the camelids representation is still stable despite dramatic human stylistic change. Obviously, man acquired a new role in his own environment representation and this could be the result of new socio-economic context (Dudognon and Sepúlveda 2013). Then, a third level of overlapping indicates the occurrence of pastoralism practices. The human figure is more and more detailed, the size ratio between animal and human tends to balance and activities depicted include principally the pasture's practice (Fig. 10). Finally,

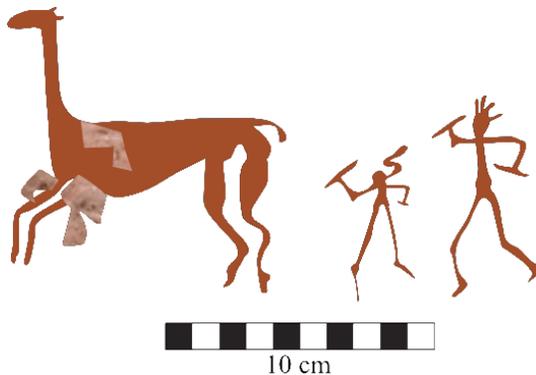
FIG. 10. A scene from Vilacaurani. The pastoral scenes attest of a new stylistic model where the anthropomorphic figure is tall and detailed (Carole Dudognon).



a new type of representation that emerged during the formative period appears in some sites. It depicts hunting practices; this chronological order is attests by a superposition in the main panel of Vilacaurani. These scenes are painted in a new style; camelids and humans present new characteristics. Both figures are stylized in the same way; articulations are pronounced, legs are high and details are still presents (Fig. 11). However the animation is very emphasize in human representation. In the same way, another style was recognized in the Tangani site, called S1 E2 (Sepúlveda *et al.* 2010, 2013). The paintings show human with hunting weapons and the paintings are smaller exactly as at Incani and Vilacaurani. In the Azapa valley, this representation had been attributed to formative period (2500-500 B.P.); when hunting was practice at the same time that agricultural and pastoral activity (Sepúlveda *et al.* 2013).

In this corpus, the stylistic variation is mainly present on the human figure representation. Hunting scenes more and more specialized shows a very assertive image of anthropomorphics. At the same time, naturalistic camelid images persist but minor changes mainly affect the animation. The constancy of the image of camelids and mutations of the human image in scenes may reflect the emergence of new symbolic models where man is playing an increasingly important role.

FIG. 11. A scene from Vilacaurani. Recent hunting scenes show the use of stylistic innovations in the figure of anthropomorphics and animals (Carole Dudognon).



Conclusion

Stylistic variations are interesting data of the rock art of naturalistic tradition in the southern Andes. The comparison between the two regions of northern Chile shows different stylistic trends according to the socio-economic context of the artists. But the stylistic shift is gradual and a transitional period shows the persistence of the naturalistic style in camelids then that appear new artistic treatment of the human figure. The slow process of camelids' stylistic change reflects the symbolic deep roots of this graphic representation. On the contrary, the human image varies and details continue to accumulate to clarify the status of the hunter or shepherd. The same trend is evident between the two regions.

This methodology makes it possible to determine and understand the stylistic variation based on the scene's overlapping. Several stages of stylistic and thematic change emerge from this study. The paintings are usually identified in the naturalist process because the camelids representation maintains its realistic depiction. But changes take place in another stylistic dimension which is the animation (Nuñez and Santoro 1988, 2003; Berenguer 1996; Aschero 1996) and the anthropomorphic figure handling (Sepúlveda *et al.* 2010; Dudognon and Sepúlveda 2013). The stylistic variation is much greater emphasis on human representation than camelids. Movement in animal control occurs early and this new economic dynamic change the representation of human's status. The human identity is asserting; a highly symbolic event in this process is the balanced size between animal and human depiction. Human dressed could be interpreted in relation to differentiation social processes, an important change characteristic of Formative societies related to the emergence of leadership (Gallardo and Cabello 2015) and various specific labor groups and actors.

The two regions exposed in this work show different styles of representations and stylistic variations linked to naturalistic tradition in rock art of Atacama Desert. However it is possible to recognize similar process of change characteristic of transition between archaic hunter gatherers and Formative societies. Rock art can also contribute to understand this important process of change if we can study not only the camelids and their difference, but also the composition of scenes and relation between animals and anthropomorphic figures.

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