

Southern Empire chronology: some questions of Inca archaeology

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The weight of tradition based on the chronicles and the influence of scholars such as Murra (1980), Rowe (1944, 1982), Zuidema (1964), and Rostworowski (1953, 1988) among others, marked a new path in the way Andean history was constructed. The emphasis of those analyses was on the operation of political, economic and ideological structures of the state at the level of the leading elites, relegating other segments of these societies, or the social processes that took place in communities far away from the principal political centers (Elson and Covey 2006).

In recent years, however, the limitations of the written sources have been under scrutiny and subjected to debate and a growing group of scholars started to develop new directions and theoretical frames based on critical analysis of the archaeological data (D'Altroy 1992, 2003:25 and ss; D'Altroy *et al.* 2000; Kaulicke 2002:6; Silva 1985, 1992-93; Uribe 1999-2000, 2004; Williams 2003; 2005; Williams and D'Altroy 1998; Williams *et al.* 2007a and b). Consequently, archaeological studies have been focused on different aspects to shed light on the processes of emergence, expansion and domination of the imperial territories, as well as the effects on both local historical processes and on the state's policies themselves (Bauer 2002; D'Altroy 2003; D'Altroy and Hastorf 2001; Stanish 1997; Williams 2003, 2005). Such research shows a more dynamic and heterogeneous panorama of the ways in which the State interacted with the provinces (Bauer 2002; D'Altroy 2001; D'Altroy *et al.* 2000; Hyslop 1984, 1990, 1993; Julien 1983; 1993; La Lone and La Lone 1987; Nielsen 1996; Uribe *et al.* 2004; Williams and D'Altroy 1998)¹.

Expansionist empires such as the Inca have used different strategies to conquer new territories. The symbolic appropriation of conquered space has been one of the most effective, working together with other military, political, economic and social domination mechanisms. In fact, in many cases the symbolic offensive has preceded or closely followed military conquest, reassuring new dominions through an “ideological basis”, used as a fundamental strategy to control societies as well as a territorial marker (Cannandine and Price 1987; Farrington 1992). In recent years, archaeologists following different theoretical frames have examined the nature of ideology and its role in the development of complex societies (Cowgill 1993; Conrad and Demarest 1984; Earle 1991,). Since ideology has a material as well as a symbolic component, and since symbols are indeed material objects, their distributions and associations in the

¹ Recent studies published in a special issue of *Chungara Revista de Antropología Chilena* 36(2), 2004, show important improvements in the Inca archaeology all over the Andes (www.scielo.cl).

archaeological record may be capable of reflecting economic, political and social activity patterns.

Studies on the Inca State expansion in separated parts of the Andes show different motivations and control strategies, dominated by the economic sphere directed to the intensification of production and surplus extraction to support the expansion and maintenance of the state. This primary economic interest would have probably been linked to political issues (Burger and Salazar 2004; Bray 2003 a , b., 2004; Bray *et al.* 2005; Covey 2003, 2006; D'Altroy 1992, 2001; D'Altroy and Bishop 1990; D'Altroy and Earle 1985; D'Altroy and Hastorf 2001; D'Altroy *et al.* 2000; Earle 1994; Gyarmati and Vargas 1999; Morris 1974, 1982, Morris and Thompson 1985; Pärssinen and Siiriäinen 2003; Stanish 1997, 2001), coercive military actions (Arkush 2005, 2006; Carneiro 1990) and ideological legitimating processes expressed in a symbolism of power, that has more archaeological visibility than military actions which are more prestigious on the chronicles (Alconini 2004; Aldunate *et al.* 2003; Bauer and Stanish 2001; Earle 1990, DeMarrais *et al.* 1996; Morris 1995, Niles 1992, 1999; Nielsen and Walker 1999; Uribe 2004; van de Guchte 1990).

In this context, the archaeological study of specific cases of administration at the provincial level has remained aside, such as those analyzed in this paper, as most of the effort, tended to be concentrated in the major center. Focusing on local scenarios is an important source for understanding the interaction of local communities with the state, as it gives a different perspective to look at the economic, political, ideological and military principles performed by the state administration. The Inca state, like other pre-industrial imperial states, operated as an integrated system of political, economic and ideological organization, which was carried out to the furthest reaches of its domain. Conversely, archaeological studies of state domination at the provincial level provide an excellent opportunity to distinguish between general principles of administration and idiosyncrasies that could occur in the administration of the provinces.

IMAGE

THE IMPERIAL INFRASTRUCTURE OF THE SOUTHERN ANDES

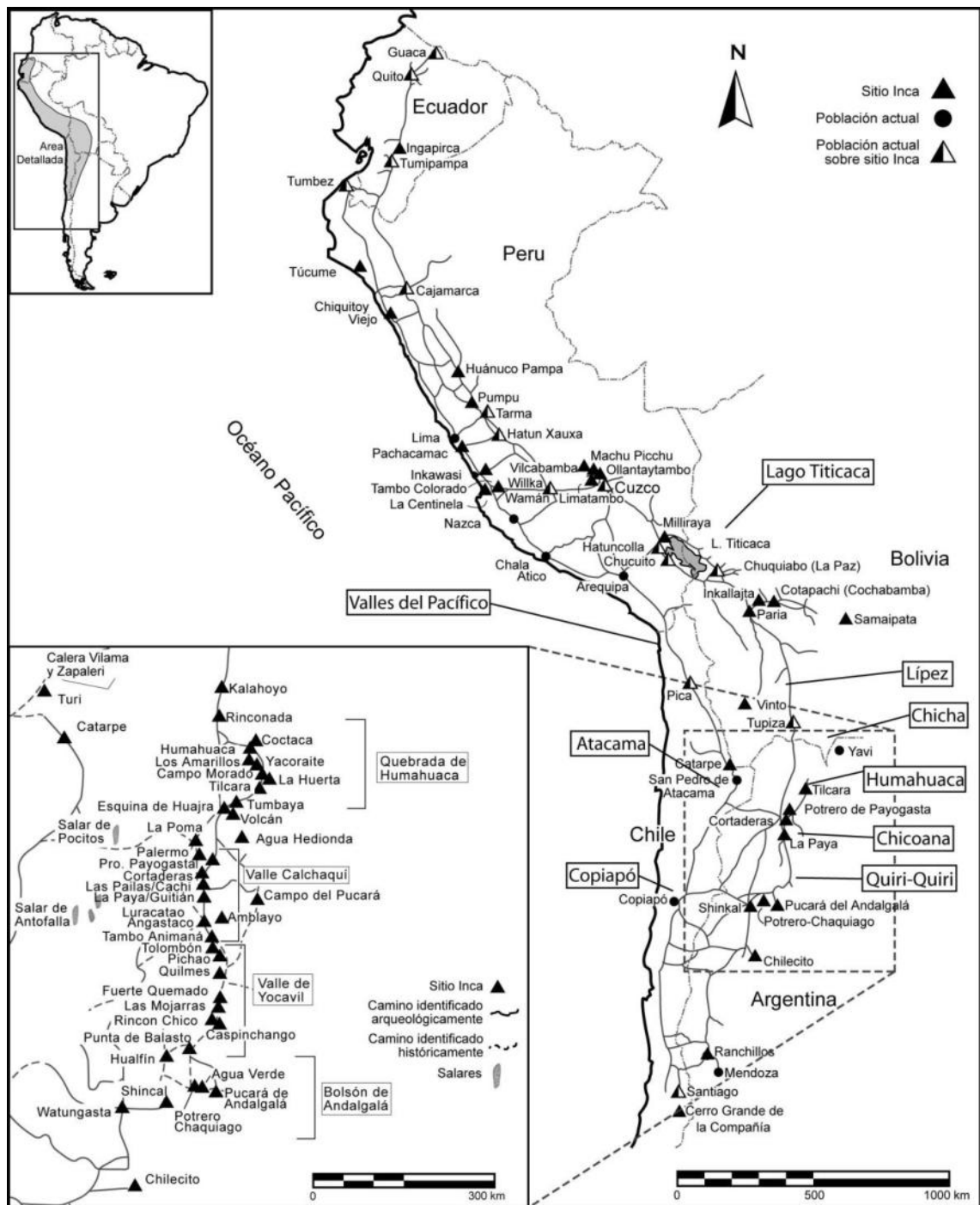
The settlement patterns related to the Inca occupation in the southern Andes provide evidences of features that parallel those of the Peruvian heartland in important ways, but are also distinctive. Perhaps the most outstanding similarity is the evidence of a network of state installations constructed along the main highways and on smaller

secondary routes that connected the highlands with the eastern lowlands through the mountains (Raffino 1983; Hyslop 1984). Many of those provincial centers shared plans, architectural details, and activities similar to those to the north.

However, even the major Tawantinsuyu centers south of Lake Titicaca diverge from the pattern found between Cuzco and Quito and along the southern and central Peruvian coastline. The major distinction is simply the scale, while the second lies in the emphasis given to defensive issues. The southeastern perimeter of Qollasuyu contains a significant number of Inca settlements located in a defensible position, fortified or not. Moreover, the southern Andes are better compared to northern Ecuador than to the heartland.

As will be described below, there is a series of fortresses along the perimeter that suggest that the Incas were far more concerned with physically constraining relationships with societies outside their control at the northern and southern margins of the empire than they were with those near the core.

Raffino (1983,) and Raffino *et al.* (1990) have catalogued over 300 imperial installations with intrusive Inca architectonic sectors in south of Bolivia, north of Chile and NOA. Although most major installations have probably been recorded, much of the region remains to be systematically surveyed. Under these circumstances, an understanding of the Inca occupation of the southern Andes requires both a macro-regional perspective and a comparative consideration of a variety of radically divergent local situations. It also requires a heavier reliance on archaeological evidence and inference from a smaller database than is the case farther north. For the present paper, we will try to summarize the big scale picture, being our information derived from an uneven and probably not fully representative cross-section of evidence.



Considering that architecture, besides being a constructive or monumental decision, is a symbolic act of “land” or “territory” appropriation, would have allowed to reformulate the preexisting space and introducing it into what was Inca in a politically and symbolically way. In this sense, we consider that the *association* and *exclusion* concepts turn to be operative to explain different alternatives about the logics of spatial organization. However, domination through constructions at the purely symbolic level

would not have been exercised without a simultaneous dominion on the social sphere. That is why it must have been very important the decision about the location of Inca settlements in relation to an already existent local architecture. But this association concept also implies a contradiction: the apparent harmony between the Inca and the non Inca **spheres** and at the same time a segregation of the Inca through its material expressions. The presence of architectonic sections in preexistent settlements in Northwestern Argentina (NOA) and North of Chile are examples of this situation, as it happens in Turi, Catarpe Este, Pukara de Tilcara, La Huerta, La Paya and Guitián.

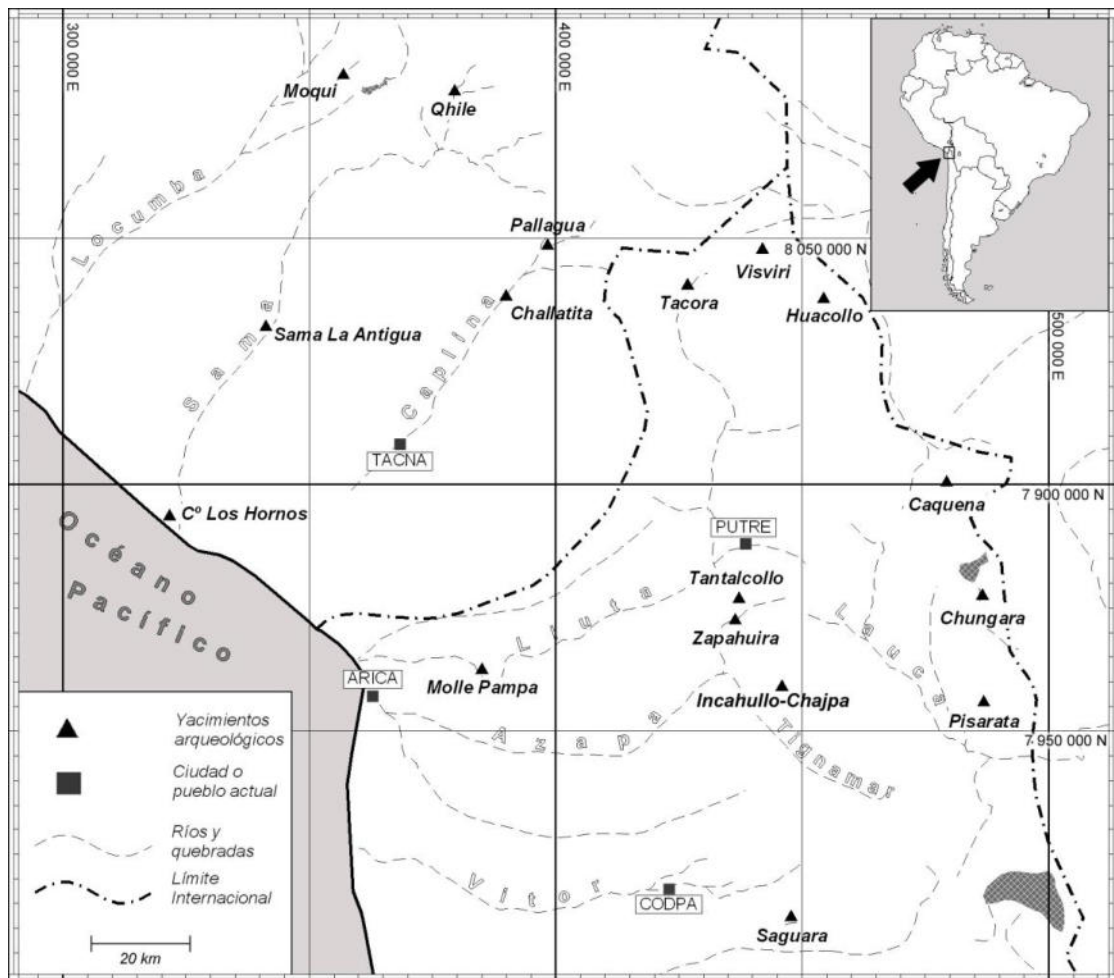
However, together with this association principle there is another of exclusion that highlights differences in the management of space between the Inca and the local contexts (Gallardo *et al.* 1995). In the NOA, as well as in the North of Chile, the two spheres mix but separate from each other at the same time by establishing a social distance. The discontinuous character of Inca presence and the monocomponent character of settlements may be an effect of organizational principles similar to those of association and exclusion (Sánchez Romero 2004:333). But Inca presence in this part of Tawantinsuyu was not only based on spatial reorganization and the change of meaning of new spaces and the abandonment of others. It also relied on the incorporation of new meanings and symbols related to the empire, materially expressed by pottery and sumptuous objects with imperial designs such as textiles, lapidary, metals, *Spondylus*, etc. These objects, designed and produced by the empire, must have replaced their similar locals in the contexts they were used and must have included and modified substantially the social practices in which they participated.

IMAGE

The North of Chile

The territories of the coast, low valleys, mountains and highland of northernmost Chile, correspond to zones of low population density and potential ecological limitations with stable processes of agricultural and pastoral production intensification, while the opposite occurs in the Circumtiticaca and Valluna sub-areas. However, that was not the only motivation for the expansion. Maintaining a peaceful region was also important in order to conquer and control new territories. These ecological, geographic and demographic factors would explain the scarce state investment in those areas. Based on this environmental consideration and application Murra's vertical model (1972), Llagostera (1976) proposed an indirect Inca state dominion derived from political groups in the Circumtiticaca area (caranga, lupaca, colla, pacaje). These political groups

had the demographic and economic capability to confront the problems of maintaining power over territories outside of their native lands in the highlands during pre-Inca periods (Covey 2000; Santoro *et al.* 2004; Schiappacasse *et al.* 1989).



North of Chile archaeological sites

Before Inca state, in coastal valleys, high Andes valleys and high Andean plateau in northernmost Chile and southernmost Perú, societal groups maintained rather interdependent sociopolitical units, where political and economic arrangements between local leaders did not trigger the formation of highly hierarchical and highly complex social organization under paramount chiefs. Instead, each local leader controlled small segments of the coastal valleys, a possible section in the coast, and possible a section in the upper part of the valley, but not in the highland. These social units maintained political and economic alliances through the use of certain cultural patterns reflected, for instance, in the iconography of pottery, textile and rock art, which contributed to

create and maintain social bonds, internal negotiations, and disputes. It may also have created a common front to negotiate or contend with the more powerful and larger social formations located in the highland, permanently anxious to get access to the attractive and diverse resources of the lowlands.

These local political networks started to be transformed in the XIII and XIV centuries when Topa Inca Yupangui conquered the province of Pacaxes, which territories were contiguous to the Arica province. Topa Inca did some geopolitical reorganization, designating land for maize cultivation in the valleys and coast of Arica and Arequipa (Jiménes de la Espada 1965:338). This political resolution may have been the act that allowed altiplano people to enter and conquer the lowlands, a political and economical desire that could not have been materialized before as the highland polities of the Titicaca region did not have the political and economic power to maintain long distance territorial control (Covey 2000).

In spite of what has been suggested elsewhere in the Andes, we think that in an early phase (1350-1450 A.D.) of Inca state control there were no major investment in infrastructure. Instead, the state took advantage of pre-established local installations for food and goods production and government, and in this process the consumption of Inca pottery, both imported and locally made according to state standard, was crucial among other prestige goods.

In other words, in this early phase of creation of social ties and negotiation the state heavily used exotic or prestige goods, such a textile, pottery and metal objects, along with the introduction of certain symbols of power masked by funerary monuments in the form of *chullpas*. This phase could be assigned as hegemonic control, following Hassig (1985); Luttwak (1976), and D'Altroy (1992).

Considering the low investment in economic and administrative infrastructure, the *coastal valleys* of northernmost Chile and southernmost Peru were ruled via a system of hegemonic control. It is feasible that in a later phase it derived into territorial control, considering the presence of features such as *ushnus*, *chullpas*, *kipus*, *qollqas* and certain productive enclaves of guano, fishing and coastal mining e.g. Huantajaya silver mine and guano islands, where the Cerro Esmeralda mummy is located.

On the other hand, *the sierra and highland* were ruled via a system of territorial control, as it shows important investments in the infrastructure required to administer and store the local production, and symbols of ideological power. In sites such as Zapahuira-Socoroma, the installations are related to administrative and economic

management activities (*tampu*, *qollqa*, roads), along with certain ideological backing, represented by the *chullpas*, which may have been linked to the high mountain shrines and *ushnu*. Conversely, in the Chapiquiña-Belén zone the state installations (Chajpa) annexed previous settlements (Ancopachane) and were oriented towards productive activities, with ideological reinforcement (*chullpa*) and high mountain shrines. This phenomenon has been verified in the higher part of Camarones Valley (Saguara and Pachica sites) (Schiappacasse and Niemeyer 1989, 2002).



Chullpas Zapahuira

IMAGE

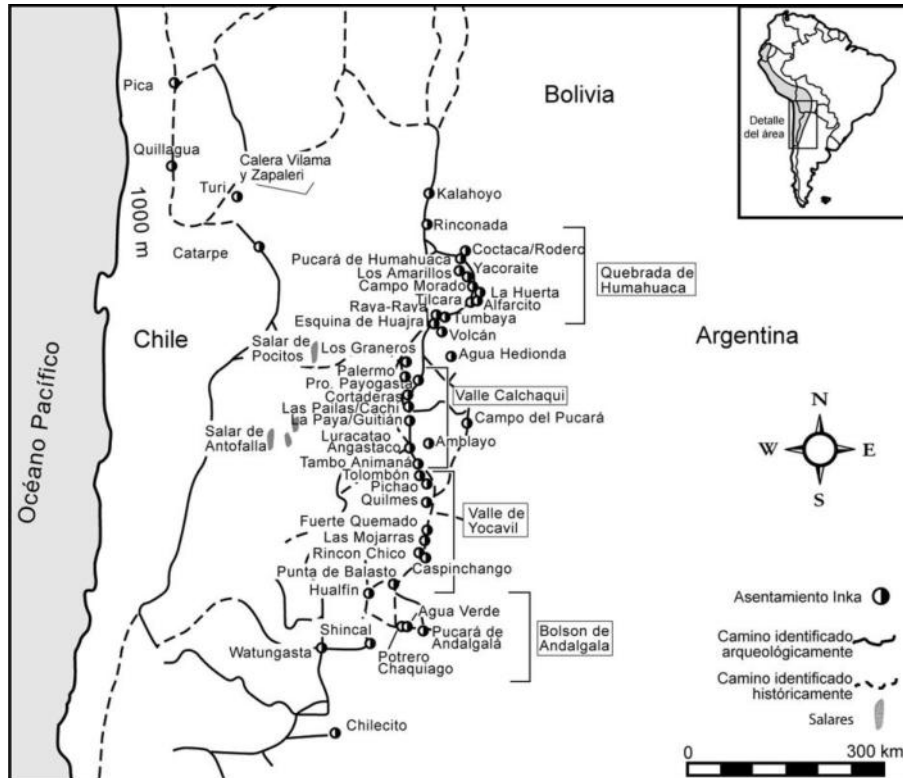
The Northwest Argentina (NOA)

The area known as Northwest Argentina is delimited by Bolivia on the North and Chile on the West, formed by Jujuy, Salta, Catamarca, La Rioja, Tucumán and Santiago del Estero provinces. The Atuel and Diamante rivers in Mendoza mark the southern limit, while the eastern one is given by the Subandean Hills of Santiago del Estero, Salta, and Tucumán. As an archaeological or cultural region these limits go beyond the national boundaries, Jujuy province being included into the South-Central

Area by Lumbrera's Andean area division (Lumbreras 1981) together with Southern Perú, Bolivia's Andean region and Chile's Norte Grande. Meanwhile, the transversal valleys of Chile (semiarid North) and the rest of the Argentinean territory are part of the Southern Andes.

IMAGE

There is a grand environmental diversity in the NOA which interlocks high terrains with low ones, and humid with semiarid spaces. Here, the state used different strategies to annex the territory. Contrary to what we have already mentioned for the Western Valleys in Chile, in the NOA the Inca presence was intensive but occurred mainly in restricted productive and strategically located areas not previously used, being a clear example of territorial expansion. We do not know whether this intensification of production was achieved by the resettlement of local populations or the introduction of new ones. In Quebrada de Humahuaca as well as in the North Calchaquí Valley, Santa María Valley and Bolsón de Andalgalá, the Incas built many installations in key interregional contact points closely located in areas where the local population was not very dense (Acuto 1999; D'Altroy *et al.* 1998; Raffino 1983; Raffino *et al.* 1983-85).



Northwest Argentina archaeological sites

If we consider the classic explanation of direct and indirect dominion, we note that Regional Development or Late Intermediate Period sites that have Inca elements are mixed with settlements planned and built by the state. It is important to remember that local and Inca sites may have been coeval and have been subjected to the empire under different political control systems: hegemonic or territorial. The fact that the Inca built important settlements in places where there was local population as well as in vacant zones, shows a preference to construct their govern according to local situations into the context of a grand scale design (North of Quebrada de Humahuaca, North of Calchaquí Valley, Lerma Valley and the surroundings of the confluences of the Santa María, Hualfín and Abaucán Valleys and surroundings of Santiago de Chile).

IMAGE

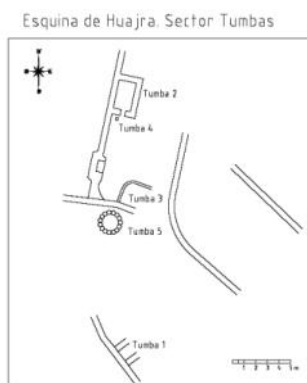
In the south of Quebrada de Humahuaca, some kilometers to the north of the archaeological site of Volcan, a Humahuaca Inca occupation is located. Esquina de Huajra was built over a low hill slope probably extending to the alluvial plain of the Río Grande, opposite to the quebrada de Huajra, one of the shortest access to the eastern valleys (Tiraxi *yungas*). Precisely, in this area Garay de Fumagalli (1998) has recorded ten Inca sites that show the productive control of the zone and the probable extraction of rich *yungas* resources.



South of Quebrada de Humahuaca and Lerma valley archaeological sites

Esquina de Huajra is an Humahuaca Inca monocomponent installation that shows scarce architectonic surface remains, being them more dense toward three artificially terraced levels located in the lowest part of the hill, called Terrace 1, 2 and 3 (from the lowest to the highest). The excavated area of the Terrace 1 belongs to a domestic context, that of Terrace 2 apparently correspond to a circulation space and finally, the area of Terrace 3 fundamentally belongs to a burial area composed of five graves, some of which contain Inca offerings (Cremonte 2003, 2004). The chronology of the site is rather difficult since several moments of Inca occupation are represented (Cremonte and Peralta 2005; Cremonte, Peralta and Escaro 2006). There are two radiocarbon datings more : one correspond to Volcan site (Tum1B2) of 440 ± 50 BP (LATYR-LP 808, cal. AD-/+ -1 sigma /+ 1sigma/-2 sigma/+2 sigma 1142/1617/1429/1627), placed next to the artificial mound and a public space or *plaza* . The other comes from an eastern

installation recorded so far called El Cucho de Ocloyas, a probable Inca garrison dated to **320**±50 BP (cal AD -/1 and 2 sigma 1510/1649 and 1481 and 1795).



The Esquina de Huajra osseous remains correspond to 18 individuals² of both sexes and of reproductive and pre-reproductive ages. Taking into account the health status of the individuals, it was proposed that nutritional events did not profoundly affect the population, considering both generalized indicators (defects in enamel deposition) as well as specific indicators (porotic hyperostosis and cribra orbitalia) (Gheggi 2005, 2006)..

Esquina de Huajra seems to have been an important settlement in the area, and considering its strategic location (opposite to the route to eastern territories) it might have had an important role in the control of labor force from the Pucara de Volcán population, in the exploitation and distribution of goods from the *yungas*, and in the structuration and supporting of the eastern border. The presence of llamas for transportation in this site (Mengoni Goñalons 2004) supports this hypothesis. The interaction with highland and eastern lowland groups would have been kept well after the Inca fall, until the first Spanish *encomiendas* and *haciendas* were effectively established in the region.

IMAGE

² **Beta-193319:** 340 ± 50 AP. This sample corresponds to vegetal charcoal obtain from a domestic area floor at Terraza, cal AD 1502-1649/ 1455/1796. **Beta 206919:** 280 ± 50 AP. The dated material corresponds to vegetal charcoal from Tumba 2 floor. This tumb corresponds to a secondary and multiple burial (2 feminine adults and 4 children from 2 to 9 years old) with different offerings, cal AD 1514-1799/ 1496-1952

UGA 16200: 550 ± 40 AP This sample was a right humerus of one of the 3 feminine adults and the still borne found at Tumba 1 (Gheggi 2005), cal. AD 1401-1446 and 1318-1463.

The abundance and variety of typically Inca pottery (footed basins, arybalous, shallow plates, etc) and also of non local pottery (*Inca Paya*, *Inca Pacajes*, Chicha, Pucos Bruñidos, Borravino sobre Naranja and *Casabindo pintado* or *Queta polícromo*), as well as metal objects, lithic artifacts and osseous remains (both from domestic and funerary contexts), allow to set a series of questions about this site function and permit to have an archaeological record unique to the area.

Esquina de Huajra and the other Inca site of **IMAGE** Agua Hedionda would have participated in the control of rotative labor prestations (*mit'a*) in the production and distribution of goods, as well as in the structuration of an apparently discontinuos and non militar eastern border with the fragmentary groups of the Chaco. Nevertheless, both sites can be interpreted as manifestations of different state strategies according to each area. Among the last ones, it might have been important the existence, or lack, of previously etnias organized in chiefdoms (in this situation the relationships between the Incas and the local etnias were negotiated) and the productive potential of the area and its importance to the state.

Considering that the Inca dominion of Quebrada de Humahuaca brought severe social changes, we see a continuity in certain aspects relating to traditional mortuary practices. This may be indicating that, in spite of the Inca conquest and the radical changes seen, people that buried their dead ones in Esquina de Huajra preserved certain behaviors of the social sphere, specially mortuary practices about burying together diverse age classes and the maintenance of an exclusive burial area. The most important difference with previous mortuary practices is the scale reached by secondary burial and the variations in body treatment given in Esquina de Huajra.

IMAGE

In Northern Calchaquí and the surrounding area of Capillitas range, the empire built a series of settlements with clear Inca architecture, while in the mid and South section of the Calchaquí-Yocavi Valley, the materialization of state power can be seen as a rearrangement of local spaces (*i.e.* La Paya, Guitián, Loma del Oratorio, Tolombón, Quilmes and Fuerte Quemado) more than in the building of Inca settlements, being the exception Pukara de Angastaco and Tampus de Animaná and Gualfin. We believe that the Inca presence in this part of the NOA generated variations in the use, reorganization and meaning of public, domestic and ceremonial spaces of local societies. In other cases, Inca presence is only represented by the existence of imperial portable remains, specially pottery found in local sites (Tero, Fuerte Alto, Choque, Valdés, Pichao y

Tolombón among others). The ways Inca adopted to govern different sub-areas, included not only actions in the political and economic sphere, but also in the ideological one. This partly explains the diversity and disproportion of state presence in remote and isolated places, as it can be seen in the summits of the Chilean-Argentinean Cordillera in places like Quehuar, Lulluailaco, El Plomo, Aconcagua, Chuscha or Iquique coast (Chile) where Huatajaya silver mine and “islas de guano”, motivated the installation of a high shrine in Cerro Esmeralda, a high mountain of Cordillera de la Costa (Checura 1977; Sanhueza 1980). This is a way of ideological power, where the state sacralizes the place to demonstrate and defend its position and interests without having to install military and administrative centers of higher maintenance cost. In this case, the cost is amplified because of the absence of a fertile valley to provide complementary support to the exploitation of coastal resources. In Northwest Argentina, we can see a higher investment in the establishment of a symbolic landscape through a superior quantity of high shrines in order to sustain the expansion into a wider territory and with more hostile groups if compared to the situation of the western valleys of Northern Chile.

Frontiers and fortifications

Forts were built along key frontiers, but Tawantinsuyu did not have a fixed border in the sense that modern nation-states do. Instead, the Incas kept up varied relationships with societies beyond their control, leaving them permeable or hardening them as the situation warranted. The Incas could not achieve control in a region simply by marching into, planting markers of possession (*mojones*), and declaring ownership. To the contrary, the limits of effective Inca rule often lay at retrenched positions, to which the troops had withdrawn after exploratory ventures. Morris (1988) pointed out that most areas lay at or near a frontier at some point and that incorporation was an irregular process.

The frontier from central Bolivia southward contains numerous fortifications, many of which appear to have been erected late in Cuzco's reign. In addition, the known high-elevation Inca ceremonial sites are heavily concentrated in the southern cordillera. In short, the Incas seem to have reorganized the south following the same kind of policies that they applied in the north, however at a scale tailored to the populations and resources present.

The forts in northern Chile and Argentina's Calchaquí and Yocavil Valleys and Quebrada de Humahuaca, for example, were probably front lines at one point but eventually lay almost 1,000 km behind the empire's southern limits (Raffino 1983; Niemayer and Schiappacasse 1988; D'Altroy *et al.* n.d.). Apart from a few prominent sites in Peru, such as Saqsaywaman above Cuzco and Incawasi in the coastal Cañete Valley, Inca-built forts cluster mostly in northern Ecuador and along the perimeter of Qollasuyu, in Bolivia, Argentina, and Chile (Hyslop 1990:146-190). Those places match the zones where Wayna Qhapaq undertook frontier campaigns, where these failed or met with concerted resistance, or where there was a realistic threat from extra-imperial incursion.

IMAGE

A similar situation existed along the frontier in what is now Argentinean territory: a hardened perimeter in the eastern cordillera, beyond which Inca armies apparently advanced onto the plains, but maintained little real control beyond the piedmont. In Jujuy, the easternmost array of small forts, way stations, and ritual sites lies along or just beyond the crest of the mountains: e.g., Cerro Chasquillas, Cerro Amarillo, Pucará Morado, Puerta de Zenta, Cerro Colorado, Putuquito, Pucará Tres Cruces, and Pueblito Calilegua (Raffino 1993:213-234; Nielsen 1994; 2001). The string of fortified sites along the border seems to have been part of a systematic effort to impede or at least control traffic between the lowlands and the mountain valleys and *puna*. In Salta, the Incas attained enough security over the piedmont between the mountains and the plains to set up farms and associated facilities with hundreds of storehouses. A string of state sites was built in the **Lerma Valley**, including an array of up to 1,700 *qollqas* at Campo de Pucará, probably to house the produce of a state farm (Boman 1908; Fock 1961; González 1983; Mulvany 1997) and in the Agua Hedionda site in the eastern Jujuy plains.

Farther south, the lands above Tucumán were guarded by the fortress now called the **Pucará de Andalgalá**, but the Inca armies may have penetrated an additional 100 km beyond, into Lule territory³.

³ Matienzo (1967 [1567]: ch. 34) wrote that an Inca road reached Santiago del Estero; Betanzos (1987 [1557]: PT 1, ch. 35, p. 160) stated that Thupa 'Inca Yupanki conquered the "Zuries"; and the *kipu kamayuq* Qhapaq Ayllu in Rowe 1985 [1569]:226] said that Wayna Qhapaq used Juri soldiers in his northern campaigns.

Writers from the 16th century to the present have puzzled over the empire's southern limit, placing it anywhere from the Río Maipo, just south of Santiago de Chile, to the Río Bío Bío, 300 km beyond. Many modern studies (Silva 1986; Hyslop 1981) settle the limit on the Río Maule, midway between the other two drainages, in part because some major chroniclers, including Cieza, Betanzos, and Santillán, placed the limit there or a bit beyond (Valdivia 1960 [1545]:13; Bibar 1966 [1558]:137-38; Mariño de Lobera 1867:254], and Olaverria 1852 [1594]).). The most southerly major Inca site is the fort called Cerro Grande de la Compañía, about 80 km south of Santiago in the Río Cachapoal drainage (Planella *et al.* 1992). That site and the better-known Cerro Chena, about 60 km to the north in the Río Maule, were existing settlements co-opted by the Incas. However, Inca-style copper axes and ceramics have been found as far south as Valdivia, 700 km beyond Santiago. As Dillehay and Gordon (1988:220) observed, the choice of location may derive from the sources of information and the criteria that the authors chose to use. They point out that the problem of fixing a border in Chile largely evaporates if we drop the notion that political, military, and economic frontiers coincided neatly. For the far south, they suggest that economic and cultural ties with the Araucanians extended well beyond the military and political limits of the empire.

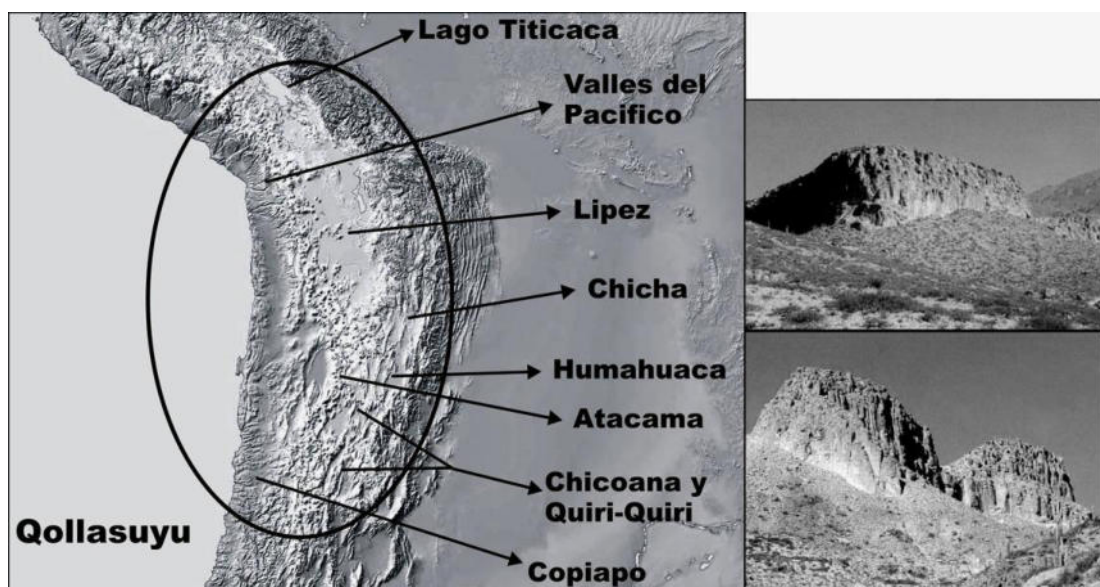
Frontier relations at the fuzzy limits of dominion in the south were thus complex and varied, because they met diverse imperial needs that changed over time and because overtures were met with differing responses. It is especially interesting that the Inca advances to the south, like those of the far north, stopped at locations that were not natural geographic termini. Instead, progress was halted at the beginnings of expansion of temperate lands occupied by the Mapuche, which were agriculturally far richer and more densely populated than those farther North in Chile. It thus seems most likely that logistical obstacles, the great distances from Cuzco, and formidable local resistance combined to halt the progression of Inca rule much beyond the points that were achieved by the beginnings of the 16th century.

IMAGE

It is important to remember that the construction of fortresses in Southern Andes from the Titicaca till the South of NOA took place in both sides of the Andes. Cieza de León mentions the presence of *pukaras* in the circumtiticaca basin where there was an endemic conflict situation during the period previous to Inca occupation. This circumstance extended to the south at Lipez, Chicha, Humahuaca, Atacama, Copiapó,

Chicoana and Quire-Quire. Fort lines extended along the western and eastern Cordillera controlling the valleys headings and basin as can be seen at the Salar de Atacama with its *pukara* Quitar. The regional post-Tiwanaco mobility model proposed by Núñez and Dillehay, points to the concentration of *pukaras* at the Tarapacá-Loa region and NOA (Núñez and Dillehay 1979).

In the Quebrada de Humahuaca, Santa Maria and Cajón valleys, and in the northern Calchaquí Valley, the population concentrated in larger settlements and there was an increasing concern with defensive location and construction (Nielsen 1996; DeMarrais 1997). At the same time, contacts across the Andes with Chilean societies appear to have increased, especially in the form of ceremonial paraphernalia that may have been associated with drugs (Nielsen 1996).



Fortifications line in Qollasuyu and Mayuco and Tacuil pukaras.

What seems clear, in any case, is that the major societies of the southern Andes were in a dynamic political phase during a century or two before the advent of Inca rule. Some scholars consider that this is showing shifting territorial alliances in an endemic social conflict situation, even though exchange networks continued and the circulation was established through certain routes and exchanging spots like those still used both sides of Cordillera (Tarragó 2000:26). The populations of the Regional **Developments** Period (900 a.C. to 1450 a.C.) showed great interest in controlling its surroundings since the visibility from these settlements was very high, but not in being seen by those who passed by the *quebradas* below. And this interest was important enough to settle down

at places with very difficult access that would have required a considerable energy investment to supply water, food and raw materials.

Chronology

It has been estimated from historical data that the expansion of the Inca Empire occurred in a very short period of time (Rowe 1944; Pärssinen and S Siiriäinen 2003). The archaeological data, however, does not reflect this situation, and shows a rather much longer historical process (D'Altroy 2000; D'Altroy *et al.* 1998 ms). The advance was achieved because the political control strategy was based on the conquest –peaceful or military- of the heads of the provinces. Responsibility for the administration of the new territorial organizations was then transferred to local leaders, or to others imposed by the Inca. In some cases, the Inca invested in infrastructure and made substantial changes in the pre-existing organizational systems (Eeckhout 2004). On the other hand, Pärssinen (2003:24) reminds us that, beneath the four *suyus*, there were administrative territorial subdivisions, and these were also integrated via inter-provincial confederations, such as the Charcas or the Collao, which had a multiethnic character and were led by lords backed by a military and ideological apparatus (*apocuna*) (Pärssinen 2003: 34). To the Atacama Oasis and the Loa basin in Chile, Uribe (1999-2000) estimates that both were directly controlled by the State, with the support of a strong ideological apparatus (Cornejo 1995; Uribe and Adán 2004; Uribe *et al.* 2000). **Although** Silva (1992-93, 1993) and Uribe (1999-2000) have pointed out that the archaeological analysis of the Inca in northernmost Chile is primarily focused on descriptive case studies (Muñoz 1989; Muñoz *et al.* 1987a, Muñoz *et al.* 1987b; Muñoz *et al.* 1997; Romero and Briones 1999; Romero 2002; Santoro 1983; Santoro *et al.* 1987; Santoro and Muñoz 1981; Schiappacasse and Niemeyer 1997). There is also a strong emphasis on state symbolic and ideological displays to manage and legitimize its supremacy in the conquered territories and on the way local cultural patterns were framed within this imperial cultural system (Uribe and Adán 2004). However, these explanations lack well-defined archaeological data to compare the operation of these or other institutions of the Inca state organization, such as the mechanisms of expansion and administration of territories far from Cusco. According to Santoro (*et al.*) data from Arica's pre-Cordillera (1400-1600 d.C.) indicate that the Inca occupation corresponds to the territorial system represented by state installations like Tantalcollo (Beta 200949: 590/-70 BP; cal AD +/-28 1261-1367-1473,) and Zapahuira's tampu (Beta 200946:

470 \pm 50 BP and Beta 200945: 350 \pm 50 BP; .cal AD \pm 2 σ 1385-1439-1493 and cal AD \pm 2 σ 1398-1538-1678).

It is likely that these settlements were built once the tax extraction via *mit'a* was politically consolidated and produced enough surpluses to allow an investment in this kind of engineering works. Nevertheless, it is possible that under the same social conditions the state investments in southern Perú valleys like Tacna were of bigger scope, given the higher productive capability of this hydrographic basins and their closer and more direct geographical relation to the circum-Titicaca political centers like Ilave, southeast to the lake, connected to Tacna's coast through a paved road by the Sama basin.



Zapahuira tampu

According to Cabello's chronology, the Incas annexed the Argentine territories *ca.* AD 1470-1480 during Topa Inca rule, sustained by some authors like Betanzos, Cieza and Sarmiento (Rowe 1945: 271)⁴. During Wayna Qhapaq's rule (1493-1526), peoples named Chiriguano (Guaraníes) took advantage of the emperor's preoccupation with the north Andes to invade the southeastern frontier. Wayna Qhapaq dispatched Yaska to lead a military campaign that reasserted control and hardened the frontier with a line of fortifications (Cieza de León 1967 [1553]:Ch. 63, pp. 211-12). In 1535, when Diego de Almagro made the first visit to the region, some of the Inca centers were still populated

⁴ Betanzos, Cieza and Sarmiento independently confirm that Tawantinsuyu's south frontier was established by Topa Inca close to Maule river, almost 250 km south to Santiago de Chile (Betanzos 1551: cap. XXV; 1987: 160; Cieza 1554: cap Ixi; 1986: 177; Sarmiento 1560: cap 50; 1943: 326).

and functioning, but that situation had changed by 1545, when Diego de Rojas passed through. Therefore, from the historical perspective, Inca dominion in the southern Andes lasted about 50-65 years.

The conquest of Southern Bolivia and Northwest Argentina is described in the Capac Ayllu text that, according to Sarmiento is the *panaca* of higher rank in Hanan Cuzco (Sarmiento 1960[1572]: 178)

“y entro en la provincia de los chichas y moyosmoyos y amparais y aquitas copayapo churomatas y caracos y llego hasta los chiriguanos hasta tucuman y alli hizo un afortaleza y pusso muchos indios mitimaes. Y asi salieron a pocona y hicieron muchas fortaleza en el mesmo pocona y en sabaypata que es en los chiriguanas y en cuzcotuiro y pusso en todas las fortalezas muchos indios de diversas partes para guardasen la dha fortaleza y frontera a donde dexo muchos indios orexones y al presente estan poblados sus hijos y descendientes en las dhas fortalezas y fronteras. Y luego hallaron una fortaleza en la provincia de los cuis y chichas llamada huruncuta y asolando aquella provincia la poblo de muchos indios orexones“.

Tucumán, which is mentioned in Sarmiento's text, would have belonged to the Tawantinsuyu, although some authors as Pärssinen, taking into account Betanzos, consider that the state would have entered into the eastern piedmont even reaching Santiago del Estero province, located in the Juri region (Matienzo [1566] 1885: XLIV; Pärssinen 1992: 128). Apparently, the Incas would have sent people from that province to the Tarija valley as *mitima*. Besides, the *quipocamayoc* mentions that Huayna Capac, who went to the *Qollasuyu* after his campaign against the Chachapoyas, rebuilt the fortresses that his father had set with the help of the local chiefs and simultaneously organized new punitive incursions into the Amazonian piedmont. Fundamentally, he ordered the frontier and deepened the administrative and economic regional reform⁵.

So far, we can point out some trends that reinforce this early data on the Inca effective occupation in the NOA and North of Chile that were presented by D'Altroy *et al.* over a decade ago. On the Quebrada de Humahuaca we have information about four sites previous to Late Horizon which show architectural rearrangement events

⁵ According to Sarmiento, Pachacutti sent Amaro Topa Inga and Apo Paucar Usno to conquer first the Collao and after that they would have continued their way against Charcas. According to the *quipocamayoc*, Apo Cari del Collao (lord of the *lupaqa*) may have been an Inca's second in command and the general captain who commanded the Collasuyu (Pärssinen 1992: 268). This data is used by Gentile when she recognizes at certain caves the representation of characters with yellow *ponchos*, characteristic of the *pacajes* (Gentile 1995: 46).

according to the state canons or the presence of clear Inca style material culture with early radiocarbon dates.

This situation is repeated in the Yocavil Valley, where five settlements with PDR occupations have early Inca dates given by the presence of Inca pottery or Inca intrusive architecture as it happens at Tolombón or Quilmes sites.

Recently dated Inca sites in Quebrada de Humahuaca like Agua Hedionda or Esquina de Huajra offer important information about different Inca occupation contexts. The first one would correspond to a late event of the occupation, being coincident with the idea of an Inca military outpost to Jujuy's *yungas*. However, Esquina de Huajra tombs show different episodes connected to the relationships between the local populations and the state, which was reflected on the offerings since some tombs have Inca objects and others do not. About funerary contexts, the Inca sites of Northern Calchaquí Valley, Yocavil and Andalgalá Valleys offer early datings as Agua Verde burial, which are coherent with the datings of administrative or *tampus* of the area. However, the early datings of San Francisco *tampu* depart from the media and should be evaluated after the widening of the sample and the incorporation of information from the other state sites of the area.

In Jujuy province, the scarce radiocarbon datings of Inca fortresses located in the eastern frontier such as Puerta de Zenta (AA- 16241- 438+/-48 BP) and Cerro Colorado (AC 1085- 430+/- 90 BP)-, point to an early occupation (cal-/+ 1 and 2 sigma 1444-1617/1431-1627 and -/+1 and 2 sigma 1440-1625/1392-1796).

IMAGE

In Salta province, the Angastaco fortress, located in the interior of Calchaquí valley, could represent a particular and early episode resulting from a strategy of control over the powerful and important local populations such as *pulares* and *calchaquies*. The only available early dating of Angastaco correspond to a midden from the *tampu* closely associated to the fort. (Beta 203739- 530+/-40 BP, cal AD -/+ 1 na s2 sigma 1414-1446/ 1399-1461) The newly obtained samples of organic material from the fort should serve to elucidate the sequence of occupation in this part of South Calchaquí Valley.

Finally, the radiocarbon datings of two northern Chile *tampus*, known as Zapahuira and Tantalcollo match the early datings of Inca settlements in Quebrada de Humahuaca and Calchaquí, Yocavil, and Andalgalá valleys of Northwest Argentina.

In spite of the diagnosis there has been few attempts to establish the local social spheres that were affected by the State administration, and how then the state shaped its

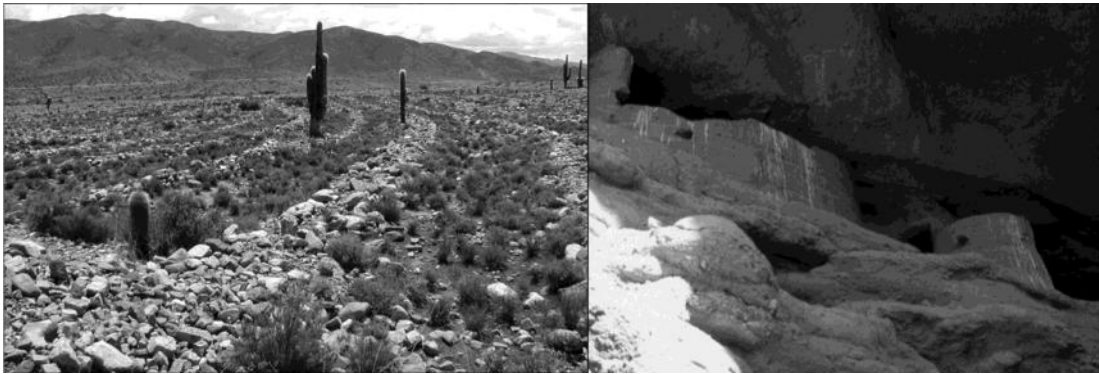
political, economic, and ideological structures to administer these provinces (Acuto 1999; Alconini 2004; Arkush 2006; Covey 2006; D'Altroy *et al.* 2000; D'Altroy and Hastorf 2001, Earle 1994; Frye 2006; Nielsen y Walker 1999; Santoro *et al.* ms; Stanish 1997; Uribe 2004; Uribe and Adan 2004; Wernke 2006). It has stressed the identification of narrow number of cultural material, as pottery styles, to define direct or indirect control, given not much attention to the mechanism of integration and its consequence among the local communities. For example, the presence of a ceramic component from Northwest Argentina in the Atacama region **IMAGE** (i. e. *Inca-Paya* and *Yavi Chico Polychrome* pottery) and distributed throughout the Circumpuneña subarea, seems to accompany the Inca expansion in the Puna de Atacama as part of imperial equipments (Bray 2004; González and Díaz 1992; Uribe 2004; Williams 2004; Williams *et al.* 2007 a).

Agricultural production

As has been well-chronicled, after the Incas took over new territories, state personnel set about ensuring that food was available to support people working on state business. That end was usually accomplished by reserving lands for state farms, which local workers cultivated as part of their labor service. It appears to have been standard practice to grant the *mitmaqkuna* usufruct rights on lands they used to support themselves. The farms were often located near provincial centers, but some immense farms were also established in especially favorable agricultural locations. The best-known of the farms lay in the temperate Cochabamba Valley, Bolivia, where Wayna Qhapaq ordered the valley vacated to make way for 14,000 agricultural workers, both permanent colonists and *corvée* laborers (Wachtel 1982). The lands were reportedly dedicated to growing maize for the Inca's armies.

IMAGE

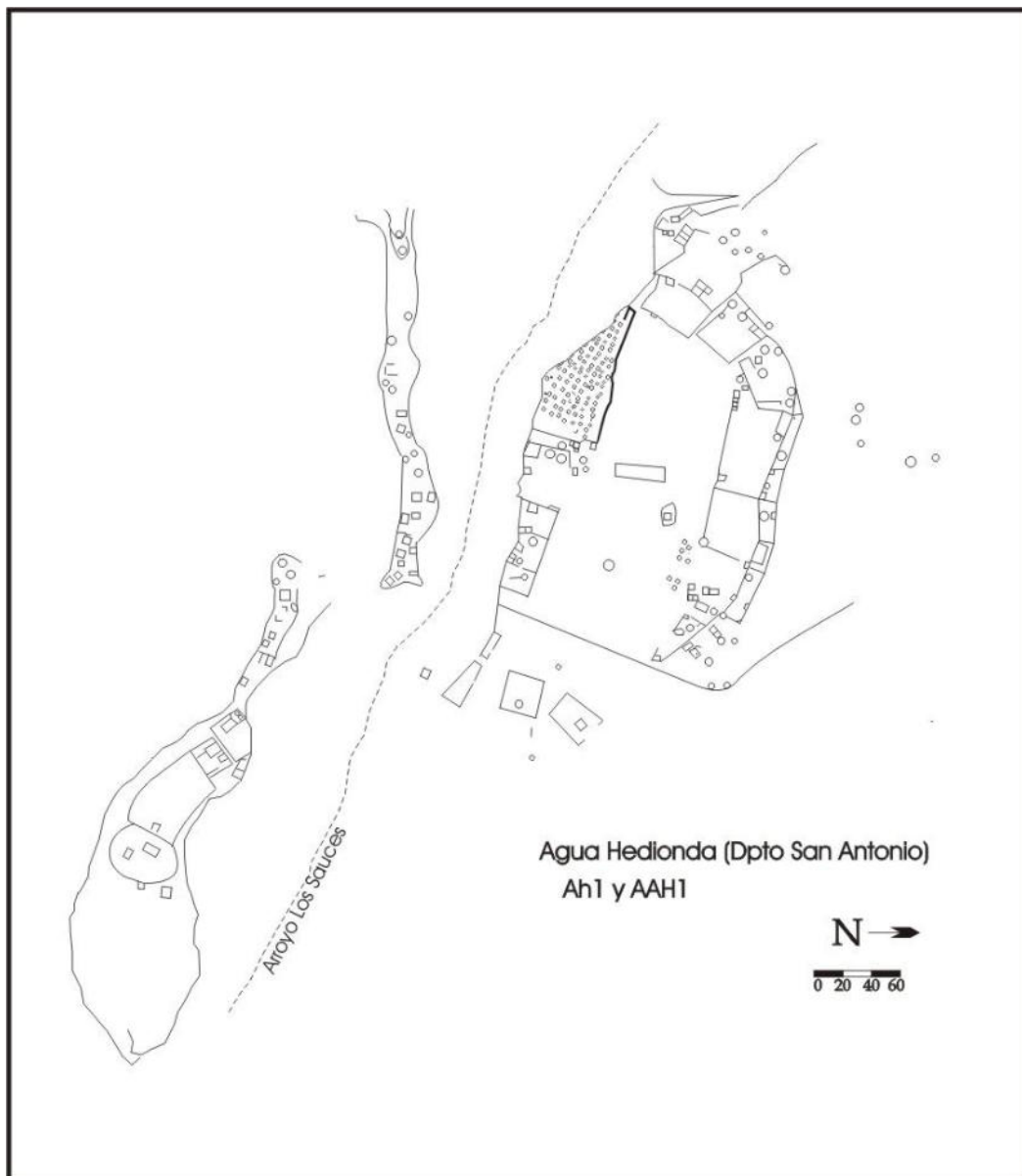
In Northwest Argentina, state farms have been archaeologically identified in several locations, most impressively at Coctaca in the upper Quebrada de Humahuaca. (Albeck 1992-93; Albeck y Scattolin 1991; Casanova 1934; Nielsen 1994). There is a vast terraced field system covers about 6 km² on the alluvial fans and piedmont (3700 m) just below the fringe of the altiplano. The identification of the field system as Inca is based, among other things, on the lack of antecedent occupation by local populations, by the scale of the project, and by the presence of Inca residential settlements in the midst of the terrace systems.



Coctaca andenes and La Poma storehouses

As we said before there may have also been extensive state farms on the lowest piedmont of the Lerma Valley in Salta, where a string of Inca sites runs along the edge between the Andes and the eastern plains, specifically at the Campo del Pucará (Mulvany 1997), where reportedly contained 1,700 storehouses (Boman 1908; Fock 1961; González 1983), and also in Agua Hedionda (10 ha) **IMAGE** located in Jujuy province, where more than 103 *qollcas* were recorded in close association to a *tampu* placed at 1,400 masl . The placing of this *qollcas* and agricultural fields suggest that this area was sufficiently pacified as to the Incas could work without fearing of the bands or mobile groups that inhabited the eastern lowlands. Agua Hedionda is connected to Quebrada del Toro to the west (through quebrada El Morado), with Lerma Valley to the south and easily with Jujuy Valley and headings of Quebrada de Humahuaca to the north, and finally with the eastern lowlands following Perico river. This two Inca settlements took part in the same system of production, storage and agricultural products distribution, all located in a transition area extremely apt to maize agriculture, which allow to have an early harvest (*michk'a*) and also because they limit with mount and *yungas* forest formations, where other needed and wanted products by Puna people could be obtained (Cremonte 2005; Peralta 2004). They could also have worked as suppliers of key locations strategically placed in the eastern frontier of the Tawantinsuyu. Agua Hedionda would have been a satellite settlement of Campo del Pucará. This situation has been recorded for the Cochabamba Valley where small storage places as Kharalaus Pampa are located close to Cotapachi, being the presence of minor satellites a characteristic feature of storage organization in state production settlements (Gyarmati and Vargas 1999).

The occupation of this territory would have occurred at a very late moment of Inca domain that we situate at the mid XVI century according to the only chronometric date from Agua Hedionda over vegetal charcoal: (Beta 194232: 340+/-60BP, cal AD 1 and 2 +/- sigma 1501-1645/ 1454-1797). We consider that Agua Hedionda (AH1) and the other related buildings would belong to a late episode of a process started at Lerma Valley, related to the Inca expansion towards productive spaces and to the structuration of eastern frontier at this latitude.



Agua Hedionda's core constructions reflect a brief and ephemeral occupation. On the other side, considering that there is very few data from Campo del Pucará and that we do not have chronometrical records, taking into account the findings from Fock (1961) our hypothesis is that the Inca occupation of San Antonios's mount forest is a late incursion on an "empty" zone which would have included the movement of population from Lerma Valley.

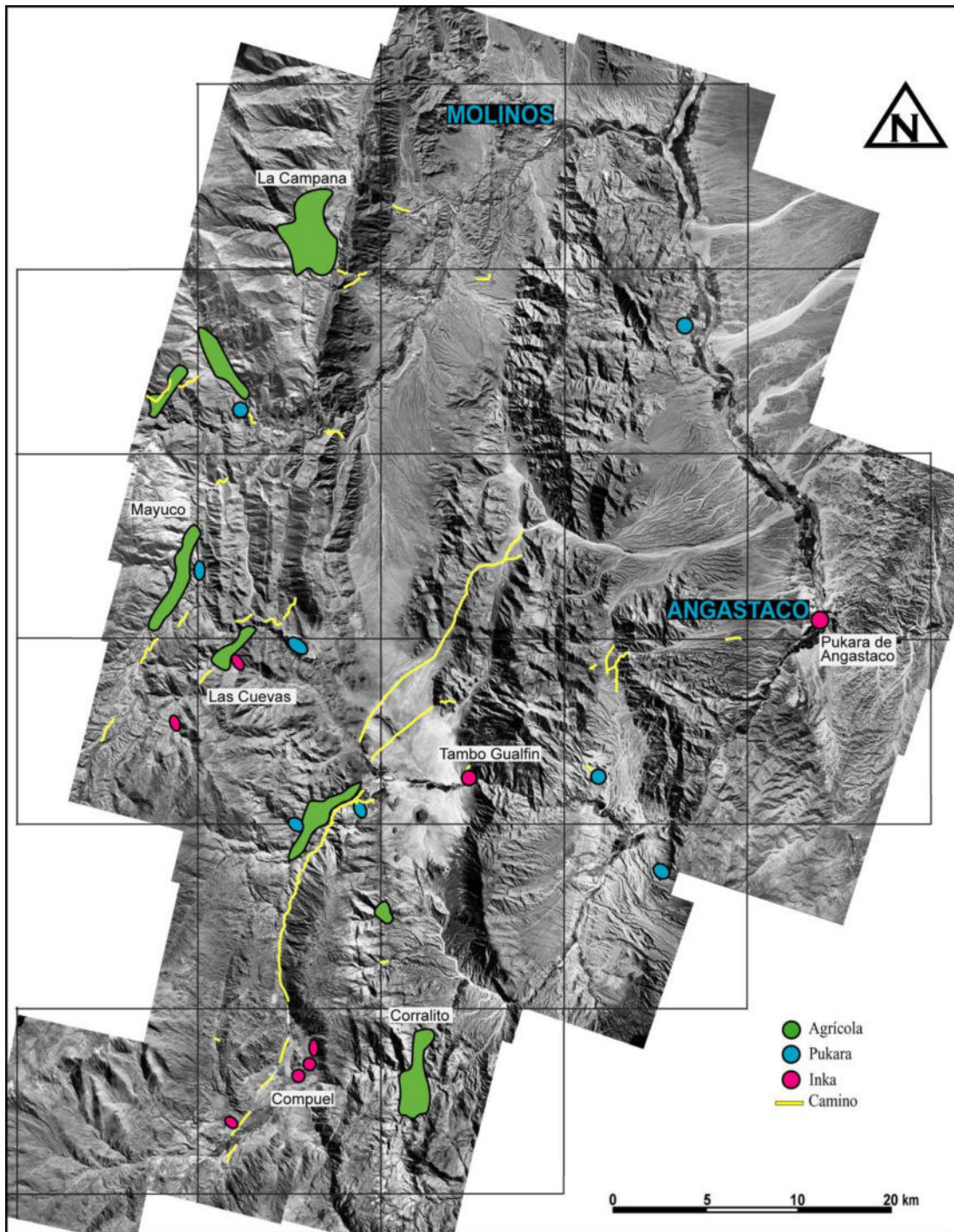
However, and in spite of the possibility that Agua Hedionda served as a secondary center, it must have imposed itself as an imperial power symbol in an area where Inca presence was not very visible and from where a direct political control could have been exercised, but it is possible, that was not the case

IMAGE

In the northern Calchaquí Valley, the Incas appear to have expanded the territory of the nearby Pular ethnic group at the expense of the native Calchaquíes, and may have imported Yavi mitmaquna from southern Bolivia or northwest Argentina (Lorandi and Boixadós 1987-88). Even though there is substantial evidence for intensified production in the Calchaquí Valley, the most productive lands in the vicinity were the lateral valleys, most of which lie to the west. Fed by runoff from the Andes and protected from the most extreme elements, those valleys provide more temperate, moister microclimates than the main valley. There is considerable evidence for Inca-period occupation and extensive field systems in those lateral valleys (DeMarrais 1997), but the nature of Inca production there remains to be worked out in detail. Although the Calchaquí production was clearly intensified under Inca dominion, the agricultural products were likely intended for consumption in activities that were locally focused, as the number of storehouses, at all Inca settlements, in the region probably totals in the low hundreds (Acuto 1999).

State agricultural production was apparently focused in several locations associated with state settlements. The far northern valley has two branches, the Río Potrero and Río Calchaquí, each of which contains a series of Inca installations. In the Potrero drainage, the Incas intensified production by building canals on both sides of the river, associated with the state settlements at Ojo de Agua, Potrero de Payogasta, Cortaderas, and Belgrano. In the other branch, expanses of irrigated land are associated with multiple state installations at Palermo and La Poma; the modern extent of irrigated lands at Palermo covers 1,000 ha, although we cannot be sure that an area that large was under cultivation during the Late Horizon. About 40 km farther to the south, the Incas

constructed a canal several kilometers long that expanded the irrigated lands in front of the paired installations at Puerta de La Paya and Guitián, where the main center for the Inca province of Chicoana lay. Even farther to the south, in the Molinos area, there is also evidence for Inca occupation in association with field systems which has been recently reported (Villegas 2006; Wiliams 2005; Williams *et al.* 2007 a). In Molinos and Angastaco basins there have been located many agricultural areas with terraced areas (tracks and terraces), aqueducts, canals, etc. like the tracks complexes like **IMAGE** La Campana-Roselpa-La Despensa (150 ha), Mayuco (30 ha) and Corralito (200 ha) among others, located in the subsidiary *quebradas* of Calchaqui river (such as Colomé or Gualfín). These subsidiary valleys have several environmental characteristics that make them particularly apt for agriculture, especially on the back sides of western *quebradas* creating favorable conditions for agriculture and notably increasing the area's productivity (Baldini and De Feo 2000: 88). They also served as passing ways located into the western hills of Calchaquí valley that connects the Ratones, Diablillos and Salar del Hombre Muerto in *puna* highlands (altiplano). The disproportion between population and cultivated land lead some researchers to propose that these lands received work labor from workers living in other areas. This situation, originally proposed for Quebrada de Humahuaca, is repeated in Calchaquí medio, judging from agricultural facilities present. This situation was intensified by the Incas by conditioning greater agricultural surfaces, canals building, ponds, storage facilities and state settlements supported by local work labor as well as by agricultural tribute organized as rotative labor force or as specialized labor force such as *mitmaq*.



Agricultural lands, pukaras , Inca road and Inca sites in Mid Calchaqui valley.

In several of those cases-the Quebrada de Humahuaca, the northern Calchaquí, and Bolsón de Andalgalá- the Incas appear to have appropriated much of their land from areas that were slightly used, if at all, during the immediately previous period. That approach may well have ameliorated the impact on the agricultural productivity of the local populace and taken some of the sting out of being exploited for labor and other resources. Elsewhere-*e.g.*, the mid-valley Calchaquí- the Incas appear to have at least

partially displaced indigenous populations and supplanted them with colonists. That stratagem seems to have been related to the Incas' difficulty in pacifying the Calchaquíes and the use of *mitmaqkuna* from the more compliant *pular* and *yavi* etnías. At Fuerte Quemado and Quilmes, a third approach may have been put into action—the installation of a relatively small Inca presence and the possible intensification of food production for state use.



High-elevation ceremonial sites

One of the most striking features of Inca ideology is the reverence paid to the sacred landscape, a practice which is apparent in a variety of situations, most notably the 328 wak'a on 41 zeq'e lines emanating from Cuzco and the several "New Cuzcos" erected at different locations (*e.g.*, Tumipampa in Ecuador or Incawasi in Peru). More modest homage paid to the deities of the natural environment can be found in the carved stones scattered across the landscape, the canalized springs, and the mountain peak sites containing ceremonial caches and the more rare human sacrifices. That combination of ideas involved both an animistic religion and concepts of the cosmos that had specific geographic and spatial referents.

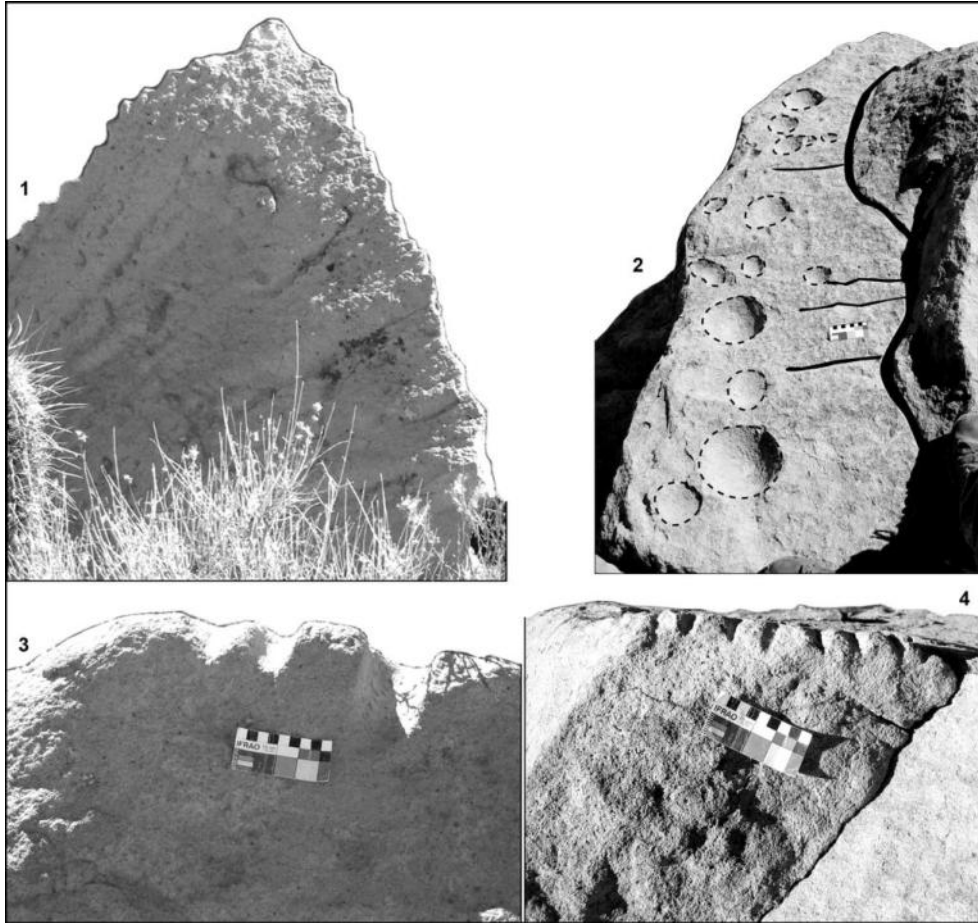
Other example of sacred landscape built by the Incas are those marks in the landscape that could be interpreted as one of the most visible manifestations of human territoriality, in order to appropriate new conquered spaces. Besides, if these marks are related to ritual activity, the implicit process in these actions is to “sacralize the landscape” as a function of the dominant group that is trying to culturally appropriate these new dominions. The result of this strategy is to convert the space into “cultural landscape”.

In this part of the empire and during the Late Horizon, the Incas increased the agricultural space and incorporated as a regular strategy lands in higher altitude and slopes (Albeck 1992-1993; 2001). In close relation to these areas, lithic elements have played an important role in the process of signification of the Andean natural landscape. In this sense, stones and rivers dominate in a powerful way both the natural and mental landscape of its inhabitants (van de Guchte 1990). The cult to the *wamanis*; the *Uywiris* (sacred places); the *huanca* monoliths; the portable stones such as *illa*, *conopa* and *enkaychu* or the tired stone are some examples of a “lithic discourse” in the sense expressed by van de Guchte.

In many cases, the Incas used artistic intervention to reveal the nature of an important, yet not visually imposed natural feature. The Incas highlighted distant elements of the landscape by manually shaping stones, as in the case of Machu Picchu where the Inti Huatana acts as one of the formations of the Huayna Picchu.

In the NOA, specifically in the mid Calchaquí valley where we can appreciate a recurrent presence of *pukara* sites, every surrounding slope is covered by agricultural structures and big carved stone blocks with abstract motifs as waving lines, circular or ovoid depressions named “cochas” (Briones *et al.* 1999) and sculpt stones.  For example, at Tacuil, in the mid Calchaquí, we located several carved stones with concentric parallel lines similar to andenes (“chacras” or agricultural field’s miniatures) and with Tumi form. The rocks’ location, its flat form and the carved elements they hold –that appear to have been made in  unique event forming a big composition– suggest that the function of this rocks may have been specific. Similar examples have been registered at Campo Morado in Quebrada de Humahuaca and at Vinto in Lluta Valley.

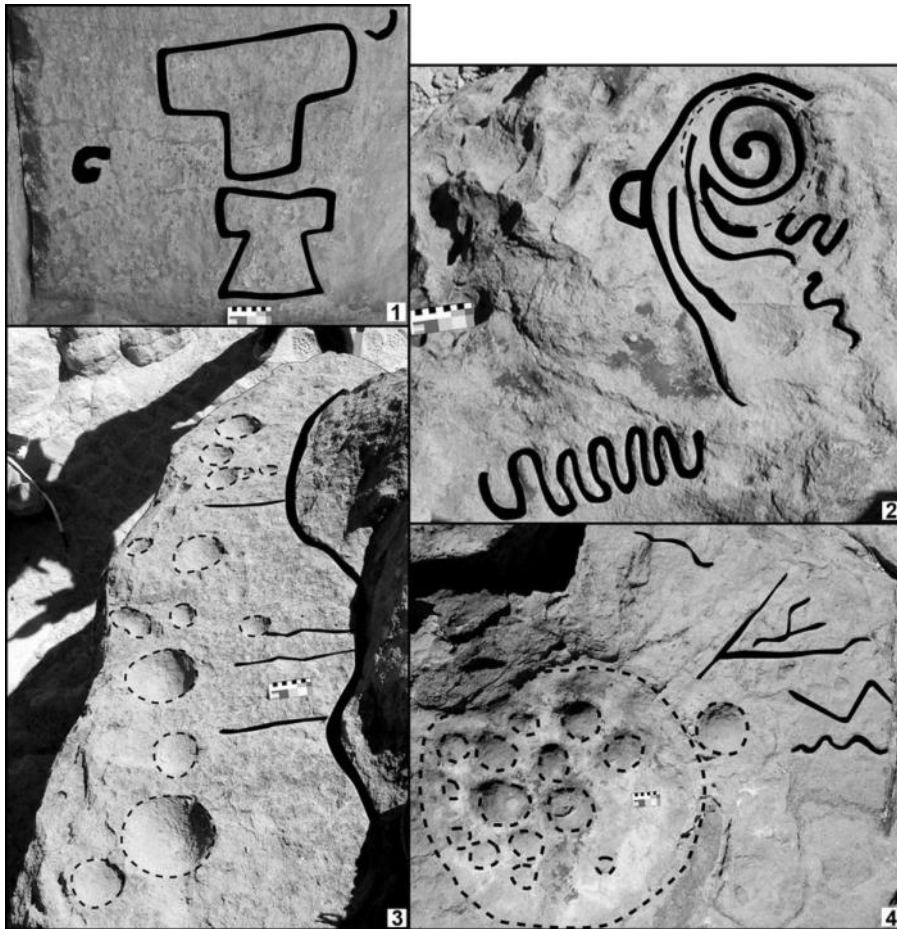
Another characteristic of agricultural sites in the mid Calchaquí like La Campana, Mayuco, Tacuil, and Gualfin is that they are directly related to the Inca road. This road system is known as an omnipresent symbol of the state power and authority for the conquered populations and may have function as an articulation of these two landscapes: the local and state ones (Hyslop 1984:2). Some scholars sustain the perception of the Inca road as a geoglyph, that is, the Inca road as a prime symbolic territorial marker (Berenguer 2005). From this perspective, the presence of certain rock art motifs and sites that may be associated to offerings and ritual activity would reinforce the theory that they were activities directed to strengthen the landscape symbolic appropriation (Hernández Llosas 2006).



Mayuco and Tacuil carved stones blocks

It is significant that these big carved rocks are “immerse” in sites that would correspond to the moment previous to the Inca arrival, like the *pukaras*. So, the question is why did the Inca appropriate this previously existent spaces and/or territories?. To answer this we should think about the *pukara* concept that goes beyond the idea of a fortress to include two symbolic dimensions that refer to the Pachamama and to the ancestors. According to Tarragó.... “*De ahí que la conjunción de “chacras”, instalaciones básicamente agrícolas y el pukara como centro social, político y religioso, constituya una metáfora del período*” (Tarragó 2000: 267). Water, the prime liquid to agricultural activity, is seen as running from the lakes and mountain springs to eventually arrive to the sea, from where it goes up to the sky and its redistributed again as stationary rains that water the sacred mountains, venerated by the local communities. The notion of *pukara* is related to this conception, so that they should be placed in high elevation to establish the relationship with the ancestors and with agricultural fields and *chacras* fertility (Tarragó 2000: 291). Moreover, places with special characteristics given by their isolation and association to rock blocks appropriated to be carved or the

fields with carved stones or petroglyphs should have been pilgrimage and reunion places related to the Calchaqui people beliefs and world view.



Tacuil carved rocks

In this part of the valley, the Inca sites are not directly associated to agricultural lands. This does not imply a lack of state interest in the western Calchaquí quebradas big productive sites, on the contrary, they may have been enlarged and re-used during Inca period, being its location closely related to productive strategies and the administration of goods and services and to the productive space control.

IMAGE The Pukara de Angastaco, for example, one of the biggest Inca sites in the area located in the confluence of Angastaco and Calchaquí river, is not placed on the top of such an outstanding geological form as the pre-Inca *pukara*, since its constructions can be seen from the bottom of the valley. This settlement appears to have been built with the intention to be visible from any angle, representing a radical shift in the local landscape structure. This defensive settlement in the interior of the territory may have constituted a defense for the hostile local populations, but may have also functioned as a constant reminding of Inca presence and power and a place for administrative tasks (Villegas 2006). The others Inca sites in the area (Tambos de

Angastaco, Gualfín, Las Cuevas and Compuel), all separated from the local population settlements, can be seen as a way of “segregating” the state space from the local population one.

Archaeological sites of Mid Calchaqui valley

The question is which would the material correlate of the complex Inca ritual activity showed in the symbolic, repetitive events in specific situations and locations, with specific offerings, whether determinate objects, human and animal sacrifices or the rock art production?

Different sources mention the importance of Amaru and its role in Inca cosmology. The principal reference is in Guaman Poma (1980 [1615]) when he mentions that the Inca descend from the *amarus* and snakes, so being considered as Inca ancestors. Amaru's transformation into stone is explained in the Huarochirí story because it

expresses the bond between the snake, water and stone and Amaru's appearance in moments of transformation into a new order (Meddens 2002). Beyond its condition as an ancestor, Amaru is a particular kind of huaca. For Meddens (2002) stones carved with circles or depressions found in the Sicha/Soras Valley may have served as recipients for solid or liquid offerings for special rituals, to contain rain water or from the over flowed canals and to be used in special rituals. For Van de Guchte (1990) the location of this carved stones in the proximities of canals, rivers or springs may have been markers to spatial organization related to water sources and the time organization associated with the agricultural calendar.

Sherbondy (1986:46) points that for the Inca Empire, watering canals possessed not only economical value but also cosmological functions since its origin were considered a *huaca*. The *ceque* system, and the huacas which were its concrete material manifestation of existence and placement, were used to set a limit in specific irrigation areas administered by different *ayllus* or *panacas*. The Cuzco *ceque* system has been compared to the *quipu* concept (Zuidema 1964, 1989). Meddens suggest that the structure and distribution of carvings associated with the irrigation system in Chicha valley may correspond to a variant of the *ceque* system and also a system that resembles *quipus* along the landscape, being the small hollows carved in the stones the knots and the threads represented by the canals and the rivers.

Generally speaking, different social landscapes created by the Inca in Southern Andes would be signaling a discontinuous control of the space that could obey to different moments of the domination, to different strategies of negotiation with local populations as well as the productive and strategic characteristics of each area.

The sacred landscape transculture local populations and allows the "appropriator" to transform the new and unknown landscape into "known" spaces that reproduce their place of origin. In this sense, Farrington points to the creation of "new Cuzcos" in the provinces in order to create and **prop up** bonds with the center through religion, trying to link conquered territories to a common history and origins formalized through common rituals.

CONCLUSIONS

This paper has attempted to sketch out the nature of Inca rule in the South Andes. As research has intensified over recent years, our knowledge of Qollasuyu has proportionately increased, but we still have a far less nuanced understanding of this vast

region than has been developed in the north half of the empire. Even so, we are now in a better position to suggest some of the more important features of Cuzco's dominion than a couple of decades ago.

Two of the most significant elements concern the time depth and intensity of Inca rule in the south. The array of carbon dates and the extent and diversity of the state installations indicate that the Incas were present earlier and invested substantially more effort in ruling the south than is acknowledged in most overviews. It is true that the development of the state infrastructure was not as ambitious as it was from Lake Titicaca north and that none of the state centers in the south was as large as the main settlements between Cuzco and Quito. Nonetheless, the Incas erected a wide array of provincial centers and smaller *tampus*, protected by cordons of fortified installations that defended both the southern extension of the empire and its eastern flanks. They also undertook a comprehensive reorganization of the indigenous societies through the resettlement program, while intensifying mineral extraction and agricultural and craft production at numerous locations.

The apparent smaller scale of the Inca presence in the south is therefore partially real and partially a consequence of the ways in which documentary records have been recorded and preserved. The lack of attention paid to the region by most major chroniclers, together with a paucity of detailed inspections such as those from Peru and Bolivia, have tended to exaggerate our vision of the region's marginality. Taking into account our current information, it seems most appropriate to consider the Inca occupation of the south to have been proportionate to the population and resources--that is, appreciably less extensive than in Peru, but equally significant for the indigenous societies of the region.

We tried to offer a general view on the expansion of Inca State towards the South of Cusco, which comprises the Chilean sub-area of the Chilean Western Valleys of South Central Andes and Northwestern Argentina. We posit that, on the contrary to previous research, Inca State had a strong political, economical and ideological intervention in the study zone. Available archaeological evidence allows us to point that Inca state intervention was far from being indirect. One of the motives for that intervention was the necessity to gain access to economic resources of the Pacific Coast (animal **faeces**, minerals), coastal valleys (subtropical agriculture), pre-mountain range valleys (maize and potato farming, metallurgy), puna (animal husbandry, tubers, salt, and obsidian) and eastern *yungas* (feathers, coca, *cebil*, wood, honey, etc.). In this

context, different state installations meant to administrate and control those territories were described. However, an interregional comparative study shows considerable differences in terms of material expressions of state administration, which are interpreted as different levels of intensification in the operation and working of power and administration structures.

These data support our interpretation of the Inca expansion over these territories (Santoro *et al.* 2005; Williams *et al.* 2005; 2007 b). We suggest that these marginal territories were incorporated into the empire, although no major architectural projects were undertaken. Particularly, we think that pottery played an important role in this process, both by translating highly prestige fine pottery from the Titicaca region, and by endorsing state standard pottery techniques for local replicas.

Bray's research on Inca pottery has pointed out that state iconography contains fundamental information on the idea of the origins and royal genealogy (Bray 2003 b, 2004; Bray *et al.* 2005) which is a very interesting idea to develop. The meaning and importance of the distinctive Inca polychromous pottery associated to the Tawantinsuyu is strongly involved in political practices and processes of Inca imperialism. For example, the temporal dimension applied to Tawantinsuyu's geography may correspond to singular modalities or the differences among Inca ceramic contexts, as much in form as in design, between the NOA and other areas in the Andes, may be the product of particular historic situations in the process of conquest. It is likely that the popularity of certain decorative patterns might be showing temporal differences on the archaeological and historical record. This topic should be further developed in the future.

Finally, it is important to recognize that the differentiated development of the archaeological research in the Andes may accentuate or diminish the imperial marks record or its consequences on local processes. We estimate that a research with a strong comparative component is an appropriate way to characterize the systems of power's use and control by the expansive state systems like the Tawantinsuyu.

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