





Project Gallery

Inca human sacrifice and sacred pilgrimages: spatial analysis of sites on the Chachani and Pichu Pichu volcanoes

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The *capacocha* was one of the most important types of Inca sacrifices. Road stations (*tambos*) were built for the pilgrims who travelled to mountain peaks with the sacrifices. Spatial analysis of two *tambos* on the slopes of the Pichu Pichu and Chachani volcanoes in Peru reveals segregation in the sacred landscape.

Keywords: South America, Andes, high-mountain archaeology, *capacocha*, rituals, *tambos*

Introduction

Religiosity in the Inca Empire (c. AD 1400–1572) was strongly related to the landscape, ethnicity and common ancestor cults (Szemiński & Ziólkowski 2021). One of the most important sacrifices performed by the Incas was the *capacocha*—the sacrifice of children, chosen from elite provincial families, and *acllas* (virginal young women dedicated to the Sun deity; Cobo 1893; Hernández Príncipe 1923). In the provinces, the *capacocha* was made for the *huacas* (deities, sacred places) and was often associated with mountain peaks. The procession of the victims, accompanied by feasts, primarily started in Cusco and could take many months to reach provincial shrines (Reinhard & Ceruti 2010). Only a few *capacocha* offerings have been discovered, mostly on the mountain peaks of northern Chile, southern Peru and north-western Argentina (Reinhard & Ceruti 2010).

Tambos were waystations along the Inca royal roads, for administrative and military purposes. Many Inca roads led directly to mountain summits and the remains of *tambos* on the slopes of some volcanoes suggest that they were also created for religious activities. High-mountain *tambos* were the last stops for the *capacocha* pilgrimage before climbing to the summit, and some are located in the cordillera ecozone above 4800m above sea level (Linares Málaga 1966; Reinhard & Ceruti, 2010). The use of such stops by the pilgrims was dictated by the distance to the main administrative centre and access to water, which

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in turn determined the number of pilgrims. Licancabur *tambo* (on the Chilean side of the volcano) had over 150 structures and could host several hundred people (Reinhard *et al.* 1980). At the *tambo* located on the slope of Lulllaillaco (Argentina), the remains of everyday activities suggest that this place was temporarily occupied (Ceruti 2003; Bray *et al.* 2005).

In 2022, a project to study the sites associated with the last stage of the *capacocha* pilgrimage was launched. The project aims to analyse the spatial architecture management of two *tambos* on the Chachani and Pichu Pichu volcanoes (Peru) (Figure 1). The preliminary analysis based on the 3D models of the visible structures indicates the segregation of the buildings according to their function and their relationship to the sacred landscape.

Spatial analysis of Chachani and Pichu Pichu *tambos*

The *tambos* of Chachani and Pichu Pichu were selected due to the confirmed location of the *capacocha* burials at both summits (Beorchia 1985; Linares Málaga 1966; Reinhard & Ceruti 2010; Socha *et al.* 2021). The *tambos* were discovered during expeditions to the summits in 1965 and 2012.

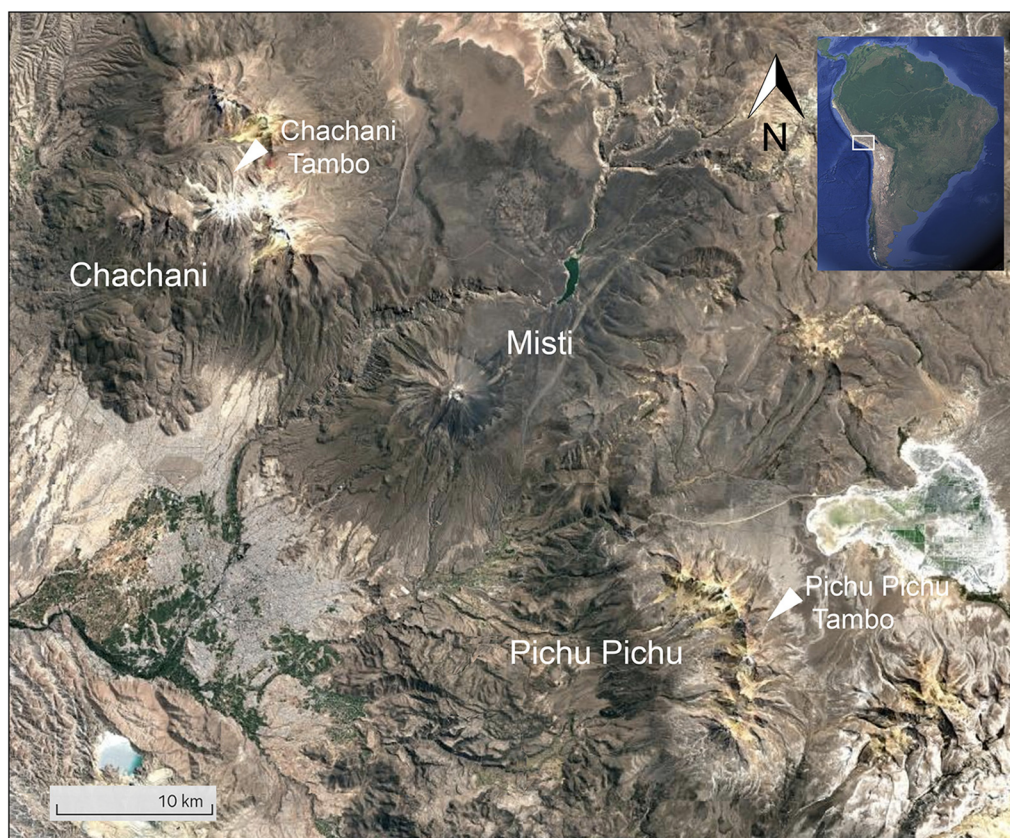


Figure 1. Map of the region showing the locations of the volcanoes discussed (figure by authors, base map from Google Earth).

During the survey in 2022, photogrammetry was performed to obtain 3D models of the most important structures concerning the sacred landscape. Photogrammetric imagery and satellite mapping were used for precise documentation, which allowed the collection of accurate measurements and calculation of site capacity estimates. At both Chachani and Pichu Pichu, the *tambos* are divided into two sections: a larger, lower elevation area and a higher elevation area characterised by smaller buildings.

Lower tambo of Chachani

The lower part of the Chachani *tambo* covers a total area of around 0.1ha. It consisted of 14 buildings organised in two *kanchas* (house grouping around a courtyard) (Figure 2). Two oval-shaped structures resemble Inca granaries. Outside of the *kanchas*, there is a ceremonial plaza of 250m². The location was probably chosen owing to the size of the natural plateau.

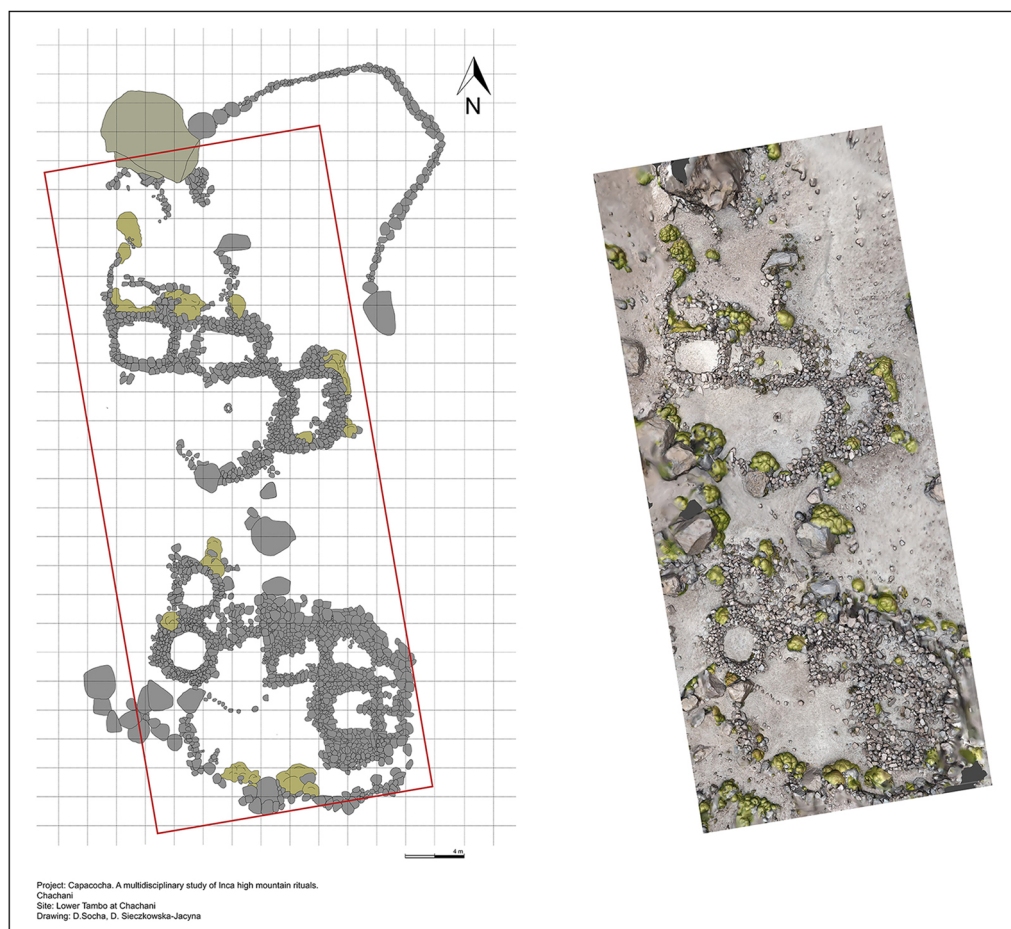


Figure 2. Plan and 3D model (red square) of the lower Chachani tambo (figure by authors).

Upper tambo of Chachani

The upper part of the *tambo* is located 250m south-east of the lower one. It consisted of one structure built against a large rock. A natural flattened area slopes gently down from the top of the boulder to the entrance wall of the building. On the side of the boulder that borders the building, a partially carved area may have given direction to the flow of liquids (Figure 3). The distance from the upper *tambo* to the summit is estimated to be around six hours of climbing. Along the path to the summit, the Incas made small shelters where the pilgrims could rest, the walls of which are still standing.

Lower tambo on Pichu Pichu

The lower part of Pichu Pichu *tambo* was organised like the Chachani one. It covered about 0.15ha of a large, flat area. The concentration of petroglyphs was recorded during a survey in 1966 (Linares 1966). The 750m² main plaza is oriented toward the valley with a view of nearby summits (Ubinas and Pacoorcco) (Figure 4). Due to vegetation cover and a thick layer of volcanic ash, not all buildings are visible, but it was possible to identify eight structures.

Upper tambo on Pichu Pichu

The upper part of the Pichu Pichu *tambo* is 140m to the south-east of the lower one. It consisted of one building with three separate rooms (Figure 5). In front of the *tambo* there is a rock resembling the shape of Pichu Pichu. It is possible that the rock was carved to represent the summit (Figure 6).

Discussion and conclusion

The spatial structures of the *tambos*, according to the new data and previous research, relate to the sacred landscape and the division of pilgrims by social rank. The pilgrimage was attended by people of different social status, Incas, priests, victims and their families and ordinary pilgrims associated with the local *huaca* cult. The size of the main plazas in the lower parts of the *tambos* suggests they were built to host many pilgrimages, being the last area with easy access before the summit. Plazas could accommodate hundreds of pilgrims (assuming about 1m² per person), although it seems unlikely that so many people could be there at the same time. Plazas may also have been designed as places for rituals that pilgrims could observe from outside the designated space.

The upper parts of the *tambos* were probably used for rituals attended by fewer people. The veneration of *capacocha* victims included divination, which was performed in secluded places. These oracles performed an important role in the Inca State as all important religious, political, military and economic matters required consultation with deities. Hernández Príncipe (1923) records that the oracle of the *capacocha* mummy of Tanta Carhua was located below the hill on which the mummy was buried. It is possible that the upper *tambos* had a similar function. The boulder at Chachani shows signs of water flow and it is possible that the rock was the place of a ritual liquid flow used in divination to invoking water

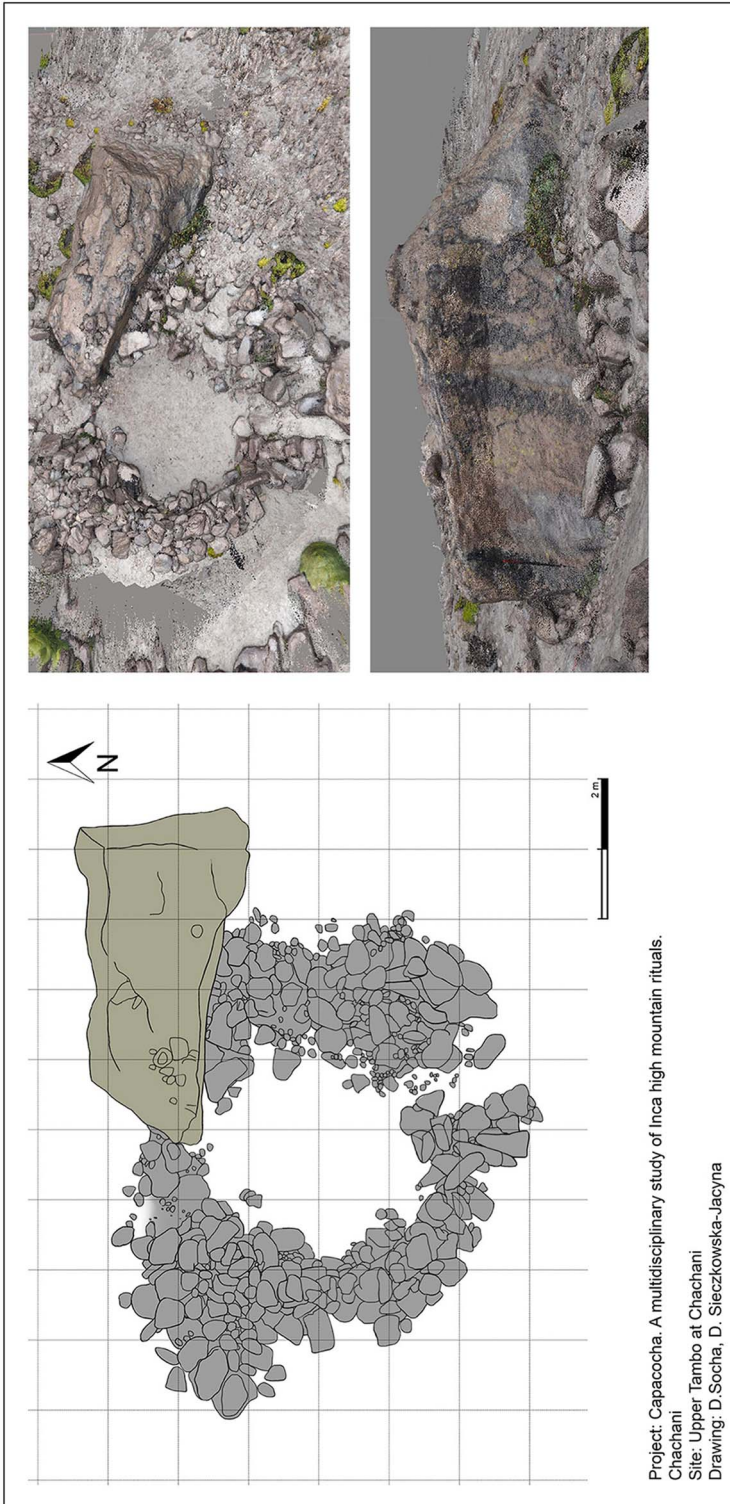


Figure 3. Plan and 3D models of building at the upper part of Chachani tambo (figure by authors).

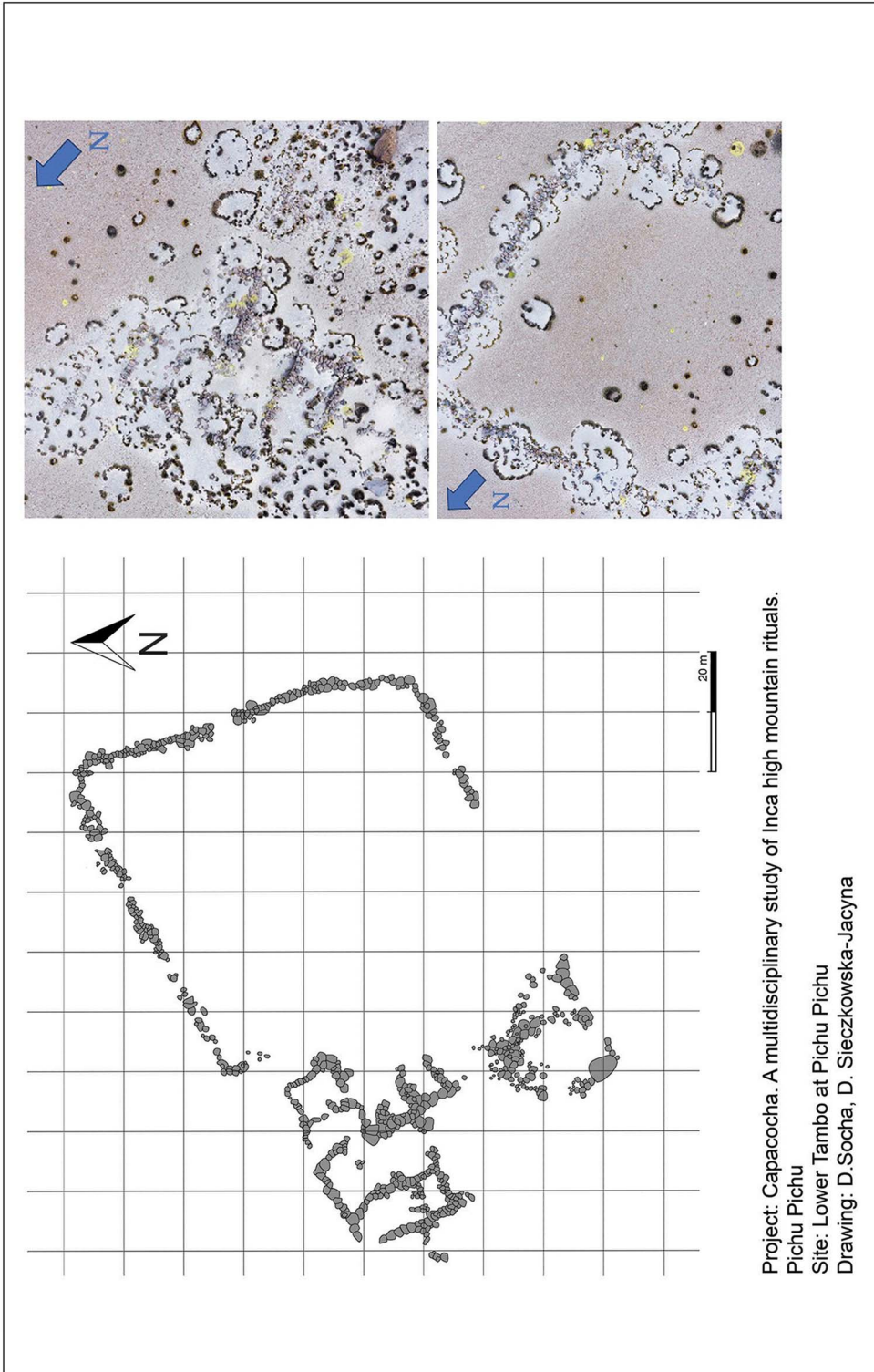


Figure 4. Plan and 3D models of building at the lower part of the Pichu Pichu tambo (figure by authors).

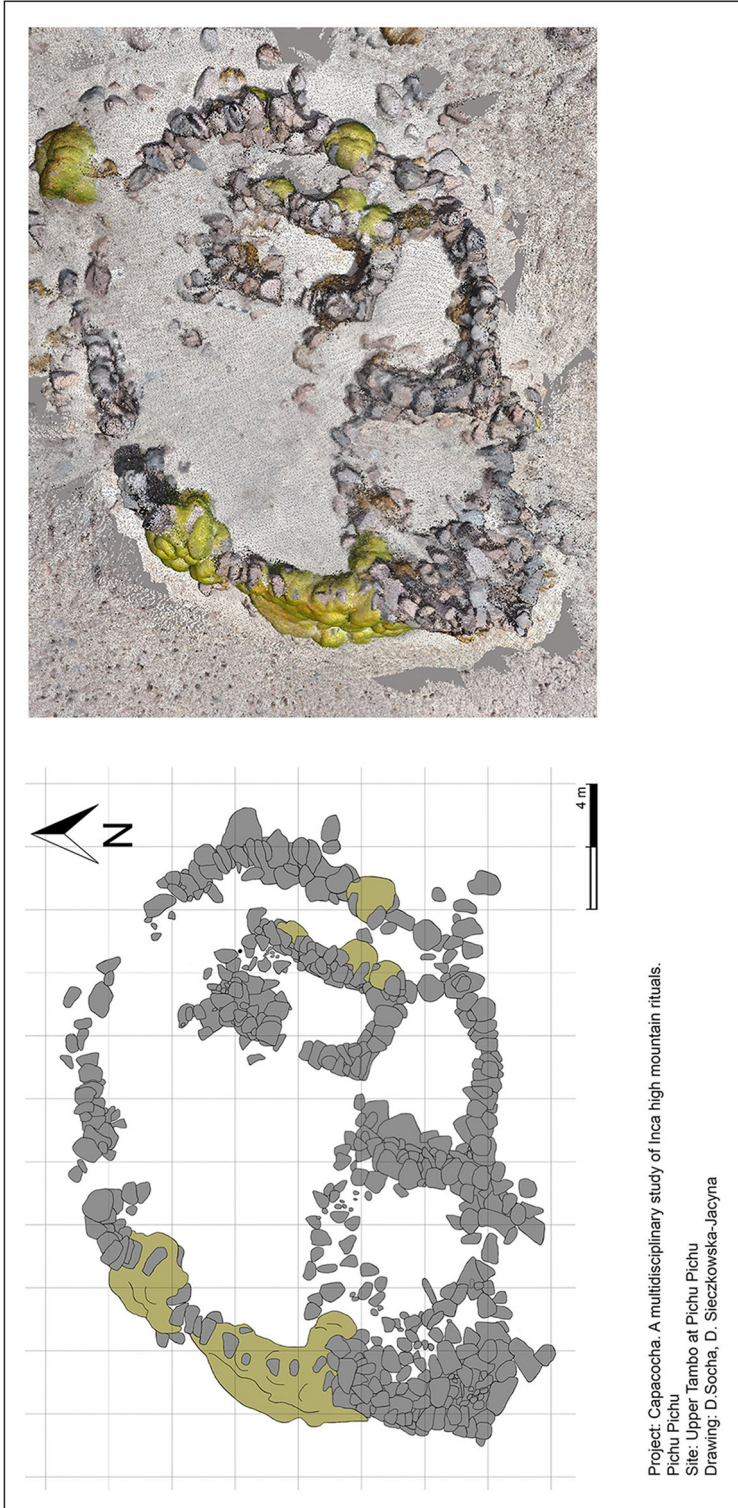


Figure 5. Plan and 3D model of building at the upper part of Pichu Pichu tambo (figure by authors).



Figure 6. Rock carving with outline comparable to the profile of the Pichu Pichu summit (figure by authors).

from a volcano. The *capacocha* was strongly associated with the cult of water and fertility and was often celebrated to prevent drought (Cobo 1893).

Ongoing research will focus on biochemical analysis of artefacts from the *tambos* to determine the possible origins of the pilgrims and establish a local chronology. Another aim of the project is to document other sites related to the *capacocha* to establish architectural patterns, Inca management of the ritual and its role in the exercise of power by the state.

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