

Introduction and Setting¹

“Water, Mr. Rango, water. Without it, there’s nothing but dust and decay. But with water, there’s life. Look at them. So desperate to live, that they’ll follow it anywhere. It’s the immutable law... You control the water and you control everything”

The Mayor²

Water, it is the very essence of life. Human relations with water pervade all aspects of culture and water management for irrigation is crucial for civilizations across the globe (Algeria 2006; UNWWAP 2003, 2008; Ortloff 2009). The above quote speaks to the vital importance of water, not just in terms of basic survival, but also in terms of its importance in leveraging power. Water control has its symbolic aspects as water is perceived by people through the senses, and, also, through ideas and imagery (Strang 2008). Inscribing practices at hydraulically significant landscape junctures was a critical aspect in constructing social landscapes in the pre-Columbian Americas as these enduring inscriptions effectively linked specific identities to specific landscape features and communicated messages to specific audiences. The nature of inscriptions differed in their iconography, technique and site selection over time as a result. In this regard, the rock art of the central Andes offers a unique perspective for understanding how, when and where rock and water features acquired ancestral significance and for how long they remained venerated.

Research Problems, Objectives and Questions

As a “concept in between” (Morphy 1993, 205), landscape theory, over the last 70 years, has drawn from several academic disciplines including ecology, anthropology, landscape design, and geography, among others. Ecological landscape theory developed primarily within the fields of ecology and biology, and ecological models generally consider landscape as an area that is spatially heterogeneous, aiming to uncover meaning in ecological processes (Turner *et al.* 2001, 2–5 cf. Lindstrom *et al.*, 2014). On the other hand, instead of trying to find meaning in landscapes, cultural landscape models understand human behavior as *meaningful*, and regard landscape as the expression of an idea (Ucko & Layton 1999, 2). Ecological and cultural landscape models are traditionally divergent but are finding increasing synthesis in recent decades.

Six general themes have gained traction in archaeological approaches towards landscapes over approximately the last 25 years. On the one hand, major social structures such as memory (e.g. Schama 1995; Van Dyke 2003),

identity (e.g. Bray 2002) and territory (e.g. Herrera 2005) have become central to landscape archaeology, while the aspects of space (e.g. Llobera 1996), place (e.g. Tilley 1994) and time (e.g. Fairclough 2003) are now increasingly understood as outcomes of social relations. Although these aspects have been valuable templates for theorizing landscapes, they are often applied uncritically (Moore 2010, 532; Lindstrom *et al.* 2014, 111), appearing frequently as catch terms where their meaning and use is assumed. As a result, the treatment of these aspects as outcomes tends to overlook the practice-based nature of their production. An additional area of need within archaeologies of landscape deals with temporal scaling as landscape case studies tend focus on relatively short time spans. Accordingly, landscape studies that focus on one place, over a long period of time, are relatively minimal despite their potential for illuminating how landscapes in general, evolve over time and how the places within them potentially change in significance.

Until recently, rock art has, likewise, traditionally been a difficult area of study within archaeology as it requires different methodologies, has different research questions, and has its own body of specialized literature (McDonald and Veth 2012, 22). Because of these challenges, rock art was largely neglected in archaeology, in the English-speaking world, until the advent of Cognitive Archaeology in the 1980s, which provided a theoretical foundation for explaining what kinds of people produced rock art, and the processes responsible for the production of specific image types. These initial advances, however, only offered insight on a relatively narrow range of rock art types and contexts.

Because of its fixed location in space, and because of its enduring presence, rock art presents a unique perspective for understanding how social landscapes develop. Differences in the rock art styles and imagery at specific places provide clues as to why places were marked at different periods of time (Taçon 2002, 132). In this sense, rock art *is* landscape art (Whitley 1998). Recent developments in rock art research have contextualized it in terms of landscapes and landscape-based applications in rock art archaeology have considered inscription as social practice, rather than a type of writing. Despite these advances, relating rock art to wider realms of human activity, beyond those who produced it, has been slow and as Whitley observes (Whitley 2011, 195–197) rock art made by settled, agrarian communities remains an area of significant need within the discipline.

¹ This chapter is derived in part from an article published in *World Archaeology*, 2018, copyright Taylor and Francis, available online: <http://www.tandfonline.com/doi/pdf/10.1080/00438243.2019.16122>.

² Verbinski, Gore (Dir.). 2011. *Rango*. Paramount Pictures. Film.

In its most general sense, semiotics refers to signs, sign relationships and sign systems. Semiotic studies have followed two main trajectories. On the one hand semiotic philosophies developed by linguist, Ferdinand de Saussure, treat signs as a language and seek representational meaning between signs and their referents. On the other hand, semiotic models developed by philosopher, Charles Sanders Peirce, seek to understand relationships between signs and their emergent properties. The latter has a long history in ecology and is valuable for modeling relationships between individual agents that co-create ecosystems. In cultural studies, Peircean semiotic models are becoming increasingly popular for theorizing landscapes (e.g. Vogt 2014) by emphasizing social interactions. These are valuable contributions; however, most semiotic applications in rock art archaeology tend to focus on human-object relations, while applications that focus on the semiotic of place (e.g. Wyndham 2011) are much less frequent. This disparity is partially due to the fact that cultural and ecological semiotic models have been slow to link (Cosgrove 2003; Preucel 2006; Lindstrom *et al.* 2014, 111), not just in archeology, but also in other areas of social sciences. In these regards, the essential problem specific to anthropology is that in spite of the numerous advances over the last two decades in landscape archaeology, semiotic applications of landscape remain underdeveloped. This problem persists because the ecological aspects of culture have not been sufficiently incorporated into cultural landscape theory.

In the archaeology of art, form has traditionally been given more attention over process (Jones 2006, 212), until recently. To address this, exploring the theme of agency has become a popular means for deciphering the practice-based aspects of the key themes of landscapes outlined above. Regarding art objects, Alfred Gell's (1998) landmark thesis for the agency of art views art objects in terms of relationships, instead of representational meaning and applies Peircean, semiotic principles, defined by two triadic models. The first model is composed of an *icon*, or a direct referent of something, an *index*, or a referent to something else³ and a *symbol* or a synthetic abstraction. The second model is comprised of the *artist*, or the producer of the work, the art object, or the *prototype* and the *recipient* of the art message. Gell's structure has been analyzed and critiqued extensively in anthropology (e.g. Pinney and Thomas 2001; Layton 2003; Chua and Elliot 2013) as well as art history (e.g. Osborne & Tanner 2007) and nearly 20 years later this model remains the baseline from which the agency of art objects is evaluated (e.g. Chua and Elliot 2013). Although Gell's model is frequently mentioned in rock art studies, it remains poorly developed in landscape archaeology.

Rock art, in this study is understood, simply, in terms of inscriptions on rock, defined as applying to either carving techniques (petroglyphs) or painting techniques

(pictographs) and these manifestations are utilized to understand how human-landscape relations were established and developed over time. To examine these connections and to more accurately place the rock art of the central Andes in time, this investigation is guided by the following objectives: First, I aim to create a new typological sequence for a large and previously unstudied complex of rock art in the highland central Andes that can be applied to the greater region. For the first step in creating this typology, I evaluate the relationships of specific rock art production techniques and imagery with their associated ecological contexts. Revealing these relationships provides the basis for understanding how specific people engaged with the land, at specific times. The second step is to produce the first stratigraphic profiles for the region to identify occupational phases by pairing faunal remains, ceramic remains, botanical materials, flaked lithic tools and carbon remains with rock art images and styles at specific places. As elaborated later, these associations allow for the reconstruction of diachronic changes in imagery and techniques of rock art that can be attributed to styles and traditions.

Second, this study seeks to understand rock art in semiotic terms by focusing on it, first, in terms of relationships and, second, in terms of representation. This is done by focusing not so much on the meaning of rock art, but rather, rock art's meaningfulness. Considering that rock art places often sit at the nexus of political, economic and religious realms, and is located at strategic places of power, I hypothesize that it was active in constructing social landscapes in the region by facilitating the control of resources, primarily water and heritage. To prove this hypothesis, an eco-cultural, Peircean semiotic scheme is developed, which is based on Gell's triadic structures, and models' physical realities (rock, water and sky), embodied practices (territory, memory and identity) and social interactions (intention, engagement and movement) between humans, their objects, and the land to produce space, place(s) and time. These models are deployed to support my general argument that rock art places are the result of, and agents of, landscapes and that they relate people in a communicative system having to do with many purposes and symbolism.

To address these problems and fulfill this investigation's first objective, I first ask: When were these works produced? Answering this question is fundamental to creating the typological sequence required to contextualize and apply the semiotic models. With this information in place, we are better equipped to ask: *What* role did rock art have in socializing the land? In other words, what did it do? The semiotic model developed for landscapes is designed to answer this question. Inherent in this question is a notion that rock art has agency and carries with it an equally important question required for contextualization: *How* do inscribing practices construct landscapes over time? To answer this question, I employ Gell's tripartite structure of icon, index and symbol to model causal sequences in rock art engagement. Finally, by focusing the intention behind the production of specific rock art images and panels, my

³ Where there's smoke there's fire is the example Gell used for indexes; smoke being a referent in the present to fire located in the past because of its connection to smoke.

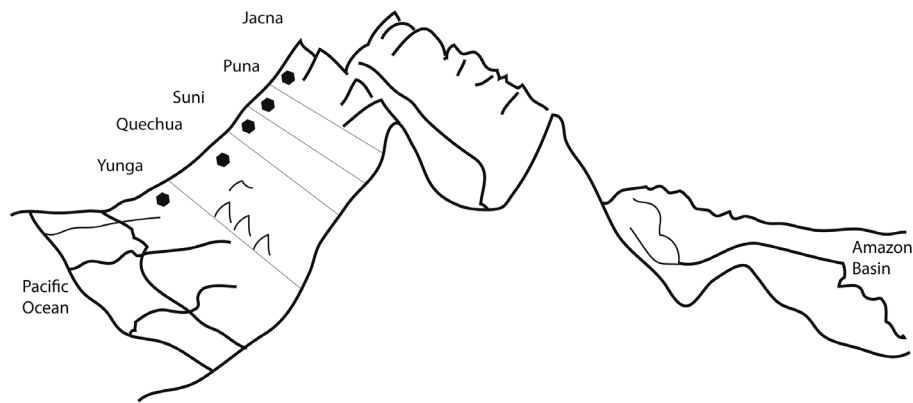


Figure 1: Cross-section of the ecological tiers of the central Andes.

final research question is: *Who* produced certain rock art works and *who* was their intended audience? This question is answered by applying Gell's second model of artist, prototype and recipient. The latter two models provide a foundation for a more nuanced analysis of rock art's role in social relations with a focus on the themes of intention, engagement and movement.

Highland Landscapes in the Central Andes

This investigation is focused, regionally, on the Cordillera Negra⁴, the westernmost range in the present-day Department of Ancash, along the central coast of Peru. Spanning approximately 230km, the Cordillera Negra extends from the Pativilca River in the south to the Santa River in the north. The crest of the Cordillera Negra is relatively uniform, with a maximum range in altitude from roughly 4,200 m.a.s.l. - 5,200 m.a.s.l. (meters above sea level). The glaciers that occupied these peaks during the Pleistocene, formed cirques and alpine lakes (Bodenlos and Straczek 1957, 5), such as the Conococha Lagoon, which is situated at the highest reaches of the Santa Valley. Groundwater is also abundant in the Cordillera Negra. The numerous springs of this range exist, and in the case of the Fortaleza Ignimbrite (the centerpiece of this study, explained below), the porous nature of the rock actually acts as a conduit to bring water to the surface (Coldwell et. al 2008). Also, the Cordillera Negra as this range is a direct barrier for the *El Niño* and *La Niña* trade winds, which bring precipitation, primarily to the upper reaches of the range.

The verticality of the western range of the Cordillera Negra holds several, adjacent ecological tiers, each containing distinct flora and fauna (Figure 1). At its highest reaches lies the *puna*, an ecoregion of montane grasslands and scrublands found only in the highland regions of the South American Andes, which lies above the tree line at 3,500 m.a.s.l., and below the permanent snowline above 4,500 m.a.s.l. Although the fauna of the *puna* is not dense, it is diverse. In pre-Hispanic times, and today, it remains suitable for the pasture of camelids, such as the llama and

alpaca, as well as the wild vicuña and guanaco. These time-honored activities include using pack animals to transport goods as well as utilizing them as valuable sources of meat and wool. These two trade items were major components in this vertical environment where exchange across ecosystems was vital.

Below the *puna* lies the *suní* ecozone. The *suní* marks the highest reach of agriculture, sitting approximately between 3400 and 4000 m.a.s.l. Although crop diversity is not as abundant as lower ecozones, the *suní* is suitable for producing tubers and grains such as *kiwicha*, *kaniwa*, and *quinoa*. The flora of the *suní* is characterized by patches of tall grasses, interspersed with hearty plant life, including cacti. Situated below the *suní*, the *quechua* ecozone, is situated between 2,300 and 3,400 m.a.s.l. This region contains the same species of grass found at higher elevations in the *suní* and *puna*, in addition to several other domesticated plant species such as coca, maize, beans and squash. The fauna within the *quechua* are denser and more diverse compared to the ecozones at higher altitudes.

The Fortaleza Ignimbrite

This investigation focuses, specifically, on a massive complex of previously undocumented rock art associated with the Fortaleza Ignimbrite (FI), a distinct geologic formation situated in the highest reaches of both the Fortaleza and Santa Valleys in the Department of Ancash, Peru. The study transect is located at the nexus of several social, geological and hydrological environments and crosscuts the *puna*, *suní*, and *quechua* high-altitude ecosystems. This area holds 122.7 thousand hectares and is demarcated (in WGS 1984 UTM) at 226000 to the west, at 254000 to the east, at 8886000 to the north, and at 886800 to the south. The highest point in this area reaches to 4755 m.a.s.l. at Cerro Chantopunta along the crest of the Cordillera Negra. The lowest point in the research area extends to 2000 m.a.s.l., at the bottom of the Fortaleza Valley.

Longitudinally, the FI covers both the north and south sides the Fortaleza Valley, and reaches into the Santa River watershed at its most eastern point. From this juncture, it continues, westward, down the Fortaleza Valley

⁴ Proper names are not printed in italics in this study; only non-English, non-proper name words are.

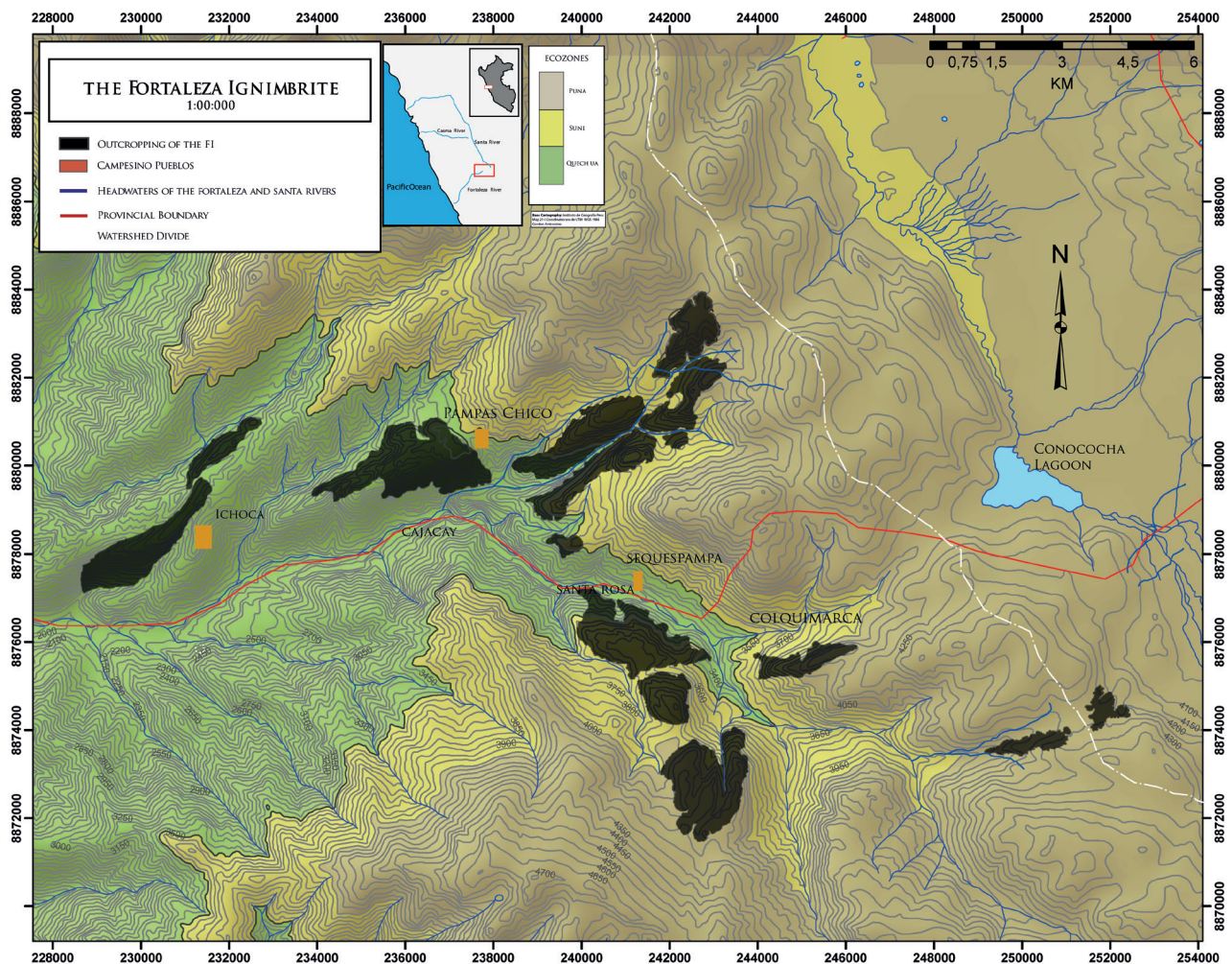
approximately 30km. Peru's Instituto Geológico Minero y Metalúrgico (Myers 1980) produced the first maps of the FI. Nearly 90 per cent of this formation is located in map quadrant 21I, (Chiquian), while the remaining western portion is located in quadrant 21H, (Huayllapampa), of the maps produced by the Peruvian Institute of Geography (Instituto de Geografía del Peru).

Politically, the land on the north side of the Fortaleza River lies in the present-day Province of Recuay, Ancash, where within sits the District of Pampas Chico, which holds the *Campesino* pueblos of Huambo, Colquimarca, Conococha and Pampas Chico, to the east and the District of Marca, which holds the *Campesino* Pueblo of Ichoca to the west. The land lying on the south of the Fortaleza River lies in present-day Bolognesi Province, Ancash, occupied by the District of Cajacay. It holds the *Campesino* pueblos of Sequespampa, Cajacay and Santa Rosa. The FI is easily reached by Peruvian Highway P1, which ascends the Fortaleza Valley and turns north heading down the Callejón de Huaylas (Map 1).

Originating at approximately 6.5 Ma and terminating approximately 5.85 million years ago, this Miocene-aged formation erupted through the Earth's surface resulting

from the convergence of the South American Plate with the Nazca Plate, which created a molten state of deep-level magmas (Coldwell 2008). These magmas ascended rapidly from a junction of fault lines that acted as a conduit, bringing these molten substances to the surface (Coldwell, *et al.* 2011, 284). Rather than erupting violently, as a volcanic blast, the distribution of the FI suggests that the formation originated from a source near Lake Conococha and migrated westward, down a paleovalley, indicating that it originated from a pyroclastic flow (Coldwell 2008).

The FI is composed of 23 distinct outcrops. These formations are known locally as *cerros* and each have individual names. All of the *cerros* are comprised of a complex combination of caves, rock-shelters, boulders, rock spires, crevasses, hoodoos, and cliff formations, some of which reach up to 800 meters high (Coldwell 2008; Coldwell *et al.* 2011). Its striking appearance aside, the FI's compositional make up is intriguing as it composed of approximately 45 per cent pumice, 25 per cent quartz, 20 per cent garnet, 4 per cent biotite, and 2 per cent Fe-Ti oxides (Coldwell 2008, 274), meaning that it is made up of nearly half crystalline content. All of these *cerros* are quite large (often several kilometers in diameter) and several are considered rock forests, or *Bosque de Piedras*, (Figure 2) as they are known in the region. Each



Map 1: The FI and relationships to the ecozones, watersheds, Campesino pueblos, across the Recuay and Bolognesi provinces of Ancash (Ambrosino 2017).



Figure 2: Aerial photo of the bosque de piedras of Hatun Machay.

cerro holds a variety of archaeological features, including hilltop sites, tombs, rock art, tombs with associated rock art, stone cut canals and staircases. Local *campesinos* consider these *cerros* to be living, animated beings with which one can (and should) interact. Many local community members offer payments to the mountain to ensure their own security, and for the reliability of water.

Each *Cerro* of the FI supports active, vigorous springs and surrounding wetlands. These springs form the initial sources of two major waterways of the north-central Andes. The springs associated with 22 of the *cerros* form the Fortaleza River, which flows westward, cutting across the mountainous desert of the Cordillera Negra, for approximately 45km, and emptying at the Pacific Ocean. Approximately 95 per cent of all of the archaeology documented in this study is associated with its watershed. The springs associated with the FI's eastern-most outcrop, Shacsha Machay, on the other hand, forms the headwaters of the Santa River, which connects with the Conococha Lagoon, and flows down valley, through the Callejón de Huaylas before cutting to the west through the Cañon del Pato and finally draining into the Pacific Ocean. These major waterways have supported thousands of people for thousands of years.

Considering the study region's relatively close proximity to Guitarreros Cave, which is located approximately 35km down the Callejón de Huaylas, it is possible that this region had human activity dating back to the Paleolithic Period. In the Ceramic Period, this area would have been within the direct sphere of influence of the Chavín culture in the Late Formative period, the Recuay culture of the Early Intermediate Period, the Wari of the Middle Horizon, and likely experienced contact with the Chimú and Canchay

of the Late Intermediate Period. The FI may have also been engaged by the Inca during the Late Horizon⁵. The FI does not geographically correspond to previously defined spatial delimitations for petroglyph or pictograph art of the central Andes.

The Ethnohistory of the Cordillera Negra

The modern political boundaries described above share much in common with the boundaries described in colonial accounts, which trace these distinctions back to at least the Late Horizon (1476–1534 CE) (Masferrer Kan 1984). The Inca Empire was composed of several provinces. In the north-central Andes, in the Province of Huaylas, for example, was subdivided into halves, which were further subdivided into sociopolitical organizations of a smaller order called *guarangas*. Each half of the province held six *guarangas*, which were split in two, forming sociopolitical triads (Zuloaga 2012, 29). Shortly after conquest, these communities were aggregated into political divisions called *encomiendas*, which were comprised of groups of three *guarangas* and essentially held the same boundaries. Over the ensuing decades, as indigenous population numbers began to wane, the Spanish incorporated these structures into their new Colonial, political system though the *reducciones* (the reductions), a system of forced community consolidation and relocation.

Although the Colonial and Inca political boundaries correspond closely with the modern political boundaries of the FI and its surrounds, there are some critical differences.

⁵ Chronological terminology used here follows Rowe's designations as this model is the most commonly used.

The area of present-day Districts of Pampas Chico, Marca and Catac, of the Province of Recuay correspond approximately with the Inca Department of Marca, which are located at the southern boundary of the Inca province of Huaylas. Marca appears to be synonymous with the Collana *guaranga* whose territory terminated to the south at the Fortaleza Valley, but extended east, across the Callejón de Huaylas Valley, encompassing the Conococha Lagoon, and nearby present-day pueblos of Chiquian, Aquia, and Matara, located in the Cordillera Blanca of Bolognesi Province, Ancash.

The first *encomienda* in Huaylas was established in 1534 when Francisco Pizarro gifted the southern half of the province (Hurin Huaylas) to the conquistadors, Sebastian de Torres and Jerónimo de Aliaga (Zuloaga 2012). In this first division, the Collana *guaranga* was not included in the *encomienda*, but was later included as part of Torres' parcel, four years later in 1538. The trouble of incorporating the Collana *guaranga* into colonial *encomiendas* may partially be due to, as Zuloaga

suggests, the fact that it had a special status in precolonial times as it was populated by *mitimaes*, or forced migrants from other parts of the Inca Empire (Zuloaga 2012, 40). If this assertion is correct, it would suggest that the Collana *guaranga* did not aggregate with any other *guarangas*. This notion would be substantiated by indigenous testimonies from the region from the year 1574 that refer to the "Time of Topa Inga" where the Collana *guaranga* was unified with three other *guarangas* in the Kingdom of Chuquirrecuay (Zuloaga 2012, 42) (Figure 2). These *guarangas* are believed to have formed when foreign peoples who migrated to the area after the fall of the Wari Empire, sometime during the Late Intermediate Period (L.I.P) (1000–1476 CE) (Zuloaga 2012, 53). The time of Topa Inga seems to refer to the new political formations established at this time.

On the southern side of the Fortaleza Valley, in the northernmost district of the Inca Province of Cajatambo, the District of Collana de Lampas held three *guarangas*: Collana *guaranga*, Chaupi *guaranga* and *guaranga* de Ocos

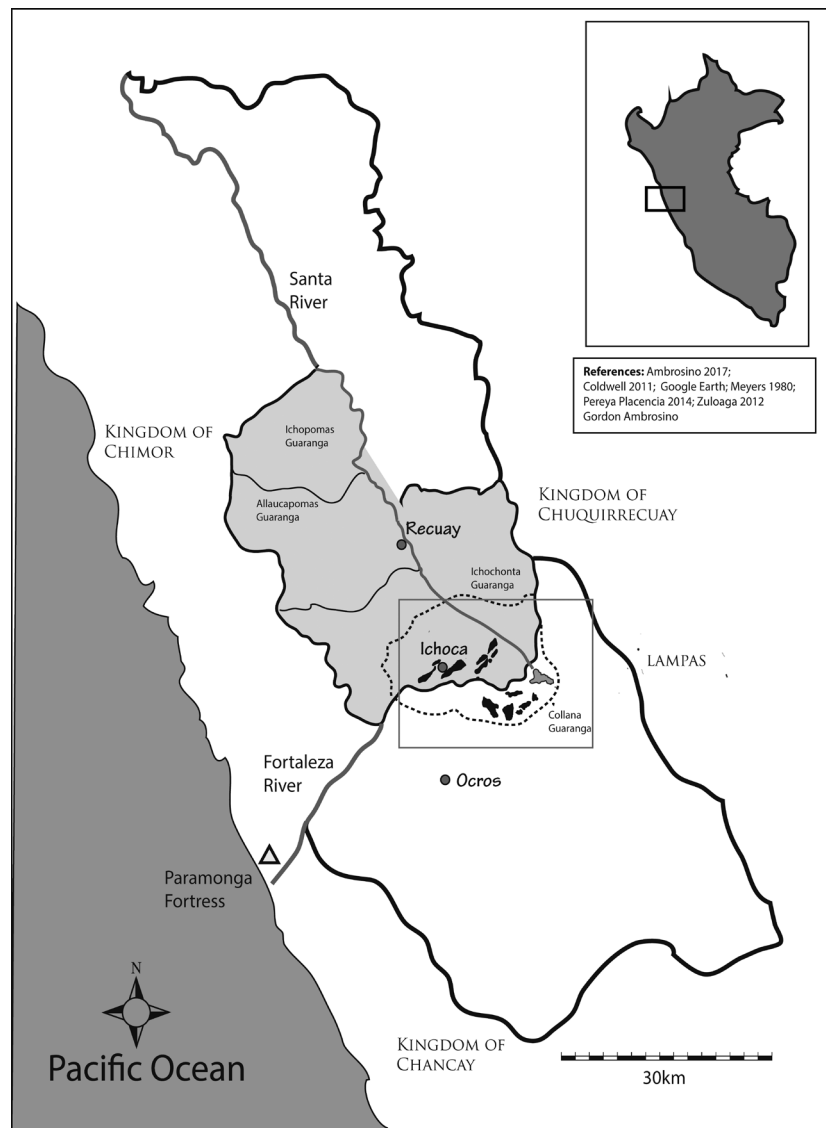


Figure 3: Marca and Collana *guaranga* location within the Inca Province of Huaylas and within the L.I.P. Kingdom of Chuquirrecuay in relation to the present research area (box).

(Pereyra Plasencia 2014, 24). The southern side of the Fortaleza Valley, excluding the *puna*, was the territory of the *guaranga* of Ocos, which was associated with the pueblos of Huayllacan, Colquioc (present day Chasquitambo), Yamor and Cajacay (Pereyra Plasencia 2014, 25). Its borders correspond roughly with the present-day Districts of Cajacay, Ocos, and Chiquian. The first documentation available for Lampas in Cajatambo comes from Hernando de Montenegro el Viejo, in 1543, who identified that the District of Collana de Lampas had “three chiefs, each with three subdivisions” (AGNP, Derecho Indígena, c. 806, f.29 r. cf. Pereyra Plasencia 2014, 24). One of these subdivisions curiously refers to the Collana *guaranga*, the other two are Caupi *guaranga* and the *guranga* of Ocos. These three groups were conflated into the *ecomienda*, Collana de Lampas, which was managed by Juan Blazquez, who was gifted the area by Pizarro in 1540 and was later killed by locals at the *Isla de la Puna* in 1541 (Pereyra Plasencia 2014, 27). Years later, the indigenous people of this *ecomienda* were later reduced in 1583, and again in 1584, to the pueblos listed above by Pedro de Arana (Pereyra Plasencia 2014, 30).

To summarize, in Inca times, the northern side of the Fortaleza Valley, along with the *puna* regions, corresponded to the Collana *guaranga*, of the Marca District, at the southern edge of the Huaylas Province. The southern side of the Fortaleza Valley, excluding the *puna*, would have corresponded to the *guaranga* of Ocos, of the district of Collana de Lampas at the northern limit of the Province of Cajatambo. In other words, the FI represents socially transitional, and possibly contested area, which temporally extends into precolonial times, possibly originating during the L.I.P., in the time of Tapa Inga.

The Visits of Friar Rodrigo Hernández Príncipe (1621–1622) (1658)⁶

The most detailed ethnohistoric accounts that pertain directly to the FI are provided by the friar Rodrigo Hernández Príncipe, who in his *corregimiento* of the Province of Cajatambo, had lengthy stays at Ocos and Lampas in 1618, Ocos, again, in 1621, Marca in 1621 (where he spent 14 days at the pueblo of Ichoca) and Recuay in 1622. In these visits, Hernández Príncipe expanded upon Friar Pablo Joseph de Arriaga’s (1620 [1621]) prior observation of an important ethnic distinction, between highland pastoral communities and lowland agricultural communities.

According to Hernández Príncipe’s accounts, the original inhabitants of the region were the *huari* lowland agriculturalists. The term *huari* refers to ‘ancient man’, who were giant beings, descended from the sun and who were masters of working the land (Duviols 1973, 154; 2003). In his visit to Ocos and Lampas in 1618,

Hernández Príncipe observed that the main god there was named *Huariviracocha*, who is described as ‘a great giant god of the land and...had a beard’ and had come from Lake Titicaca in ancient times (Duviols 2003, 725). *Huari* mythical beings arose from the earth, and in doing so, became lithified as *huaca* (deified landscape features that are considered to house ancestors, giving rise to human lineage (Duviols 1973, 158). It is in these same places where the *Huari* people settled and used the agricultural knowledge taught to them by their ancestral beings to build dams, irrigation canals and terraces to yield crops such as coca and maize. *Huari mallqui* (mummified ancestors) were abundant. They occupied their homes and remained vigilant of their agricultural fields, from their *machays* (caves or rock shelters). Because of their associations with the underworld of Ukhu Pacha, the *huari* people identified with ground water (Duviols 197, 155).

Cast as later arrivals to the area, the pastoralist *llacuaz* of the highland *puna* had an ecology, worldview, and a way of life that was distinct from the *huari*. The semi-nomadic *llacuaz* followed their llama and alpaca herds across the *puna* and used these animals not just for their own subsistence, but also for economic gain as they traded the meats and textiles, produced from these animals. The *llacuaz* associated with, and venerated directly, Lliviac, the lightning god who they conceived of as a trinity. Lliviac’s origin point is associated with the peak of the distant Cerro de Raco, which is located in Chinchaycocha, approximately 200km southeast from the FI (Mariscotti 1973, 1978; Duviols 2003). As Lliviac is of the sky, the *llacuaz* did not associate themselves with subterranean waters, but rather with the life-giving rain, which nourishes the *puna* grasslands that were, and still are, fundamental to the well-being of alpaca and llama herds. For the *llacuaz*, Lliviac was also responsible for producing stone manifestations of ancestral beings and each *llacuaz ayllu* (political groups that regulated ceremonial cycles) venerated their main *huaca*, which was a lithified materialization of Lliviac in one way or another (Duviols 1973, 171). Due to their late arrival in the region, the *llacuaz mallqui* were greatly outnumbered by those of the *huari* (Duviols 1973, 172). Upon arrival, however, the *llacuaz* established themselves as the dominant class, subjugating the *huari* and imposing the veneration of Lliviac on them. Maintaining their own status as the children of Lliviac, they required that the *huari* observe and venerate Lliviac’s father, Namoc.

This social structure is not to suggest, however, that these two groups maintained combative relations, although they may have engaged in battle periodically. Mono-ethnic *llacuaz* groups generally had peaceful relations with the *huari* as exemplified in Ocos, where Hernández Príncipe noted that they would come down valley from the *puna* (usually between June and August) to trade items such as alpaca, furs, and meats for goods like maize, peppers, and coca (Duviols 1973, 173). These interactions produced mixed bi-ethnic, agro-pastoral communities who venerated Lliviac’s son Uchu Lliviac, completing the triadic religious structure, which

⁶ This section is derived in part from an article published in *World Archaeology*, 2018, copyright Taylor and Francis, available online: <http://www.tandfonline.com/doi/pdf/10.1080/00438243.2019.16122>.

expressed the relationships between rulers, the ruled and the middle class (Zuidema 1973, 29).

Based on Hernández Príncipe's accounts at Recuay, Zuidema argues convincingly that these groups were organized in nested sets of two and four where the lower class were associated with llamas and the upper class was associated with 'sacrificers of llamas' to form a three-fold hierarchical organization, which crosscut the fourfold one "giving it a territorial character" (Zuidema 1973, 17–23). In these multi-ethnic groups, each *ayllu* conserved their own particular cults and each group venerated, and were responsible for, specific ceremonies according to their corresponding divinity. The ceremonial system of which they were a part was predicated on a notion of an exchange between gods, which kept their agro-pastoral ideology, and economy in balance. Pacts between these groups were secured by periodic human sacrifice (Duviols 1973, 178–180) as a form of reciprocation.

Hernández Príncipe's accounts are invaluable for understanding the nature of social life during the Colonial period. The question remains, however, when did the *llacuaz* arrive and implement this religious structure? In the settlement of Allauca, near Recuay, Zuidema used the information transmitted, orally, over generations, as expressed to Hernández Príncipe, to trace this structure back four generations, or approximately 132 years from the time of contact.

Although Hernández Príncipe documented lineages and ceremonial practices in detail in Ocos and Lampas in 1618, in Recuay and later in Allauca in 1622, he only identified individuals, or political groups in the latter. In his brief 14 day visit to the settlement of Ichoca, Marca District, Huaylas, where he was received by the chief of the Collana *guaranga*, Joan, Hernández Príncipe described Ichoca as 'exposed, cold and of few Indians, ruined by an *obraje*... reduced from four pueblos' (1621 [1923], 65). Unfortunately, he did not trace lineages and only briefly described ceremonial practices. He did however identify four named *ayllu* groups (Figure 4), and their *huacas*, also identifying that they shared a main *huaca* which was associated with 'el rayo' or Lliviac, and to whom they sacrificed their stillborn babies, babies born feet-first and twins (1621 [1923], 65).

The *llacuaz ayllu* was named Cascapárac. Their *huaca*, Mana Rircuy, was located roughly one league (approximately 4 miles) from the settlement and was accompanied by numerous *conopas*, or venerated ancestors corresponding to the household (Lau 2008). Mana Rircuy was a large rock that weighed nearly as much as 'two trees' and had a form that resembled a 'neck, face and head'. Mana Rircuy's children and the *ayllus'* *mallqui* were named Xulcan Lliviac, Quiquin Allauca and Huican Mallqui. The Cascapárac adored the sun, moon and the stars in the same manner as the *huari*. The ceremony that they oversaw occurred at the start of winter, where they would confess to their shamans, who would bathe them in the streams (Hernández Príncipe 1621 [1923], 65–66).

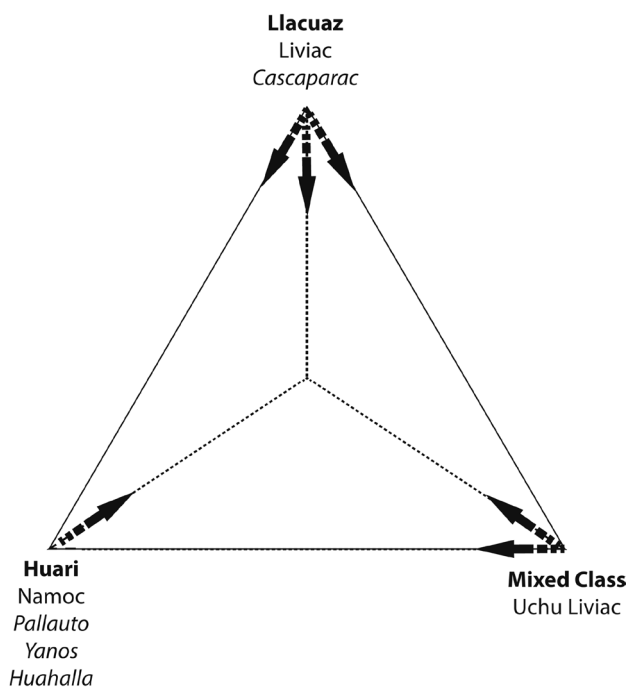


Figure 4: Diagram of power relations between ethnic groups of the study area and their associated gods (bold print) and ayllus (in italics) of the bi-ethnic community of Ichoca, Huaylas, with arrows indicating power over. This follows Zuidema's model of forward-referencing, territorial structures, and as documented by Hernández Príncipe (1621 [1923]).

The first *huari ayllu* that he describes is Huahalla, who 'pretended' to observe the *huaca*, Cámece, which was located within their traditional settlement, located below Ichoca in a warmer climate a bit more than 1 league's distance from the pueblo (Hernández Príncipe 1621 [1923]). Cámece also had an anthropomorphic form, but was decapitated. Hernández Príncipe notes that his *ayllu* had a shell trumpet to announce ceremonies and makes references to paintings (*retratos*) and a possible carving of ram horns, but does not provide further detail. Huahalla's *mallquis* were named Huaman Llasac, Huaca Pusca, Yanac Pusca and Auca Llasac and were located in *machays* in a rocky formation (Hernández Príncipe 1621 [1923], 66).

The *ayllu* Pallauto was also *huari*. Their *huaca*, Llamoc was of marble, having the form of the neck, head and beak of a bird, carved so that it resembled fish scales. Llamoc was located within their traditional settlement, which was located at the pinnacle of a rocky mountain, 1 league from Ichoca, and was difficult to access. Their *mallqui*, the children of Llamoc, were named Condor Carhuachin, Punchau Carhuachin and Villca Caque. The Pallauto *ayllu* also had a shell trumpet for announcing their ceremonies (Hernández Príncipe 1621 [1923], 66–67).

The last *huari ayllu*, Yanos, observed the *huaca* Apu Huahac, which was burned by the punitive friar, Fernando de Avendaño, in his visit to Huambo, which lies approximately 3 hours on foot from Ichoca, in the year CE 1617. The priest that was responsible for caring for Apu Huahac replaced it with another *huaca*, which he kept by his house and adored greatly. At his death, several priests from the surrounding

area came to his house where they observed, ‘numerous idolatry instruments, among which was a copper trumpet’ (Hernández Príncipe 1621 [1923], 67).

This configuration of *ayllus* is slightly different from those he observed in Recuay (2 *llacuaz*, 2 mixed groups, and one of *mitimae*—forced migrant workers) and those that he observed in Allauca, where all four groups were *llacuaz*. Using Hernández Príncipe’s documentation from neighboring Ocos, Duviols (1973) convincingly traces this social structure of that pueblo back nine generations, or 270 years, to the year CE 1351. This would suggest that the *llacuaz* arrived during the Late Intermediate Period (CE 1000–1476) and may possibly correspond to the time of Topa Inga. Duviols does caution, however, that certain pueblos of Cajatambo remember a wave of migration to a time that could correspond to the Wari in the Middle Horizon and that these configurations may have been altered during the *reducciones*, a disruption that may have also been responsible for establishing bi-ethnic *ayllus* and communities (Duviols 1973, 176).

The Ceremonial Cycles of the Cordillera Negra

The timing and social nature of the ceremonies of Cajatambo were well documented by both Noboa and Hernández-Príncipe. This cycle consisted of seven primary ceremonies (Polia Meconi 1999, 153–157). The Festival of Pariaqaqa was an annual festival held in April that all *ayllu* participated in. This 10-day festival commenced with fasting from food and abstaining from sex. On the morning of the 8th day all the *ayllus* embarked on a pilgrimage to the *puna* cave of Churinhaque, bringing with them their family *mallquis*. On the night of the 8th day, ceremonies commenced where large quantities of llamas *guanucos* and *cuy* were sacrificed to *Yanaq*, the supreme deity, over the next two days. The festival of Chaupiamok, the sister of Pariaqaqa was also celebrated by all *ayllus* and commenced 40 days after the festival of Pariaqaqa terminated, also consisting of fasting, feasting, and sacrifice. The festival of Ynacha (or the new fire) was, likewise, a 10-day ceremony, but was divided into 2 smaller ceremonies. The first consisted of traveling up to the *puna* to hunt *guanacos* to be sacrificed, while the other involved a ritual race where the winner drank from a sacred, metal cup. The new fire had to remain lit for the duration of the festival. The festival of Mature Corn corresponded with the winter solstice, lasting also for 10 days. The Festival of Aupi, or Puinac corresponded with the beginning and end of summer and culminated in a ritual race, of roughly 2.5km, where naked participants were followed by members of their respective pueblos. The first day of the Festival of Urau involved a sacrifice of *mullu* (or seashell) along with the blood of a llama for Urau. The second day marked the first of a 5-day fast, which culminated in a ritual bath. Lastly, the Festival of Apullamac, or Master of the Llamas, involved a 5-day fast of foods brought by the Spaniards. *Cuy* were ceremonially sacrificed by being burned among coca leaves. All of these ceremonies share a unifying aspect in that they are all located far from settled areas and incorporated pilgrimage to select destinations.

Archaeology in the Fortaleza Ignimbrite

The highland *Cordillera Negra*, at the meeting of the Santa and Fortaleza Rivers, is an understudied area, archeologically, as most investigations in these watersheds have largely focused on the lower portions of these valleys. In the Fortaleza Valley extensive archaeological investigations have been conducted in its middle and lower sections (e.g. Haas and Creamer 2006; Perales 2007; Creamer *et al.* 2013), while minimal research has been conducted in its upper regions. Ruiz and Ruiz’s (2013) study at the site of Pilapunta, a Late Intermediate Period (CE 1000–1476) necropolis with associated rock art, constitutes the only rock art research conducted at the Fortaleza River’s headwaters. The archaeologically-rich Callejón de Huaylas, on the other hand, has been studied extensively in archaeology and archaeological investigations have been conducted at sites pertaining to most pre-Hispanic periods (e.g. Burger 1985; Gero 1990, 1991, 1992; Lau 2006, 2008, 2010; Lynch 1980; Paredes *et al.* 2000; Ponte 2000, Herrera 1998, 2003, 2005, 2007). Although research has been conducted in its corresponding valleys and watersheds, no systematic, archaeological investigation have never been conducted in the FI and minimal rock art research has been done in these watersheds, altogether. The FI and its rock art, therefore, represents a major gap in the archaeology of the region.

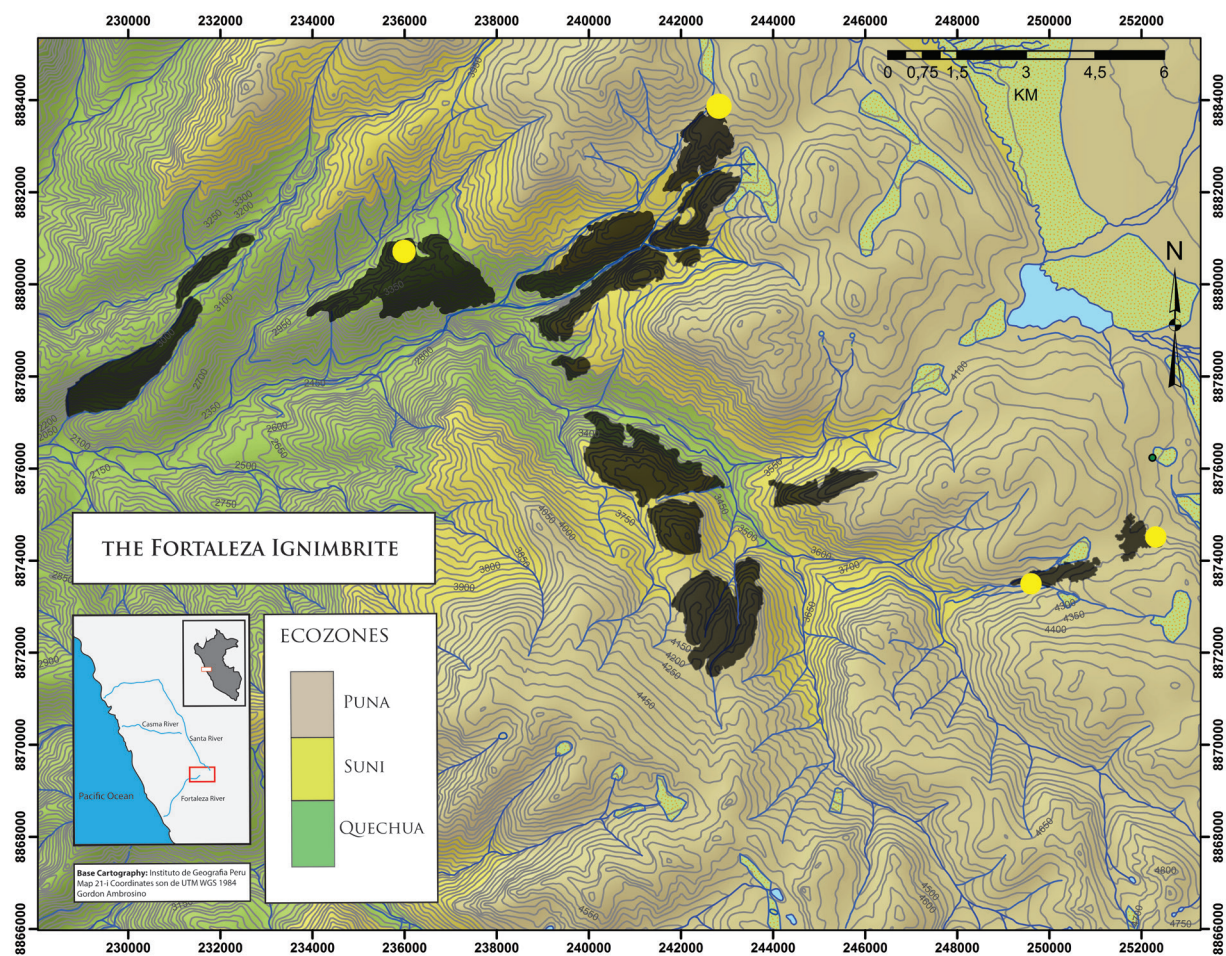
The Excavation Sites

To better understand the spatio-temporal relationships of the FI’s diversity of rock art, four sites were chosen for stratigraphic excavations: the *puna* rock shelter sites of Hatun Machay, Shacsha Machay, and Diablo Retrato, and the *quechua* mortuary structure of Pallauta (Map 2). Local *Campesino* informants have identified all of these places as being deified *huaca* features and being associated with *pacarina* springs, or points where ancestors emerged into this world.

Pallauta (3455 m.a.s.l)

The collective tomb of Pallauta was chosen for excavation to gain a better perspective of the FI large complex of pictograph art. Pallauta is particularly noteworthy as this structure and its associated *ayllu* was one of the four *ayllu* groups (Casparac, Huahalla, Pallauto⁷ and Yanos) mentioned by the friar, Hernández Príncipe, during his stay at nearby Ichoca in the year 1621. Pallauta’s most conspicuous feature is a large pictograph panel that is associated with a collective tomb, which sits overlooking a terraced agricultural field. This south-facing pictograph panel is offset at its center, where its western portion lies approximately 1 meter higher than the eastern half (Figure 5). Pallauta’s art panel holds several important

⁷ Modern *Campesino* villagers from the pueblo of Pampas Chico refer to this structure as Pallauta, although Hernández Príncipe’s accounts spell it Pallauto. Hernández Príncipe’s accounts of this site are so accurate when compared to the *Campesino*’s accounts that they are considered to be the same place here.



Map 2: Relative locations of the sites of Pallauta (left), Hatun Machay (upper center), Diablo Retrato (lower center) and Shacsha Machay (far right) selected for excavation.



Figure 5: North-facing view of the pictograph panel located at the entrance of the structure Pallauta.



Figure 6: South-facing view of the rock shelter of Hatun Machay.

motifs. The western half of the panel is comprised of two horizontal bars, one on top of the other, each consisting of alternating red and white painted rectilinear forms. Below these “bars” lies an impressive painting of a camelid in white pigment, with red borders. The eastern half of the panel is dominated by two prominent “double-arc” motifs. At the base of the cliff, just below the art panel lie the remains of the tomb’s foundation. Approximately 15 meters east of this rock art panel lies a large boulder, which has a staircase carved into its side. This boulder is oriented towards the agricultural field and likely served as an oratory platform to address an audience.

Hatun Machay (4259 m.a.s.l)

The rock shelter of Hatun Machay is located along the northern face of the northernmost outcrop of the FI, a rock forest that goes by the same name. Several springs are located in close proximity to the shelter, comprising the first source of the Fortaleza River. Aside from its striking physical appearance, this rock shelter is known for the high quantity and density of rock art. In total, Hatun Machay contains 41 anthropomorphic images, 25 zoomorphic images, 53 geometric images and 25 abstract images, along with 28 pictographs. The most prominent rock art feature in this shelter is a large petroglyph

bar-shaped image that measures 8.4m long by 30cm wide in a concave form, which follows the natural curve of the rock shelter (Figure 6). This “bar” consists of 22 rectilinear forms, 11 of which are in high relief and 11 in lower relief. Each of these “block” features contain different imagery, and no two of these features are the same. Some of the art found within this panel articulates with individual rock art elements from adjacent panels by a combination of painting and carving. Although the cave entrance is oriented NE at 20 degrees the exact center point of this bar (between the 11th and 12th blocks) is oriented perfectly North at 0 degrees.

Shacsha Machay (4224 m.a.s.l.)

Shacsha Machay is a rock shelter situated on the northern face of the *cerro* that goes by the same name on the eastern side of the water divide, at the headwaters of the Santa River. The shelter’s access is approximately 7.8m wide by 3m high and the shelter is 7m deep. Shacsha Machay faces north at zero degrees and has an unobstructed view of The Calluaraju Glacier, which is located across the historically documented Pampa de Lampas, *puna* plain. Shacsha Machay holds the second highest quantity of rock art, documented in a single place, on the FI, containing in total, 14 anthropomorph images, along with 14 zoomorph,



Figure 7: South-facing view of the rock shelter of Shacsha Machay (box).

16 geometric and 11 abstract images. These motifs are arranged in a dense and complex composition, all of which lies within 2 meters of the present ground surface. Shacsha Machay's images correspond to four art panels. Panel 1, is located on the cave's east wall consists of several finely-carved figurative motifs. Panel 2, located on the cave's south wall, holds 5 zoomorph figures, 6 front-facing anthropomorph heads, several of which are connected by incised lines, and at its center, a deeply-carved, abstract images consisting of a series of horizontal lines joined to a vertical line, which has a circle at its top (Figure 7). Panel 3 consists of several large, gouged rectangular hollows, primarily along the shelter's south wall and Panel 4 consists of a line of drill holes, which line the shelter's east, south and west walls.

Diablo Retrato (4087 m.a.s.l.)

Back on the other side of the water divide, approximately 1km from Shacsha Machay, the rock shelter of Diablo Retrato is also located near several springs that feed the Fortaleza River. In total, Diablo Retrato holds 20 anthropomorphic figures, at least 22 zoomorphic figures, 19 geometric figures and 26 abstract images. These images form three main art panels. Panel 1 is comprised of dozens of deeply incised, single-line anthropomorphic, zoomorphic, geometric and abstract images. Panel 2 occupies the same space as Panel 1 and had has two defining features which make it distinct from Panels 1 and 2. The first is that the imagery is quite different, consisting mostly of bold symbols. The second is that these carvings are relatively shallow and were produced using an abrading technique. Diablo Retrato's carbon stain, which originates in the shelter's NE corner, actually covers certain images from

Panels 1 while Panel 2 is actually superficially carved into the stain and do not penetrate the rock itself (Figure 8).

Cosmology, Art, Social Life and Practice in the Ancient Andes

The control of water and the veneration of ancestors were critical aspects of life in the pre-Hispanic central Andes. Social status in the region was affirmed by people's connections to ancestors and such affirmations of status were closely entwined with negotiations surrounding the allocation of water rights (Herrera 2005, 163), which extended from individuals to the greater cosmological order (Salomon 1991, 321). Negotiations related to water control were administered by ancestor cults, groups who served as mediums to the ancestors and invoked them through ceremony.

The Andean World: Dualism, Reciprocity and Pacha⁸

The notion of duality is one of the most fundamental aspects of Andean worldview. The binary relationships between opposites (man-woman, right (allauca) left (ichoca), above-below, night-day, sun-moon, and so on) were considered vital to maintaining harmony and balance between nature and people, as well as between people. One of the most primary dualistic structures in Andean thought pertains to the difference between life and death

⁸ This section was derived in part from a previously published article "Inscription, Place, and Memory: Palimpsest Rock Art and the Evolution of Highland, Andean Social Landscapes in the Formative Period (1500–200 BC)". *H-ART. Revista de historia, teoría y crítica de arte*, no 5 (2019): 127–156. <https://doi.org/10.25025/hart05.2019.07>.



Figure 8: Aerial view of the rock shelter of Diablo Retrato (box). (Photograph credit, Erik Maquera).

as it not only shaped ideologies, but also influenced social organizations and political structures (Bernier 2009). Harmony needed to be maintained between the worlds of the dead and those of the living. This balance was guarded by numerous, elaborate ceremonies, which were focused on the deceased and often involved sacrifice, in various forms, as a means of reciprocating the dead to ensure the well-being of the living.

In the ancient Andes space and time were not experienced as homogeneous, and were home to numerous sacred places (Polia Meconi 1999, 158–159). Dualistic ideologies were structured in the Andean world in relation to places and space-time as an undivided duality are unified in the concept of *pacha*. *Pacha* refers to the physical world as we know it, but it also includes the Andean cosmos. Manga Quispe remarks that *pacha* may more accurately translate to “space-time” as it can, and often does, refer to a place’s location in terms of its relationship(s) to both space and time (Manga Quispe 1994, 155–189).

Pacha is divided into three main parts. At the most mundane level, Kay Pacha, refers to the earth plane, and in general, the physical world, as we know it. Kay Pacha also refers to the present and to one’s center; it represents the struggle between past and future, as well as between the upper and lower worlds (Polia Meconi 1999, 158–167). Ukhu Pacha, in turn, refers to the world below; it is associated with the past, and one’s left side (Polia Meconi 1999, 159). Ukhu Pacha is the domain of prominent ancestral beings, subterranean waters and creatures, such as serpents. Landscape features, such as caves (*machay*) and springs (*pacarina*) are considered access points between Kay Pacha and Ukhu Pacha.

Lastly, Hanan Pacha, the world above, refers to the future and one’s right side; it is the domain of the wind and the animals that inhabit it, like birds, rainbows, clouds and even powerful gods.⁹ Although *pacha* exists as these three distinct facets, space and time in *pacha* are linked and essentially considered one and the same. It is through the space-time continuum that the *pacha* world distinctions are all connected and co-creative, promoting balance and harmony in the cosmos.

Camac: Embodiment and Animism in the Andes

Art production in the ancient Andes was a means of invoking ancestral figures into the present, often in the interest of maintaining security and future prosperity. Dualistic expressions in art reflected the prominence of symbolic dualism in religions, ritual performances and social order (Bernier 2009). Artistic manifestations of concepts and beings associated with the three realms of *pacha* could serve not merely as representations of elements associated with them, but could have acted also to invoke those elements, such that they became physically united with them. In terms of rock art, images of (or depictions of) serpents, felines, birds and rainbows are often considered to embody features of Ukhu Pacha, Kay Pacha and Hanan Pacha, respectively¹⁰. Likewise, visual art in the Andes was not simply just a means of capturing specific ancestors or deities; it was, and still is, a means for animating those beings. Bird-David’s (1999)

⁹ See Polia Meconi (1999) for full, descriptions of the *pacha* worldview and how it relates to people’s orientation in the world.

¹⁰ Numerous *Campeño* consultants from the local pueblos involved in this study claim that these animals refer to these realms of *pacha*.

notion of ‘relational epistemology’ describes the core values of animism as a belief in the ability of people, places and things to communicate with each other. In the Andes, animism focuses on places, which can be constructed or natural, as well as objects (Sillar 2009, 376). A fundamental concept in this regard is *camac*, which refers to the vitalizing energy that animates life. In addition to embodying beings and concepts, Andean art was used to transfer *camac* between realms of *pacha* to maintain harmony in the world. Art has been a tool for towards these ends since as early as 2000 BCE (Malville 2010, 2106).

Animism was also achieved in Andean art by incorporating concepts of dualism. Lau posits that such ancestor images not only served as receptacles for embodying such beings, but also served to promote social relations, as they actively embody social relationships and mediate physical interaction between the living and ancestral divinity (Lau 2008, 1043). Viewed in this sense, animation through art can be understood not just in terms of vitalizing a depicted being, but more so in terms of animating and vitalizing relationships not just between people and objects, but also between people and between worlds. In other words, images of ancestors were produced not just to represent these beings, but their production was rather a matter of social practice designed to incorporate the ancestors into the world of the living. Andean art, therefore, was both active and reflective.

Ancestors, Economy and Politics in the Andes

Recognized as a universal aspect of religion throughout the world, the veneration of the dead is based on the belief that the deceased have a continued existence and that they possess the ability of influence the lives of the living (Steadman, *et al.* 1996, 64). In broader contexts, relationships between the living and the dead confirm the local *status quo* of existing kin-based lineage (Calhoun 1980). This was the case, and still is the case, in many areas of the central Andes where ancestor worship is a critical component to social life, at varying scales, as the deeds of the dead became mythologized within the broader social fabric, becoming a form of history (Cohen Suarez and George 2011, 127). Early colonial documents pertaining to the Cordillera Negra describe practices of ancestor worship as a central aspect of daily life where social status was maintained by engaging the ancestors (Duviols 1973, 2003; Zuidema 1973). Such affirmations of status in the region were closely entwined with negotiations surrounding the allocation of water rights, the communal organization of labor, and were mediated by mortuary practices as all scales (Herrera 2007, 163), creating a seamless web expanding from family organization to geographic and even cosmological order (Salomon 1991, 321).

In the Andes, the dead were associated with specific landscape features. Certain points in the physical landscape, such as caves, odd rock outcrops and springs,

for example, were considered places of emergence, or *pacarinas*, and it was from these physical landscape features that ancestors were considered to have surfaced from the underworld to populate the world above (Dean 2010, 34). At levels that are more expansive, *pacarinas* took the physical form of large bodies of water, while at the local level tended to be dry cave sites (Gose 1993, 492). It is from these places that the natural landscape became socialized as Ukhu Pacha became linked with Kay Pacha.

Often associated with *pacarinas*, certain places held sacred by Andean peoples were deities who had petrified. Such stones had histories passed down through generations of worshipers. These *huaca* deities were remembered and associated with particular deeds or events (Dean 2010, 26) and were worshiped at both local and regional scales. *Huaca* often were considered to be the body, and/or living space of these deities (Lau 2008, 1031). This lithomorphic transition, from human to non-human, facilitates ancestors remaining with their descendants at specific places in the landscape. All *huaca*, no matter how big or small, are anchors to communication with the supernatural world (Cohen Suarez and George 2011, 125) and certain types of *huacas* were believed to be the *pacarina* of certain living peoples and the deities that they venerated, who they considered their founding fathers (Glowacki and Malpass 2003, 436).

Christianizing, Spanish monks were puzzled by *huacas* (Malville 2010, 2108). Some of the earliest accounts of *huaca* come from Garcilaso de la Vega, who wrote in the year 1609, that in addition to referring to something as “sacred or extraordinary” (Staller 2008, 270), the term *huaca* can be applied to any temple, to tombs, to agricultural fields or mountains as these things were perceived to have superiority over common things (Garcilaso de la Vega 1966 [1609], 73, 76–77 cf. Staller 2008, 270–271). In some instances, the sun was understood to be a *camac* for certain *huacas* (Malville 2010: 2110) in Inca times.

The ethnohistoric accounts of Bernabé Cobo (1990 [1653]) identify that two dimensions emerge in the creation of *huaca*: continuity and transformation. This occurs, first, as *huacas* anchor ritual practice over multiple generations. Second, *huacas* are transformed as these associated activities evolved and as their meanings change through human practice (cf. Moore 2010, 538). Due to these ancestral associations, *huaca* were understood to be the petrified owners of places, such as agricultural fields and even villages (Gose 1993, 44). They thus developed over time as symbols of occupation and possession, and factored heavily into how territories were defined. The concept of *huaca* is generally believed to date as early as 1500 BCE (Bray 2015) and endures to this day where the modern use of the term *huaca* translates to “great grandfather” and by extension, “ancestor”; these concepts are realized interchangeably through the use of this word (Glowacki and Malpass 2003, 436).

Inscription was an important aspect of mortuary practice in pre-Hispanic times and marked rocks in the Andes were recognized as ‘both normal and numinous, existing and participating in diverse worlds simultaneously’ (Dean 2010, 35). Marked *huaca* socialized rock by locating the land in a cosmological order. In this regard, inscribed rock features found in association with tombs or *huacas*, at hydraulically significant points in the landscape, offer insights into relationships between inscriptive practices and concepts of ancestry.

At the community level, *mallquis* were the mummy bundles, of important individuals considered to be group progenitors and the offspring of *huacas* (Doyle 1988, 97). Like *huaca*, *mallquis* were also associated with certain aspects of the landscape, although they tended to be located, physically closer to habitation areas, near their descendants. *Mallqui* bundles, containing mummified human remains, were the ancestors of specific mortuary communities and their repositories frequently took form as subterranean tombs, above-ground tombs (*chullpas*) or small caves (*machay*), which were often related to myths at specific places, and located the embodiment of associated lineages (Cohen Suarez and George 2011, 128).

Like *huaca*, *chullpas* and *machay* often identified *pacarinas*, but of a lower order. The *mallqui* they contained were considered desiccated seeds, which through burial, were returned to the earth and their location around agricultural fields symbolized and reinforced commitment to a program of social organization through inheritance (Salomon 1991, 346). Frequently situated within or overlooking agricultural areas, these mortuary communities’ design was intended to reflect, or even create, utopias in the sense of being constructed perfect societies (Ragon 1983, 39 cf. Salomon 1991). The presence of the *mallqui* guaranteed the presence of the ancestral spirit in the daily life of their descendants, securing the control of three essential functions: agricultural cycles, the reproduction of the family line and the continuity of cultural identity (Polia Meconi 1999, 123–125). In addition to being visibly accessible, above ground tombs of this type were physically accessible as well¹¹. This accessibility facilitated frequent visitation and the mobilization of *mallqui* during times of ceremony or war (Herrera 2007), two fundamental aspects of ancient Andean life.

Economies at all scales in the Andes were heavily influenced by the physicality of the land, primarily in terms of water and land availability, and altitude. As described above, these ecological factors dictate which types of resources can be produced, and where. Murra’s (1972) vertical economy model suggests that Andean social formations tended to make as much use as possible

of the vertically staggered ecological tiers through the establishment of enclaves of production, which are physically removed from the core territory. These enclaves were organized around islands of resources where, in a vertical environment, specific economic resources (crops and / or livestock) corresponded to specific ecological zones. Such controlled islands were often widely scattered and situated at different elevations (Gose 1993, 491).¹² From a pragmatic standpoint, this system was designed to diversify the resource base of a specific group and establish a degree of economic and political autonomy as interactions with outside groups became less critical to maintaining economic well-being.

Murra’s model, although effective in identifying how territory relates to resources in a distinct physical environment, tends to treat populations as being isolated. Hastings (1987) offered an alternative model, which acknowledged the existence of mixed-ethnic communities in the highlands. Lane defines agro-pastoralism as ‘a diversified form of pastoralism that integrates farming, and it is the process of integration of agriculture and the level at which it occurs that shape the individual agro-pastoralist community’ (Lane 2006, 20). Factors that influence and direct agro-pastoral economies are avoiding production reduction and mortality of animals from cold, shortage of forage and vacating grazing areas for at certain times of the year to allow for regeneration (Namgay *et al.* 2013). In the Andean highlands, this structure developed partially in response to the climatic nature of this region, which has distinct temperature differences, from those on the nearby coast. Hastings’ model, therefore, is particularly useful for understanding how agro-pastoral economies and mixed identities arose and functioned at the upper reaches of agriculture in the Corillera Negra.

Agro-pastoralism in the Andes is characterized by a primary dependence on livestock (in pre-Hispanic times, alpaca) by highland *puna* groups, who seasonally came down into the upper reaches of agriculture, in the lower *suní* ecological tier to produce agricultural goods¹³. Agro-pastoralist groups in the Andes were comprised of mixed identities, as well as mixed economies. These mixed economies had to be flexible and permeable by nature to ensure success (Orsini 2006, 153). Hastings’ model was developed based on how economies functioned and interacted on the eastern slopes of the central Andes and he suggests that agro-pastoralism was a relatively late phenomena, possibly as late as the Inca State. Work in the inter-montane and western slopes of the central Andes (Herrera 1998, 2003), however, suggest that such integrated production had a much longer temporal

¹¹ The physical accessibility to *chullpas* varies by location. In the present study numerous *chullpas* are directly accessible by foot with little effort, while others are located high up along cliff faces where special equipment is required to access.

¹² In the Cordillera Negra this system forged a more general highland-lowland ethnic distinction which corresponded to pastoralism and agriculture, respectively. Both ethnicities were defined in part by their role in the greater economy and their place within the power structure which came about.

¹³ The specific nature of each ecological zone forms an important aspect of this study.

trajectory, possibly dating back to the Early Intermediate Period (CE 100–700).¹⁴

In the Andes the autonomous unit of production is the *ayllu*, which, at its most basic level, is an alliance of households that exchange labor and jointly own land and resources (Moseley 2001). *Ayllus* are also characterized as a group of people of shared descent, a shared residence, or a social group whose members share a common economic and political focus. The central concept of *ayllu* is based on a hierarchical relationship of a group of people to the land they occupy and to the water needed to irrigate and cultivate that land (Zuidema 1972, 16) and the primary function of the *ayllu* was to solve subsistence issues (Earle *et al.* 1987, 263) by controlling resources. As administrative units, *ayllus* collectively formed local hierarchies, which nested together or subdivided and provided the basis for empire building (Gose 1993: 480). Geographically, *ayllus* were, and still are, typically localized, but not necessarily in a single contiguous space, and all the places in which a given *ayllu* are seen as significant were ritually marked (Albo 1972; Solomon 1995, 321–322).¹⁵

Huacas played a critical role in structuring local and regional identities, as well as economy in the Andes, and in this nested political system, were often considered kingpins in such hierarchies. Each *huaca* defined a level of political organization that, likewise, might nest into unity of a higher order or subdivide into smaller groupings (Gose 1993, 4811). As such, *huacas* were the focus of kinship relations and agrarian fertility rituals; they defined the entire political culture from which these administrative forms emerged as the deities who lived and spoke through them were considered the ancestors who founded *ayllu* descent groups (Gose 1993, 480–490). *Huaca* were, therefore, prized landscape features of *ayllu* groups who sought to control them in the interest of harnessing power over ancestral land and cosmological sources of water (Glowacki and Malpass 2003, 437). This was achieved by regulating lines of communication with the deceased through controlling ceremonial cycles and access to symbols.

The concept of *ayllu* is closely related to the concept of the water cult or ancestor cult, groups who administered ceremony with a focus on invoking the ancestors. In the most basic sense, ancestor cults were conservative groups that oversaw ritual and inscribed the landscape with symbolism and funerary architecture (Isbell 1997). Ancestor cults were deeply entrenched in Andean cultures (Doyle 1988), where their actions were intended to essentially incorporate ancestors into the lives and affairs of the living, on their terms. The minimal element of ancestor cult was the veneration of at least one dead person as the source of entitlement among a group of

people who shared rights or identity (Salomon 1991, 320). To achieve their goals as mediums, or access points to the dead, *huacas* were their primary focus (Gose 1993, 489) and diagnostic material traces of ancestor cults are *chullpas* and *machay* tombs (Isbell 1997) as cult territories may be visually demarcated by individual or clusters of ancestor shrines or mortuary monuments (DeLeonardis and Lau 2004, 81–82). In this sense, the mortuary utopias described above can be considered the works of ancestor cults, and the creation of such places engaged people with the past to create and perpetuate social memory (Cannon 2002, 193–194). Each cult was associated with particular landscape features, such as the sun, the moon, rainbows, certain constellations and lightning (Polia Meconi 1999, 158–164) and each small *ayllu* was affiliated with a local ceremonial center.

Ceremony and Pilgrimage in the Andes

As concentrated and directed acts of observation and attention, ceremonies in the Andes sought to engage and harmonize the three realms of *pacha* and were often located, or centered on, the specific access points that linked them. *Machays*, in particular, were important not just for serving as links to these worlds, but were considered prestigious and of primary social import as they represented the uterus of Mother Earth (Mama Pacha) (Polia Meconi 1999, 167–168). Likewise, above ground access points which linked Kay Pacha with Hanan Pacha were often identified as rainbows and lightning (Strong 2012, 63). These particular landscape features constituted central aspects of people's daily life and were the focus of rituals and ceremonies.

As administrators of ceremonies, centered on ancestor veneration, ancestor cults regulated ceremonial cycles and feasting festivals. These events sought, primarily, to revitalize communal solidarity (Lau 2002, 280) as well as emphasize community stability and group boundaries (Lau 2008, 1029). Ritual performance and the manipulation of ceremonial space, centered on *huacas*, articulated differing political dispositions in the ancient Andes that shaped hierarchical socioeconomic *ayllu* units (Moore 1996, cf. Swenson 2006). Ceremonies organized by *ayllu* were designed to promote social memory and remind people of specific connections between *huaca* and particular social groups in the interest of controlling water (Dean 2010, 37). By sponsoring competitive feasting, elites intended to secure unequal influence and social credit over followers and/or subordinate groups (Clark and Blake 1994, 20–21). These activities resulted in differing access to, and control over, natural resources.

Water played a central role in Andean ceremony, both in terms of location and participation, and often was related to rock art. Flowing water visualizes the passage from, and communication between, *pacha* realms and many carved rocks signal sources of water or waterways. For example, the Inca's 'culture of water' clearly and importantly overlaps and intersects with their culture of stone

¹⁴ Rock art is used here, in part, to assess the nature of possible agropastoral economies at the upper reaches of agriculture.

¹⁵ Rock art is examined in the present investigation to shed insights regarding the spatial distributions of specific *ayllu*.

(Dean 2010, 32) and, in ceremony, libations for the dead were poured through pierced or channeled stones (Salomon 1991, 316) to emphasize and animate these relationships. These libations invoked *camac* from the landscape by certain rituals, which involved running water, blood and other liquids' *camac* (Malville 2010, 2110).

The nature of the influence of *mallqui* in pre-Columbian, Andean ceremony is documented in Spanish chronicles, where it was reported that ancestor mummies played vital roles in festivities, both as objects and participants (Rowe 1946). Tello (1942) convincingly argued that funerary and public architecture, stone sculpture and iconography are components of a coherent program of religious ceremony focused on ancestors, fertility and community reproduction (cf. DeLeonardis and Lau 2004, 78). These activities fostered the competitive nature that characterized ancestor-focused ceremonies and feasting rituals where participants sought to claim preferential access to farmland. These economically autocratic communities were held together by these shared practices, which are materially signaled through purposive emplacement of ancestor tombs. The *mallqui* they contained can be viewed as a flexible and pivotal element of that sacred landscape.

As locations designated for apprehending the deceased, venerated places also served as pilgrimage destinations in the region. Pilgrimage in the Andes was organized around the seasonal nature of ceremony, based on these movements, and factored into how people moved across the land at certain times of the year. *Huacas* could be pilgrimage destinations or they could be located along pilgrimage routes. They were, therefore, flexible in terms of scale, some being venerated by single families, while others were considered regional pilgrimage centers and factored prominently into the control and expansion of territory by various states through pre-Hispanic times.

Issues Regarding the Cultural Chronologies of the Central Andes

With these themes in place, we can now take a closer look at some of the existing issues regarding the archaeology and rock art research of the central Andes, specifically regarding general cultural and rock art chronologies. For the former, six primary models have been produced for the central Andean region, over the last 50 years, (Lanning 1967; Rowe 1967; Lumbreras 1969; Bonavia and Ravines 1970; Alcina Franch 1986 and Lavalley and Lumbreras 1985) (Table 1), each emphasizing specific criteria for defining cultural periods. For example, the models proposed by Lanning and Ravines have a greater emphasis on lithics, and accordingly, have more detailed definitions for the preceramic period. For the ceramic period, Rowe's (1962) model, for example, defined by Horizons and Periods, is widely adopted across Latin America (Herrera 2005). This model holds as a main tenant, that variations in the intensity of social interaction is reflected in the material culture at specific times (Steward 1949 cf. Herrera 2005). Horizons, in

the Andes are defined, archaeologically, by a general ubiquity in material, in terms of technology, style, modes of production and landscape relations, over a large geographic area. Rowe's identifies three horizons: the Early, Middle and Late, which correspond to the Chavín¹⁶, Wari and Inca cultures, respectively in the central and north-central Andes. Alternatively, Periods were located, temporally, between Horizons and are characterized by more fragmented regional interaction.

One key chronological debate that is important to this study deals with a period spanning between 1500 BCE and CE 200. Up until the mid-1980s this time frame was generally divided into either the Formative or Initial Period, for the first part, and then, for the second part, the Early Horizon. Recent models for this period, based largely on the works of Japanese investigations at the sites of Kotosh (Matsuzawa 1972) in the second half of the twentieth century, refer to this time frame more generally as the Formative Period, dividing it into five sections: Early (1500–1000 BCE), Middle (1000–600 BCE), Late (600–400 BCE) and Final (400–200 BCE) and Epiformative (200 BCE–CE 200) (Kaulicke 1998, 2004), eliminating the concept of the Early Horizon entirely. This delimitation reflects a more gradual transition between cultural phases, rather than a leap from Period to Horizon. The distinction between the preceramic and ceramic periods is also emphasized less in this model, where the Formative Period is viewed as being more fluid, and where the transition between the Late Archaic Period and the Formative Period is also seen as being subtler.¹⁷

Likewise, cultural chronologies for the latter part of pre-Hispanic occupation of the region (CE 100–1532) are also a matter of debate. Lau's (2002) chronology for this period utilizes ceramic and radiometric evidence from several sites in the region to further refine these distinctions. His model begins with the Early Intermediate Period (E.I.P.) (CE 100–700) and continues with the Middle Horizon (CE 700–1000), followed by the Late Intermediate Period (L.I.P.) (CE 1000–1480) and terminates with the Late Horizon (CE 1480–1532). This model is employed in this study, for this time period and utilizes these abbreviations for these periods.

Because rock art is stationary, it offers a unique perspective for observing cultural changes over time. As a result, rock art typologies for the region, although they do share some similarities with the models presented above, follow a distinct path. Nuñez Jimenez's (1986) catalogue of 72 petroglyph sites constitutes the first modern, large-scale inventory of rock art in the region. Nearly two decades later, Hostnig's (2003) inventory includes dozens of new

¹⁶ Rick (2005) indicates that this period is characterized by the emergence of elite priesthoods who used art (and even water) as a means of ideological control.

¹⁷ As will be presented in Chapter 4, excavated results show intensified activity at this time, and displays several similarities with this model. The 4-phase Formative Period model, therefore, is utilized here to inform the model produced for the rock art of the FI pertaining to this period.

Table 1: Comparative cultural chronologies for the central Andes produced over the last 50 years.

Year	Lanning 1967	Rowe 1967	Lumbreras 1969	Bonavia, Ravines 1970	LLavallee, Lumbreras 1987	Alcina Franch 1986	Kaulicke 1998
1532	Late Horizon	Late Horizon		Late Horizon	Inca		
1400			Tiwanisuyo				
1300	Late Intermediate Period	Late Intermediate Period	Regional States	Late Intermediate Period	Regional States	Post Classic	
1200							
1100			Wari		Middle Horizon		
1000							
900	Middle Horizon	Middle Horizon		Middle Horizon		Classic	
800							
700							
600							
500							
400	Early Intermediate Period	Early Intermediate Period	Regional Cultures	Early Intermediate Period	Classic Regional Cultures		
300							
200							
100							
0							
100							Epiformative
200							
300							
400	Early Horizon	Early Horizon	Formative	Early Horizon	Early Horizon	Formative	Final Formative
500							Late Formative
600							
700							
800							Middle Formative
900							
1000							
1100							
1200							Early Formative
1300							
1400							
1500							
1600	Initial Period	Initial	Archaic	Initial Period			
1700							
1800							
1900							
2000	Period V			Epoch 5	Preceramic		
5000	Period IV			Epoch 4		Proto Neolithic	
	Period III			Epoch 3			
	Period II	Preceramic	Lithic	Epoch 2		Paleolithic	
9000	Period I			Epoch 1			

rock art sites not presented in earlier works. The most complete typology for rock art in the central Andean region, however, were defined by Ravines (1986) and later by Guffroy (1999, 2009, 2011) whose analysis of numerous sites and contexts identified ‘styles based in various modalities that permit the definition of common, large, regional roots, which formed particular cultural areas’ [translation by the author] (Guffroy 1999, 23).

For petroglyphs, Guffroy defined three distinct groups of rock art traditions in the Andes (Guffroy 1999, 71–87; 2009), which roughly correspond with specific Periods

and Horizons. They are marked by a general evolution in use and purpose, associated with a diversity of rituals as evidenced by the presence of other associated archaeological features, such as lines of transit, water springs, small, circular and/or rectangular enclosures, cupules and areas of running water (Guffroy 2009, 19–20). Located in the north-central Andes, in the departments of Ancash, La Libertad and Lambayeque, Tradition A is the oldest of his defined traditions. It corresponds largely with the Formative Period, beginning approximately 2000 BCE and terminating approximately CE 300. Particularly diagnostic aspects of Tradition A are combinations of

feline, raptor and serpent zoomorphs, which are frequently located on isolated rocks, such as boulders, as well as in caves. Tradition B, is broken down into northern and southern sections and temporally corresponds, roughly, to the Early Intermediate Period (CE 300–600). Both sections are located along the coastal area, along the western slopes of the Cordillera Negra and are characterized by both human and feline faces, zoomorphs in profile, serpents, depictions of small, local fauna, and most notably, the introduction of geometric images, such as spirals, curves, crosses and representations of the sun. (Guffroy 2009: 20).¹⁸ Lastly, Tradition C spans a long temporal period and corresponds approximately with the onset of the Middle Horizon (approximately 600 C.E.), goes through the L.I.P. and essentially ended with European contact in 1532. Tradition C does not geographically apply to the FI.

Chapter Summary and Outlook

The rock art of the central Andes, despite its abundance, represents a key and understudied aspect of this archaeologically-rich region. Because of the high quantity and diversity of rock art that it holds, and because these works display such intimate relationships to the ecologies of this high-altitude environments, the rock art of the FI provides an exciting opportunity to understand rock art with new perspectives. The relationships between imagery, technique and style with rock and water, lend themselves to semiotic modeling and allow for new approaches regarding the agency of *in situ*, landscape-based art. The fact that this wealth of rock art appears to have a long temporal range allows for existing rock art typologies to be tested, generating new possibilities for comparing general cultural chronologies, which, traditionally, have a heavy emphasis on mobile material culture. The rich ethnohistoric accounts of the region offer a unique glimpse into cosmologies and worldviews and provide an additional line of evidence for clarifying for the agency of these works as they crosscut sedentary, agrarian and mobile, pastoralist communities in mortuary environments.

As we will see in the following chapters, the temporal breadth covered in this study is enormous, spanning from 3000 BCE, up until the year CE 1821. As a point of departure, the following chapter consists of a literature review that further develops the histories of research, current directions and problems in landscape archaeology, rock art research, semiotics and studies of agency. This review informs the following Peircean, eco-cultural semiotic model, which incorporates new perspectives on the agency of art and is presented at the end of the chapter. Chapter 3 details the methods employed to address these problems, to answer the research questions of this monograph, and presents the results of these activities. In Chapter 4 these data are interpreted and a typology for the rock art of the FI, defined by styles and traditions that

spans nearly 4000 years is presented. The second half of chapter four applies the semiotic models developed in chapter two to each style and tradition defined. Finally, chapter five reviews all presented material and discusses the semiotic nature of palimpsest art and the evolution of places before finalizing by detailing the contributions of this research and considerations for future work.

¹⁸ Guffroy (1999: 75–76) initially categorized this site of Cumbemayo in Tradition B (1999) but in later editions leaves this site from the discussion.