To Unite and Divide: Canals, *Tinku*, Liquids and Time in the Moche World

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Here I evaluate Andean concepts understood from the Quechua and Aymara languages to test their applicability to Moche archaeology—a region where the languages once spoken are now extinct. By focusing on geographical features common to the highlands and the coast (mountains and rivers) and archaeological evidence, I look at broad patterns of Moche material culture and consider how these relate to canal-fed irrigation systems, ceramic spatial patterning and fractaline socio-political organization documented in the colonial-era Chicama Valley. I then present a case study from Licapa II in the Chicama Valley to show that the physical components of the site's layout and the spatial patterns of artifact distribution relate to temporal and socio-political divisions that have their roots in long-standing ideas in Andean thought. Overall, this study shows that through careful evaluation some Quechua and Aymara concepts, namely tinku*—or two parts coming together to make a whole—is relevant to the Moche worldview. This concept is manifest through canals uniting and dividing physical space, both socio-politically and temporally. Liquids running through the canals ensure the well-being and energetic flow of Moche society.*

Introduction

This paper explores the relationship between irrigation canals, the Andean concept of *tinku* (the coming together of two parts to create a whole), the importance of liquids, and the circulatory nature of time in the Moche world. I contend that canals acted as *tinku*—they united and divided physical space both socio-politically and temporally. The water running through the canals, and liquids in general, served as animating forces in Moche society. Netherly's (1984) case study on political organization in the Chicama Valley prior to Spanish arrival in 1532 shows that, like the Inca, the late pre-Hispanic Chicama Valley was composed of moieties with fractaline political authority, meaning that at any scale, any part of the political system has the same underlying structure as the whole system. The irrigation canals and the Chicama River acted as boundaries and delineated the lands of these moieties. Here I argue this was also the case centuries earlier in Moche times.

I use as a case study the Moche site Licapa II, a midsized ceremonial centre in the Chicama Valley. Licapa II consists of two adobe brick platform mounds, known as *huacas*, separated by an irrigation canal. Each side of the canal is characterized by distinct material culture and activities. Furthermore, the construction periods of the *huacas* date to different phases—one side pre-650 CE and the other post-650 CE. Drawing on the Quechua concept of *tinku*, or the coming together of two parts to create a whole, I suggest that the canal served both to divide and to unify ritual and socio-political space physically and temporally. I also contend that the water running though the canal and that liquids in general—blood, urine, semen, corn beer, etc.—were vital to the society's energetic flow. Ultimately, I suggest that Licapa II can be viewed as a microcosm, or synecdoche, of valley-level organization. Allen (1997)

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defines synecdoche as a figure of thought, where the whole is enveloped as a part of the larger whole, much like fractals in geometry or nested Russian dolls.

Because the Moche had no writing systems and what survives of ancient north coast languages is fragmentary, to elucidate Moche worldview I turn to Spanish chronicles, colonial-era documents and ethnohistoric and contemporary Quechua- and Aymara-language accounts from the highlands. Concepts and traits extracted from these works paint a rich picture of life just prior to Spanish contact. Inca archaeology greatly benefits from this knowledge, and years of fieldwork provide examples of how many of the concepts were manifest on the physical landscape (Bauer 1998; Zuidema 1990). However, both the antiquity of specific Quechua and Aymara terms and ideas, as well as the relevancy of applying these terms and ideas to interpret the archaeological record of much older and geographically distant cultures like the Moche, present ongoing questions.

Here I evaluate if some Inca and highland Andean concepts understood from Quechua and Aymara sources were operating centuries earlier on Peru's north coast during Moche times (200–850 CE). I draw on concepts centring on geographic features that connect and are common to highland and coastal regions (mountains, rivers and canals). This approach is distinct from other readings of Moche imagery and archaeology that import Quechua/Aymara narratives to verify specific interpretations of images (Hocquenghem 1987; Sánchez Garrafa *et al.* 2012). My approach uses the archaeological record to inform and test the applicability of the concept, rather than accepting that all Andean concepts were universally appropriate in Moche times.

The Moche and their language

Archaeologists recognize the Moche phenomenon by common artifact and architectural styles that extended over 10 contiguous coastal valleys. Moche culture is characterized by decorated *huacas*,[1] wealthy elite burials and exquisite ceramics. Moche is also understood by a series of ritual practices that took place at *huaca* complexes. Detailed realistic, fine-line drawings on ceramic vessels depict these practices.

Scholars once believed that the Moche were a homogenous polity, as proposed by Rafael Larco Hoyle (1945), the father of Moche studies. Research at Moche sites in the 1990s led scholars to realize instead that Moche consisted of at least two major cultural regions—one in the north and one in the south—with the large Pampa de Paiján desert dividing the two (Fig. 1). These two regions are characterized by different ceramic and architectural styles (Castillo & Donnan 1994).

A refined chronology and better understanding of regional associations among and between sites allows for new interpretations of how socio-political relations may have developed and been negotiated. Many scholars now contend that the Moche area was subdivided into independent polities whose alliances cross-cut the northern and southern regions (Castillo & Donnan 1994; Castillo *et al.* 2012; Castillo & Uceda 2008; Quilter & Koons 2012).

The archaeology of Moche has made significant strides over the last three decades, yet many archaeologists pay only cursory attention to the Moche language(s). This is mainly due to a lack of material evidence, such as writing systems. However, it is significant that two major languages were spoken in what was the Moche region prior to the Spanish arrival: Quingnam in the south and Mochica in the north. Both are now extinct and their antiquity unknown, but fragmentary evidence from various sources allows us to make some linguistic and geographical reconstructions (Calancha 1638; Carrera 1644; Cerrón-Palomino 1995; Middendorf 1892; Salas García 2002; Urban 2019). One reconstruction shows that they overlapped in the northern part of the Chicama Valley—near the archaeological site of Licapa II—and where we observe the frontier or boundary in material differences between the northern and southern Moche regions (Netherly 2009; Fig. 2). Although it is compelling to think that the linguistic divide corresponds to the material divide in Moche times, more interdisciplinary research is needed.

Languages carry with them perceptions of reality and the ordering of the world. Even if certain words are translatable across languages, the concepts they embody do not always hold the same meaning (Mannheim & Salas Carreño 2015). Yet regardless of language, many concepts were probably mutually understood by coastal and highland people quite early. Camelid pastoralism and agricultural exchange between vertical ecozones pre-dates 3000 BCE, and recent genetic modelling shows gene flow between the northern coast and highlands by at least the Moche period (Nakatsuka *et al.* 2020). Because of prolonged interactions, pre-contact-period people understood and spoke various languages. This is substantiated by shared vocabulary between coastal languages and adjacent highland languages, such as Culli (Urban 2019). It also includes the borrowing of

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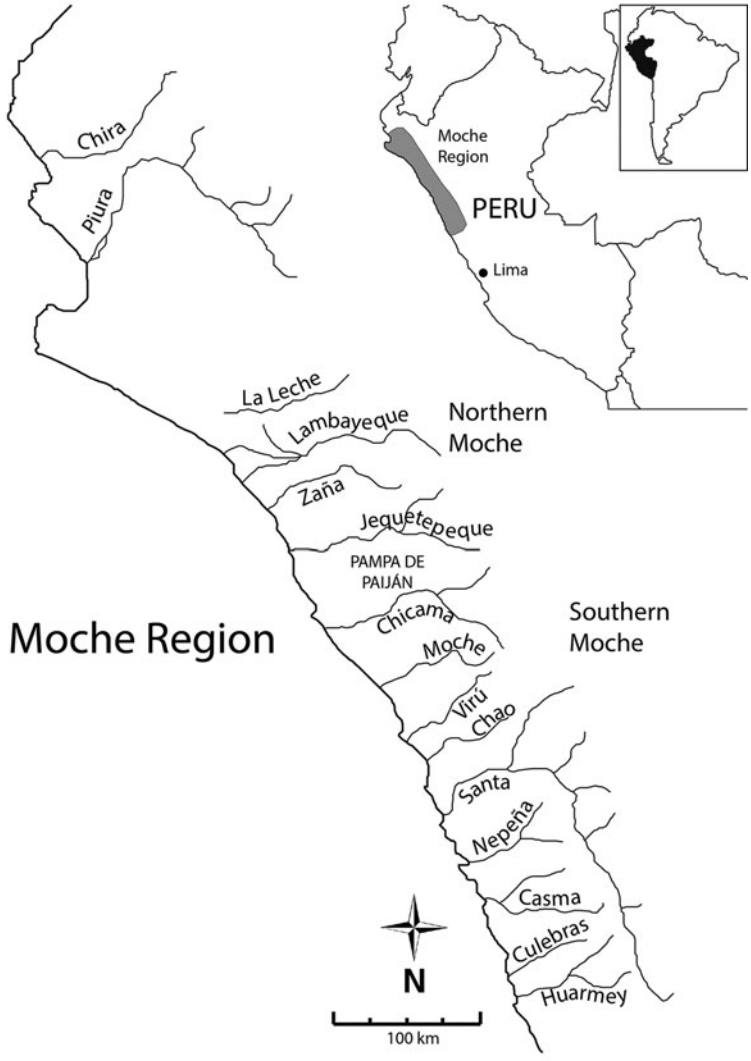

Figure 1. *North Coast of Peru.*

Quechua words into Mochica after 700 CE (Beresford-Jones & Heggarty 2012; Lau 2012). Intense connections between the coast and highlands led to shared ontologies concerning physical features of the Andean landscape, explicitly rivers and mountains.

Andean worldview in the highlands and north coast

In order to understand a Moche mindset better, it is useful to draw on what we know about an Andean worldview from highland Quechua and Aymara sources. Dualism is embodied in a number of conceptual ideas that shaped Andean thought. Binary pairs such as male/female, sun/moon, sky/earth, mountain/valley and wet/dry are complementary and oppositional (Gelles 1995; Platt 1986; Zuidema 1990). These pairs, referred to as *yanantin* in Quechua and meaning 'to serve together', can be symmetrical and ranked equally or asymmetrical and ranked unequally (Platt 1986). For example, the male/female pair is complementary but asymmetrical since male ranks slightly higher than female. Two opposed pairs coming together to form a whole was essential to a functional society and is embodied in the concept of *tinku*.

In Quechua, as well as Aymara, the noun *tinkuy* means 'binding or meeting' (Cereceda 1987). As a verb, it is translated to 'encounter or come together'. This 'coming together' is to achieve balance (Gelles 1995). In this respect, *tinku* refers to any two parts that come together to make a whole. Examples include the confluence of two rivers, the seam holding two pieces of cloth together, the uniting of two separate channels of the stirrup-spout bottle into

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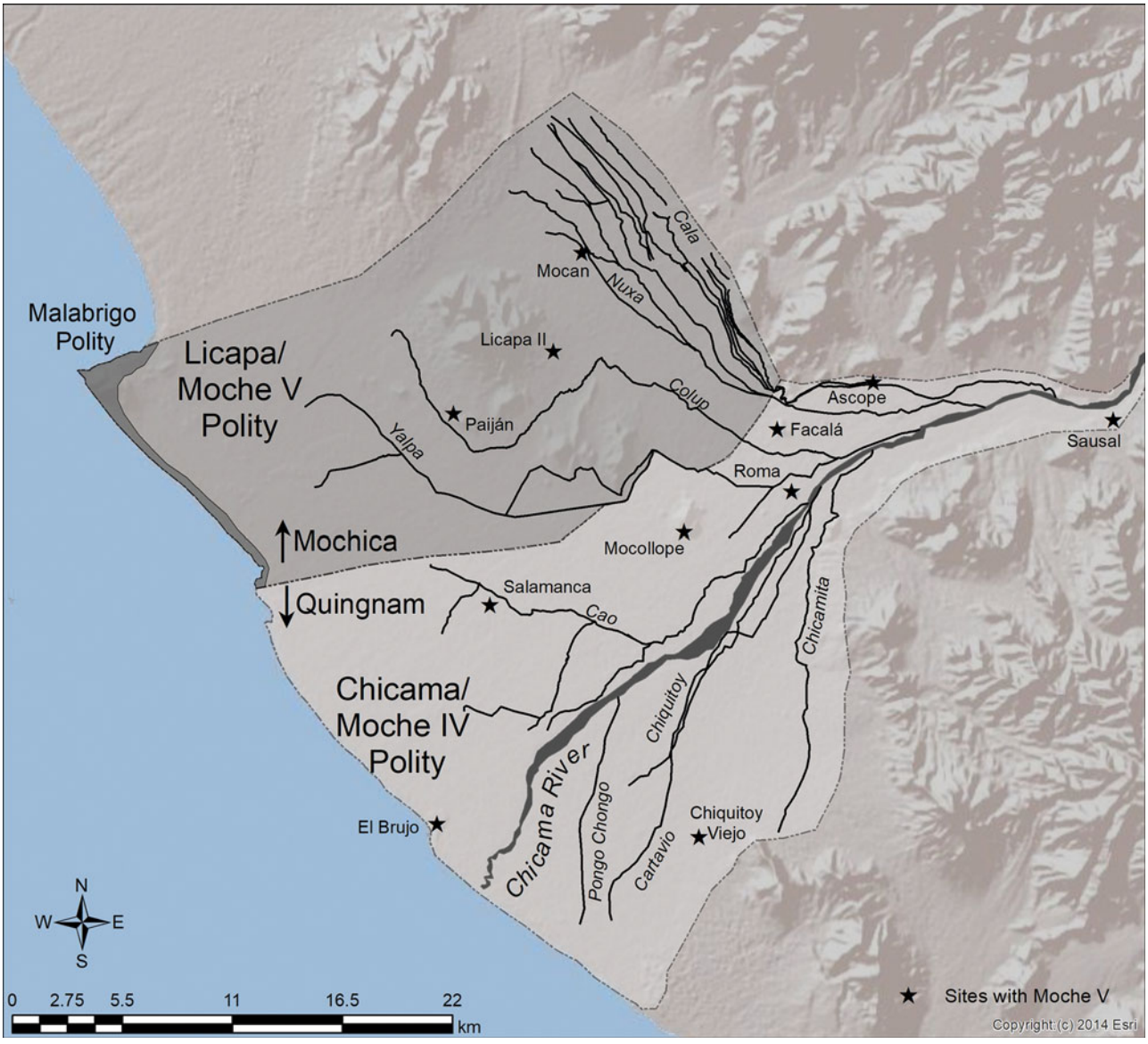

Figure 2. *Chicama Valley polity divisions during the late pre-Hispanic era as derived from Netherly (1984), Ramírez (1995) and Clément (2015). The canals shown here are modern canals that were in use in the pre-Hispanic era and abandoned ancient canals that are currently seen on the landscape. The canals were digitized from satellite imagery and checked with Netherly's (1984) maps. The sites in the valley with Moche V materials and the Mochica/Quingnam language boundary are also noted.*

one, or the way a single irrigation canal joins two parcels of land (Burger 1992; Netherly & Dillehay 1986; Ossio Acuña 1992; Quilter 2010). This balance also relates to the concept of 'the centre'. Unlike Western thought where the centre is a single point, in the Andes the centre refers to a line where two sides meet and is defined by what is on either side (Gelles 1995, 715).

The layout of highland Andean communities in upper and lower components is a manifestation of *tinku*. In Inca Cusco, this division was both horizontal (*hanan* to the north and *hurin* to the south) and vertical (*hanan* is physically above *hurin*). Gose (1996) notes that there was also a temporal component to this division, as space and time were merged in highland Andean thought, a concept known in Quechua and Aymara as *pacha* (Allen 1998; Bouysse-Cassagne & Harris 1987; Qespi 1994). In the Inca king lists, the first five rulers are assigned to Lower Cusco, where the more recent were

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ascribed to Upper Cusco. Gose (1996) suggests that the rulers in the later part of Inca society literally looked down the hillside and back in time to their ancestors. Furthermore, Dean (2007) suggests that *tinku* also operated to bring the unordered realm of nature together with that of the ordered world of the Inca. She argues that the incorporation of rock outcrops into Inca buildings is the visual evidence of this coming together.

The term *tinku* today is synonymous with ritual battles fought between the upper (male) and lower (female) moieties—known in Quechua and Aymara as *ayllus*—in Andean communities, both in the pre-Hispanic past and present (Platt 1987). The purpose has been interpreted as "symmetric justice" or "equilibrium wars" that served to bring balance to society and foster fertility (Gelles 1995; Platt 1987). These ritual battles remain a key factor in political negotiations today. In her study on ritual battles during colonial and more contemporary times, Hopkins (1982) notes that the main objective is to shed blood. The blood nourishes *pachamama* (mother earth) to ensure a good harvest.

There is fluidity and a dialectic nature to *tinku*. The 'coming together' is often a forceful or violent collision between two opposing forces. This union results in synthesis and the creation of something new. For example, when men and women come together a baby is formed, or when two small streams collide a bigger, more powerful river results. Likewise, bloodshed in *tinku* battles renews societal order. Liquids are vital in all these unions, and this intimacy between *tinku* and fluids underscores the larger role fluids played in Andean society.

In Inca times and today, liquid in various forms (e.g., water, blood, corn beer, urine, semen, etc.), and especially the circulation of liquid, was essential to the fertility of living beings and the earth (Cummins & Mannheim 2011; Sikkink 1997). This circulation was linked to mountains and their prominence in Andean worldview. In many ethnohistorical accounts, the mountain is associated with the erect penis of a male, whereas the valley bottom, and the river running through it, is seen as a woman's vulva (Bastien 1978). The recycling of liquids (semen/water) through the system—from mountain top to valley bottom, from male to female—represented the fertilizing effects of liquids and was and is a key belief in Andean religion (Bastien 1978).

A Quechua term that is relevant to this ritual feeding or offering is *t'inkay*, which means to 'sprinkle or libate'. Not to be confused with *tinku*,[2] *t'inkay* is a physical gesture where liquid is sprinkled or spilled onto the earth. The gesture is often enacted in a ritual context to ensure fertility and restore to the mountains the fluids that were spent during the rainy season (Gose 1994). A series of rituals involving this physical gesture—known as *t'inka* rituals—are enacted in modern-day Huaquirca (Gose 1994). The *t'inkas* involve heavy drinking, offerings of corn beer and blood sacrifice to mountain deities to promote agricultural and animal fertility.

Time, like liquid, in Andean thought can also be characterized in this circulatory nature. In nonliterate societies, the passing, or flow, of knowledge through oral tradition took on a circulatory nature as it was handed down, recited and repeated throughout the generations (Howard-Malverde 1990; Swenson & Roddick 2018). The circulation of and privileged access to this knowledge was the source of power held by the ancestors (Kelly 2017). To sustain the connection to the knowledge source and legitimize the acts of their progeny in the present, ancestors remained a part of the living world. They were memorialized as part of the living landscape and continuously revitalized though sustained sacrificial offerings by their descendants. Thus, the physical landscape and time (past and present) were fused and inseparable (*pacha*), and the living commingled with and tended to the dead with offerings of food and, especially, drink.

Thus, integral to a highland Andean worldview was the flow of both liquids and time. Whether it be water though an irrigation canal, corn beer at ceremonies or knowledge though ancestors, circulation had real implications for politics past and present.[3] Canals, rivers and flowing springs delineated the lands of different social and political groups throughout the Andes in the past and today (Bray 2013; Sherbondy 1982). As the landscape was alive with the ancestors, sustaining the flow was a necessity for the well-being of all.

Shifting attention to the north coast, much like the *ayllu* system in the highlands, dualistic or bipartisanship organization was also in place there prior to Inca and subsequent Spanish conquest (Netherly 1984; Rostworowski de Diez Canseco 1990). The indigenous Chicama Valley population was organized into a series of polities, known as *repartimientos.* The best documented were the Chicama and Licapa *repartimientos*. Each *repartimiento* contained ranked and nested moieties known in Spanish as *parcialidades*, translated to 'part of a whole' (Netherly 1984; 1990; Ramírez 1995; 1996). At the top of the social hierarchy was the paramount lord, who was responsible for the entire *repartimiento* and the higher-ranking *parcialidad* (Fig. 3). A second person was in

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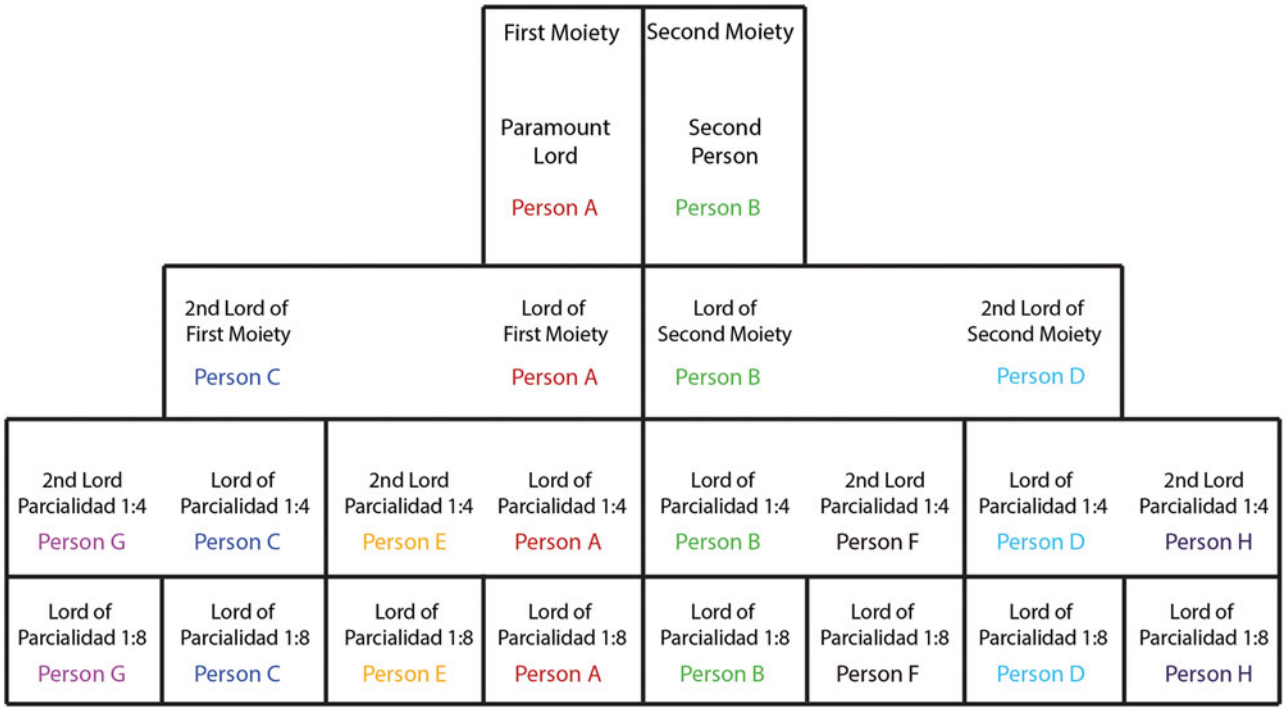

Figure 3. *Moiety division and hierarchy of the Chicama Valley in 1565. (After Russell & Jackson 2001, 162; based on Netherly 1984, table 1).*

charge of the lower-ranking *parcialidad*. Under the paramount lord and the second person were a series of lower-level lords. At the lowest level, the population was grouped by economic specialization (Netherly 1984).

Numerous colonial-era documents from the Chicama and Licapa *repartimientos* relate to irrigation (Caramanica 2018; Netherly 1984; Ramírez 1995).[4] Canal management was organized on the system of nested hierarchies of socio-political control (Fig. 4). I contend that the canals acted as *tinku*: they physically brought together different moieties on the landscape. The life-giving water circulating through these canals was vital to their role not only in agricultural sustainability and fertility, but also as a symbol of the circulatory nature of time and the ancestral political ties the moieties had to the land. These ancestral ties ran generations deep and can be interpreted in the archaeological record of ceramic styles in Moche times, as described below.

Moche worldview

I now turn to evidence from Moche archaeology to show that the Andean concepts outlined above were relevant in earlier times. Many scholars have argued that dualism was a feature of Moche society and visible in aspects of Moche art and praxis (Bourget 2006; Holmquist 2013; Swenson 2018). Yet dualism is not always explicit in the archaeological record. It is easy to suggest that the existence of two *huacas* at a Moche site is a manifestation of dualism (Quilter 2002), yet time is a critical component since not all *huacas* at any given Moche site were constructed or in use at the same time. Refined work on chronology at the Huacas de Moche site now shows that prior to 650 CE, the Huaca de la Luna was the main structure. Around 600–650 CE, focus shifted to the Huaca del Sol (Uceda 2010). Although not contemporaneous, these *huacas* still could have been some kind of manifestation of dualism, as the importance of time—as seen in the Inca Cusco example above (Gose 1996)—has not been addressed for Moche. This is explored more below.

Drawing on the idea that moiety organization was similar in Inca and Moche times, Topic and Topic (2009) and Benson (2012) argue that the Moche participated in a form of ritual battle similar to *tinku*. However, the crucial aspect of *tinku* in terms of a physical part of the landscape that brings two parts together has not been addressed in Moche studies. Below I suggest that the concept of *tinku* extends beyond ritual battles for the Moche and applies to canals in Moche times. A canal acts as a

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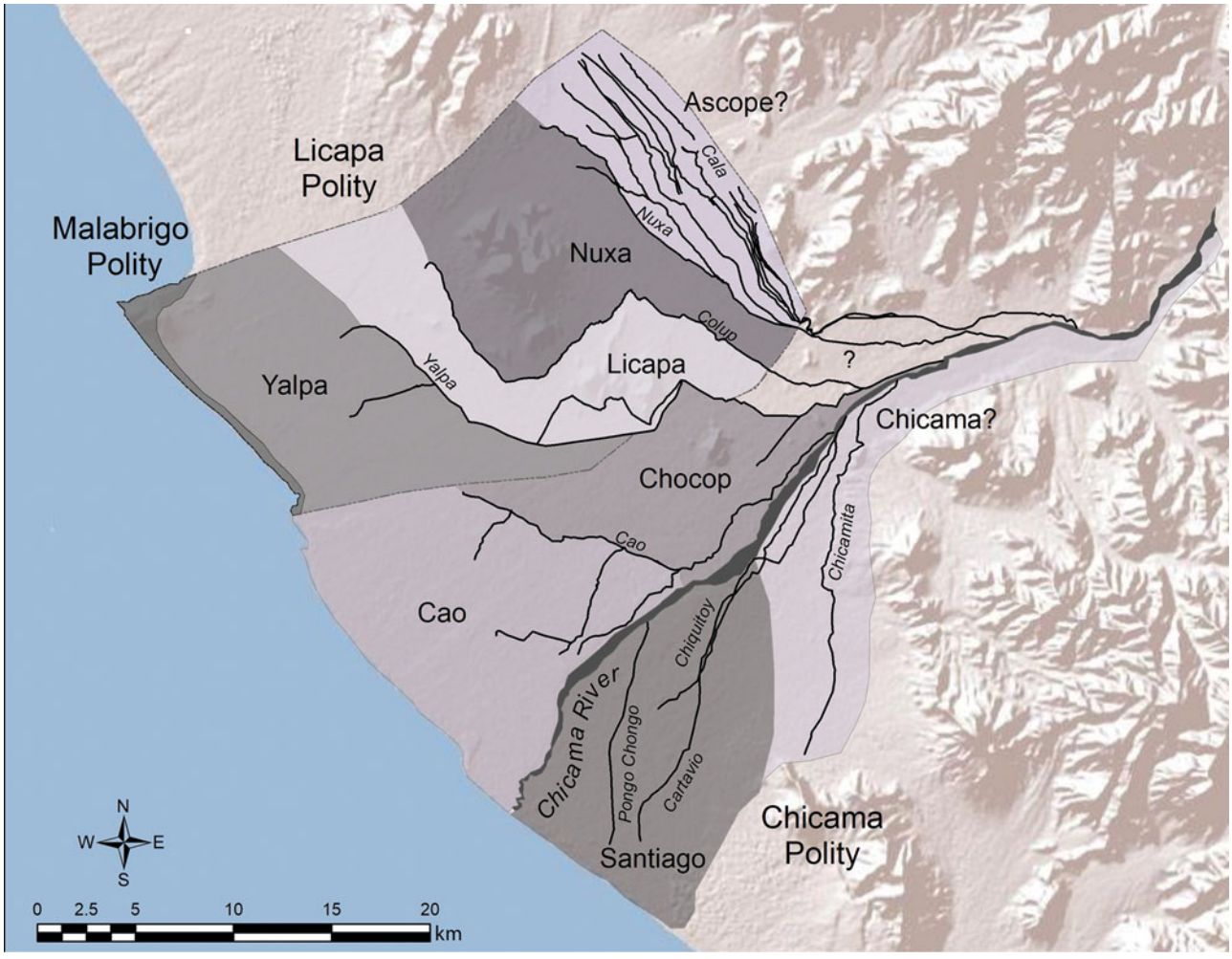

Figure 4. Parcialidad *divisions of the late pre-Hispanic and early colonial period delineated by irrigation canals (after Clément 2015; Netherly 1984; Russell & Jackson 2001).*

thread that weaves two parts of the landscape together in physical, social, temporal and symbolic terms. The water flowing through the canals and snaking through mountains and *huacas* on the landscape was also vital to the well-being of society.

Other highland concepts are also notable in the Moche archaeological record. As in the highlands where mountains are often associated with males, some Moche ceramic vessels depict an erect penis as a mountain peak (Scher 2012). *Huacas* are symbolically associated with mountains—places of power that are connected with sacrifice, fertility and the source of flowing water (Swenson & Warner 2016). At the Huaca de la Luna, Guadalupito, Mocollope and numerous other Moche sites, extant hills and rocky outcrops were incorporated into the *huaca* construction, intimately connecting them to the power of the mountains and also perhaps representing a vertical, as well as a natural/cultural, manifestation of *tinku* (Dean 2007). *Huacas* are also often placed at the base of coastal mountains, where they replicate alignments and/or features of the mountains themselves (Koons 2012; Swenson & Warner 2016). Liquids feature prominently in our understanding of what happened at Moche *huacas*. The spilling of blood during sacrifices fed the earth and awakened the *huacas*. Corn beer flowed freely at ceremonies and through consumption was transformed into urine and eventually returned to the earth (Cummins & Mannheim 2011).

The gestural sprinkling of fluids, much like the Quechua word *t'inkay*, is apparent at Pañamarca, a southern Moche *huaca* centre. Here, murals were spattered with liquid—possibly with hallucinogenic properties—as part of an architectural reopening event (Trever 2016). At Licapa II, as an act of closing,

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Table 1. *Sites with Moche V ceramics in the Chicama Valley. (Information compiled from Museo Larco's online catalogue.)*

Site	Figurative	Geometric	Late Moche	No Design
Sites Served by Licapa Polity Canals				
Paiján/ Tchuín	3	39	1	2
Mocán	1			
Facalá	4	1		
Ascope	1	1		
TOTAL = 54	**9**	**42**	**1**	**2**
Sites Served by Chicama Polity Canals				
Sausal		5	1	1
Salamanca		2		
El Brujo		1		
Roma	1			
Mocollope		1		
Chiquitoy		8		
TOTAL = 20	**1**	**17**	**1**	**1**
Unknown				
Santa Ana	1	3		
Resbaladero		2		

liquid was poured over a Moche tomb inside the architectural layers of Huaca A (Koons 2012). A similar tomb-closing event involving spilled liquid is seen at San Jose de Moro (Mauricio & Castro 2008).

The stirrup-spout bottle in particular is intimately tied to the movement and circulation of fluids. These vessels are ubiquitous at Moche *huaca* centres and in tombs. They were constructed so that liquid flows into and out of the vessel's body through the circular spout, mimicking the flow of vital bodily fluids (Weismantel 2021). Along with scenes of sacrifice and bloodshed, sexual acts are the subject of a suite of stirrup-spout and other vessels. Weismantel (2004) claims that vessels portraying sexual acts between women and skeletons, as well as images of skeletons masturbating, highlight the importance of ancestors in the living Moche world. She suggests that the exchange of fluids between the living and the dead demonstrates a conception of time and kinship that is not linear, but circulatory. Ancestors remain active players in the lives of the living, as their fluids circulate through each generation. Claiming descent from an ancestral lineage was the key to economic and political power, as control of irrigation systems and agricultural fields was linked to ancestral ties (Weismantel & Meskell 2014). To keep things circulating and in order, the past had to exist in the present to legitimize political power.

The fusion of and circulation of space and time can also be interpreted in the built environment. Many Moche *huacas* are encapsulated within a new remodel or reconstruction phase, which Spence Morrow (2018) suggests signals temporality as synecdochal. Older, terminated buildings, which were once whole *huacas* themselves, are enveloped by new 'whole' *huacas*. Through the renewal process, the older buildings, or phases, become energized and active 'parts' of the new whole *huaca*. As such, built structures were fluid and malleable in their everlasting presence on the landscape. They marked time and legitimized political order by linking the present authority to a deep and layered history (Spence Morrow 2018; Spence Morrow & Swenson 2019). Thus, through construction projects large and small, the Moche manipulated the flow of time. Beyond the Moche, the stability and permanence of structures from all time periods no doubt played an important role in people's lives throughout time. The built environment of the entire coast can be viewed as a palimpsest where the past and present commingled.

Below, I contend that canals acted as *tinku*—they brought two parts of the society together to create the whole and entwine the past with the present. Furthermore, the flowing, or circulating, of liquids though the canal systems was vital in delineating this socio-political order and tying it to the realm and power of the ancestors.

Ceramic styles and irrigation networks in Moche times

The distribution of different Moche ceramic styles, specifically Moche IV and V, helps elucidate Moche socio-political organization in the Chicama Valley and how it relates to canals. Research over the last decade shows that Larco's pioneering five-phase ceramic sequence (Moche I–V) cannot be strictly understood as phases, but rather is better characterized as different regional styles that have a loose association with time (Donnan 2011; Koons & Alex 2014). The southern part of the Chicama Valley post-600–650 CE is dominated by Moche IV wares, a style that probably originated at the Huacas de Moche (Franco Jordán *et al.* 2003; Russell & Jackson 2001). Moche V ceramics characterized the northern part of the valley

Of the more than 40,000 Moche ceramics in the database at the Larco Museum in Lima, 207 are Moche V. Most of these have an unknown provenience, but many of the remainder come from the northern Chicama Valley, specifically from the area around Paiján and Tchuín, the same region as the colonial-era Licapa polity (Fig. 2; Table 1).

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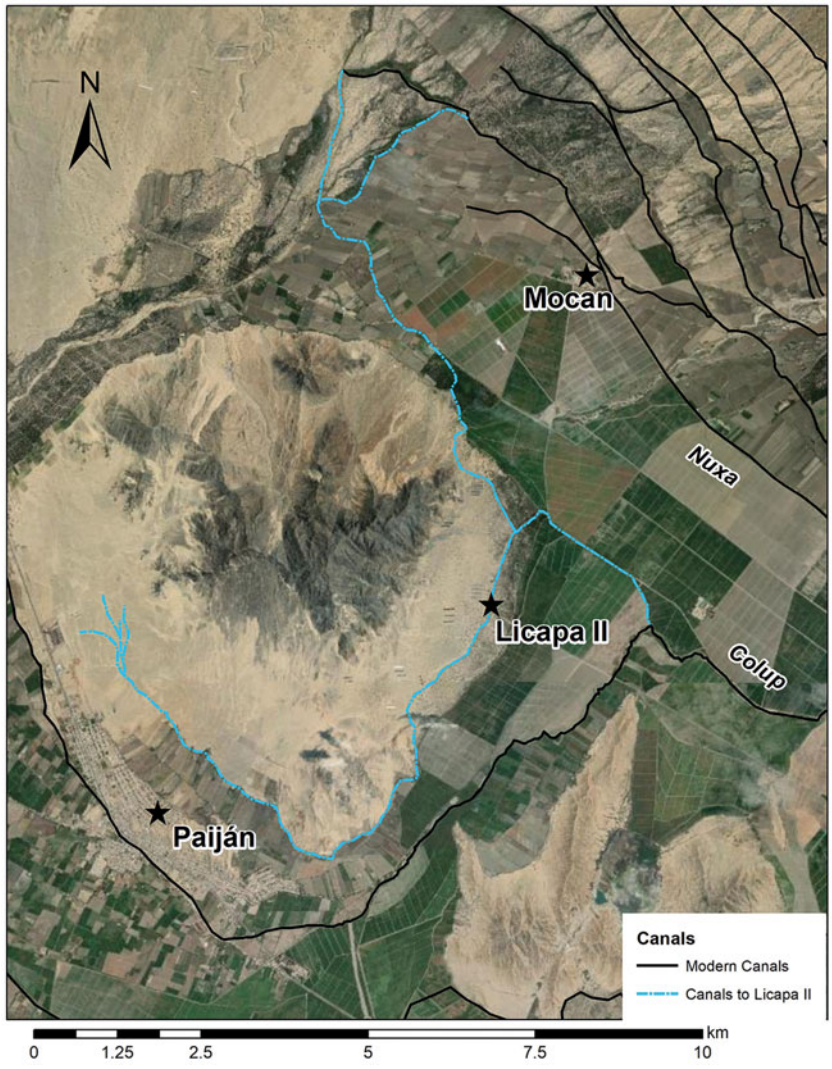

Figure 5. *Possible original routes of the canal that runs through Licapa II. In order of likelihood: 1. The Colup canal had a branch that extended further to the west from the main artery seen today. 2. Water from the Nuxa canal could have travelled past Mocan to the desert valley margin, where it descended to Cerro Azul and eventually Licapa II and Paiján. This is plausible based on the topography and current canal configurations but would have made Licapa II and the Paiján region vulnerable to water shortages. 3. Both the Colup and Nuxa canals were used to water Licapa II and Paiján, making this a prominent region because of its varied access to sources of water. 4. There was another canal branch now under modern agricultural features that brought water more directly from the Nuxa canal or via another route.*

Significantly, many are from along the canal segment that ran through Licapa II, and excavations here revealed other examples (Koons 2015). This canal was defunct by the colonial era and to my knowledge is not discussed in any documents. It is also unclear as to how this canal was integrated into the overall network and received water from the Chicama River, but an evaluation of satellite imagery, existing canals and valley hydrology suggests a few possible routes, detailed in Figure 5. The flowing water through the canal intimately connected the places and people who resided alongside it. Thus, moiety organization might explain the material differences seen between the northern and southern Chicama Valley.

I suggest that Moche V was a style associated with the northern Chicama Valley and in the region of the colonial-era Licapa polity (Fig. 2). Moche IV dominates the southern part of the valley—the location of the Chicama polity. This region probably had closer affiliations to the Moche Valley to the south, as is evidenced by similarities in material programmes at Huacas de Moche and El Brujo. It is also significant that the boundary between the Quingnam and Mochica languages map to this same location (Netherly 2009; Urban 2019). Although much more study is necessary, the linguistic division may mirror the material differences found in the northern *versus* southern parts of the Chicama Valley.

It is noteworthy that, while Moche IV wares are found in the northern part of the valley, very few Moche V wares are found in the south (Régulo Franco pers. comm., 11 May 2020). These patterns can be explained by how the nested structure of Andean moieties functioned. If the Chicama polity ranked higher than that of Licapa, then we would

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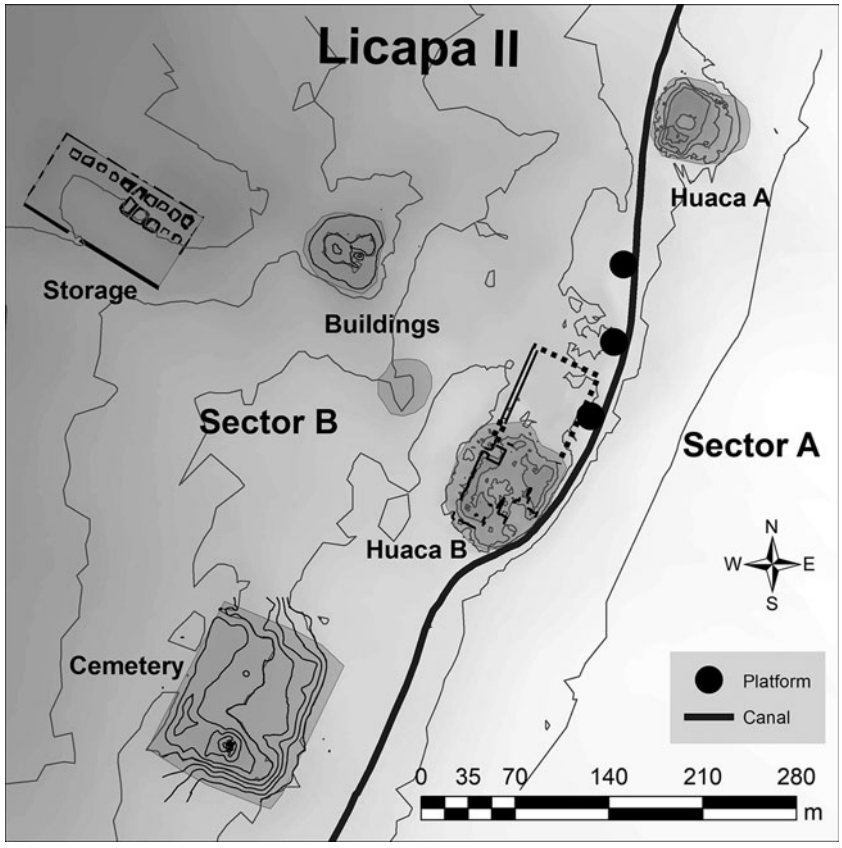

Figure 6. *Licapa II showing the structures, the canal and the platforms along the canal. The excavated part of the residential area included the northernmost of these platforms.*

Table 2. *Comparison of Sectors A and B at Licapa II.*

	Sector A (East of Canal)	Sector B (West of Canal)
Dates	500–600/650 CE	600/650–800 CE
Architecture	Huaca A	Huaca B, Residential Area, Outbuildings
Ceramic Type	Licapa A	Moche IV, Moche V and Late Moche
Diacritical Nature	Public	Private

expect to find dominant polity materials in the subordinate territory, but not necessarily the reverse. Furthermore, Moche IV and V wares obviously occur outside the Chicama Valley. Using the moiety model, we can conclude that political expansion of a community occurred by increasing the scale of the moiety divisions that were recognizable as complementary units bound by reciprocal relationships (Topic & Topic 2009). These moiety dynamics could account for Moche V ceramic styles spreading outside the northern Chicama and into other valleys north and south, as well as for the variety of materials found at all Moche sites.

Similar to the colonial era, in Moche times the canals acted as *tinku*, uniting and dividing moieties at different scales. Social organization can be traced though the different ceramic styles that dominate and characterize sites affiliated with canal branches in the north and south parts of the valley.

Licapa II in the Chicama Valley

Licapa II can be viewed as a synecdoche of the valley-level organization. It is a mid-sized ceremonial centre on the northern desert margin 25 km from the Chicama River. Licapa II is situated at the base of Cerro Azul, a large coastal mountain, and is dominated by two *huacas*, Huaca A and Huaca B. Significantly, an irrigation canal bisects the site into two sectors (Sectors A and B) that have distinct archaeological signatures (Fig. 6; Table 2). Here I suggest that the canal acted as *tinku* in that it brought together the two sectors. The circulation of water through the canal and the importance of liquids in the activities of the site overall both point to the significance of concepts understood from Quechua and Aymara—*tinku*, liquids and time— in Moche life.

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Figure 7. *Examples of Moche vessels from the Chicama Valley found during my excavation and in the Museo Larco (ML). (A) Licapa A-style goblet from Licapa II (author's photograph); (B) Moche IV vessel from Facalá (ML003700); (C) Figurative Moche V vessel from Mocán (ML003758) (D) Geometric Moche V vessel from Tchuín/Paiján (ML011015); (E) Late Moche vessel from Paiján (ML002298). (Images B–E are from the Museo Larco, Lima, Peru.)*

Sector A

East of the canal is Huaca A, a 55 × 57 m and 9 m tall structure that is highly visible from below. Radiocarbon dates show that Huaca A construction levels are pre–650 CE (Koons 2015), but Huaca A could have continued to be used for ceremonies after its final phase of construction. The ceramics associated with Huaca A lack ornate decoration; I refer to these as the Licapa A style (Koons 2015). They are stylistically different from the Moche IV, Moche V and Late Moche ceramics found in Sector B; these ceramics contain elaborate narrative scenes (Fig. 7).

A significant part of the Licapa A ceramic assemblage consisted of goblets, much like the ones used in the Sacrifice Ceremony, also known as the Presentation Theme. The Sacrifice Ceremony is best known from fine-line drawings on ceramic vessels; these drawings depict warriors and anthropomorphized animals slitting the throats of prisoners to fill goblets with their blood. These goblets are then presented to highly regaled elites (Donnan 2010; Donnan & McClelland 1999).[5] Donnan (2010) claims that the Sacrifice Ceremony was the glue that held the Moche together as an archaeologically recognizable culture. Archaeological evidence from Huaca

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de la Luna indicates that this ceremony or something similar was probably enacted there (Uceda 2010). One of the scenes depicts an elite holding goblets and seated on top of a structure that architecturally is very similar to Huaca A.[6] Based on the presence of goblets and the architectural form of Huaca A, I have suggested that this structure is where important Moche ceremonies, like the Sacrifice Ceremony, were performed at Licapa II (Koons 2015).

Overall, Huaca A served a ritual purpose that was intimately tied to the imbibing and pouring of liquids. Inside the layers of Huaca A was a burial of a female and liquid was poured over her head in a closing act. The goblets used to present and drink blood or other liquids in ceremonies that took place on this artificial mountain, as well as the intimate relationship of the *huaca* and the canal, both point to the significance of liquids and their circulation in this sector.

Sector B

Huaca B, two small structures, a platform cemetery, storage area and a residential area sit west of the canal in Sector B. Huaca B is larger than Huaca A, measuring 80 m long, 66 m wide and 6–7 m high. It consists of enclosed rooms and chambers at different levels; these rooms and chambers are not visible from outside the structure, suggesting that Huaca B's function was for more private activities than in Huaca A. A large, walled platform is situated on the north side of the *huaca.* Here I uncovered evidence for feasting in the form of four large cooking or corn-beer brewing vessels, known as *paicas,* placed in a row and supported by adobe frames. Adjacent to the *paicas* was a large ash-filled pit from cooking and brewing activities. Additionally, my team found over 30 musical instruments on the platform near the ramp entrance to Huaca B. All of this indicates that music, feasting and consumption were important elements of rituals on this part of the site.

Ceramics from this sector are northern Late Moche fine-lines, Moche IV and Moche V (Fig. 7). Moche IV and V ceramics were found together throughout all stratigraphic contexts, reinforcing that these represent contemporaneous styles and not temporal phases (Koons 2015). Radiocarbon dates indicate that this sector of the site was primarily used from roughly 600–800 CE.

In Sector B, we excavated a portion of the residential area that abuts the west side of the canal and located six layers of occupational surfaces that included hearths, rooms and a guinea-pig pen (Koons 2015). The plethora of fine Moche IV and V ceramics suggest that people using this space were of elevated status and/or lived here only during ceremonies that involved these fine ceramics.

The final occupation level in this residential zone consisted of a raised platform made of adobe. A continuous plastered floor extends from the canal up to the easternmost wall of the platform, seamlessly connecting the canal and platform structure. Farther to the south but in the same residential zone of the site, the ground topography and the architecture visible inside looters' holes indicate that there are at least two additional adobe platforms along the west side of the canal (Fig. 6). I suggest that the intimate association of these platforms and the canal indicates the continued, and possibly increasing, importance of water and/or ceremonies surrounding water and this canal in this marginal desert zone.

The canal as tinku

The entire site is intimately woven together and defined by the canal and what lies on either side. Sector A consists of the highly visible Huaca A, where ceremonies were performed with goblets possibly once filled with blood. Sector B consists of the privately enclosed Huaca B, a residential area and at least three adobe platforms in direct association with the canal. I contend that the canal acted as *tinku* at the site level; it divided the site into two sectors, yet united the two halves to make a whole. Vital to the canal's role was the water that ran through it; the water libated and sustained the land and the people who lived there.

The different ceramics on either side of the canal may be related to nested moiety divisions. Moche IV and V wares are almost all found on the west side of the canal in Sector B. Sector A had Licapa A style and very few examples of Moche IV wares, and no Moche V. The activities associated with each site sector were also distinct. These differences may indicate that this canal united and divided not only the site itself, but also nested moiety divisions within a larger polity, much as canals did in later times. Perhaps like *tinku*, the canal at Licapa II was where two polities came together to perform ceremonies that served to balance the site, the different moiety divisions and the Moche society as a whole. However, time is also a factor in the material differences of Sector A and B, yet our linear understanding of time might obscure the living role of ancestors and ancestral lands and how this related to moiety organization and Moche politics.

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In these terms, Licapa II can be viewed as a synecdoche or microcosm of the nested structure of organization in the Moche world. Much as micro-*ayllus* are nested within macro-*ayllus*, where at each level the same structure was replicated, the canal's role at Licapa II can be seen as a microcosm of how canals in their entirety delineated and defined socio-political organization at the valley level. The key to maintaining balance and cohesion within the society was through rituals—many of which involved liquids in its various forms. These rituals included sacrificial bloodshed in terms of ritual warfare and offerings to *huacas,* ancestors and mountain deities, ceremonies involving heavy consumption of corn beer, and undoubtedly ceremonies surrounding the canals and the life-giving waters that flowed with them and outlined space socio-politically and temporally.

Tinku, liquids and time at Licapa II and beyond

As the canal acted as *tinku,* the circulation of liquids through the canal was a vital component in both physical and symbolic forms. During the summer months, the water discharge from the Chicama River can be low. This probably disrupted the operation of the canal, situated 25 km away from the river. The small platforms along the canal could have held ritual significance, possibly related to the need for water in this desert zone.

Water temples along canals are noted in Inca Cusco and elsewhere (Wright 2017), and it is possible that the structures at Licapa II were used for some ceremonies associated with the circulation of water. However, many Moche sites are at the distal ends of irrigation canals (Quilter 2002; Quilter & Koons 2012). Quilter (2002) suggests that if the concept of the circulation of water down from the mountains and back up (Bastien 1978) was a key feature of Moche religion, as in other Andean religions, then positioning important sites at the distal ends was quite appropriate. Perhaps some Moche *huacas* were involved in systems of water distribution similar to temple management of irrigation in Bali (Lansing 1987), where the timing of when field sections were irrigated was linked to when rituals were held at associated temples (Quilter & Koons 2012). It is also noteworthy that in the colonial era some lands were watered from the distal end of the canal to the intake so that the communities farthest away from the river were the first to receive water (Netherly 1984). Therefore, Licapa II's position in what today seems like a marginal zone may have actually been desirable in the past. Its proximity to and alignment with the mountain peaks of the inimitable Cerro Azul could have also been a factor.

The importance of liquids at the site is highlighted by the canal and the activities performed on either side. The canal can be viewed as a metaphorical river, weaving between the two mountains (*huacas*) at the site. The water in the canal ensured the earth's fertility, much like blood from the sacrifices performed at Huaca A. In some circumstances, this blood was from prisoners captured and/or ritually sacrificed in *tinku*-like battles. Likewise, feasting and consumption involving corn beer, and no doubt urine and other bodily excretions, were important activities in Sector B. When viewed holistically, the circulation of fluids at Licapa II is vital to understanding its role in the Moche world.

The circulatory nature of time was also embossed on the landscape at Licapa II. Radiocarbon dates, as well as distinct ceramic assemblages, indicate that Sector A and B were primarily in use, or at least constructed, at different times. Elsewhere, I have suggested that the differences we see in the two site sectors highlight changes throughout Moche society around 650 CE (Koons 2015). However, if we take a step back from this linear understanding of time and incorporate the chronological data with an Andean understanding of time as being circulatory—the past alive in the present (Bray 2018; Swenson & Roddick 2018; Weismantel 2004)—then a more complex picture begins to emerge.

Sector A, although chronologically older than Sector B, may have had ancestral significance and continued to play an active part in people's lives, even if its primary use changed or shifted over time. With this understanding, it is significant that the canal at Licapa II divides the site into the two sectors. It also acts as a centre line that unites and defines what is on either side in spatial and temporal terms. Likewise, at the Huacas de Moche, the Huaca de la Luna surely remained integral in the lives of the site's inhabitants even after it closed and the focus shifted to the Huaca del Sol and the New Temple (Uceda 2010). Canals are present between these *huacas* and may have played a role in uniting and dividing the site spatially and temporally, but this has yet to be explored. Overall, the temporal component to *tinku* is not as explicit in the Quechua sources or archaeology (cf. Gose 1996), but the north coast's dry environmental conditions and extreme preservation of the past on the landscape suggest that we can add new understanding to this concept from the archaeology of the coast, despite language differences.

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Conclusion

From this analysis, I suggest that a fractaline organization system was in place by Moche times. Canals were the dividing line between moieties in late pre-Hispanic times. I argue these divisions have their roots in the Moche era, if not earlier, and can be traced to the clustering of particular Moche ceramic styles along canal branches.

The site of Licapa II can be seen as a microcosm of the socio-political division of space in the valley. The two distinct sectors are separated, yet also united, by a canal. We can view each sector as a part of a whole or both together as a manifestation on the landscape of the Quechua concept of *yanantin*. The canal acts as *tinku,* the centre that brings the two parts together to achieve balance. The *huacas* at Licapa II, like other Moche *huacas,* mimicked sacred mountains, and liquids—blood, corn beer, semen, urine, etc.—served to enliven them during ceremonies. The fact that the canal, a metaphorical river, weaves between two *huacas*—separating them yet bringing them together—demonstrates the power and significance of the circulation of fluids of all kinds. Furthermore, the water in the canal would also have had significance, as it libated the land it ran through. It is probable that water rituals and the political motivations surrounding these were pertinent to Moche society, much like the modern-day *t'inka* rituals that function to return fluids to the mountains, which supply the rain and foster fertility (Gose 1994). In its various forms, liquid was symbolic of and essential to the cyclical rhythm of nature and the world. It was vital to ensuring the well-being within an individual body, the ancestors, the community as a whole and the cosmos (Sikkink 1997).

We can use this case study to reflect on how aspects of Moche society can be viewed through the lens of more recent accounts of Andean worldview. However, rather than applying Quechua and Aymara concepts wholesale to the Moche, we must look to the archaeological record to evaluate critically the applicability of each term/concept on an individual basis. In so doing, it is apparent that certain ideas have great time-depth and spatial reach, regardless of language. The dualistic nature of political organization is a shared principle, as well as ideas involving geographical features common to all of the Andes, such as mountains and rivers. By taking a ground-up approach, the understanding of Andean conceptual frameworks becomes an additive process and not merely one of trying to make terms fit. For example, the exceptional preservation on the north coast allows us to understand better how time functioned and was inscribed on the landscape. From an analysis of the canal at Licapa II, I suggest that the concept of *tinku* operated on multiple levels, including in the temporal realm. Thus, by using this approach, we can identify nuances in Andean concepts we would not see if we were looking only at Spanish chronicles or Quechua and Aymara resources.

Notes

1. *Huaca*, also spelled *w'aka,* is a Quechua term that has various meanings including idol, living beings, sacred places, etc. (Mannheim & Salas Carreño 2015). *Huaca* is not what the Moche would have called these structures, but the term has been adopted and used by early chroniclers and is now used by archaeologists to describe Moche adobe mound structures. The Quechua term *huaca* is not explored here; rather, the term is used only to describe the Moche structure.
2. Benson (2012) and Dean (2007) suggest that *tinkuy* and *t'inkay* are related concepts. Personal communication with Bruce Mannheim (21 May 2020) and Rosaleen Howard-Malverde (19 August 2020) confirms that the two are distinct and unrelated terms.
3. The Quechua term *camay* is relevant here. It is understood as an energetic and vital flow that connects and animates all beings, living and dead, past and present (Bray 2009; Salomon 1991).
4. Ramírez (1995) also discusses the Malabrigo polity, which was made up of fishermen who inhabited the coastal regions of the valley. The geographic extent of this polity is confusing, but Ramírez believes that Malabrigo was coastal and subordinate to Licapa (Fig. 2). Elsewhere in the documents, fishermen are subordinate to agriculturalists (Ramírez 1995).
5. See Donna McClelland, Presentation theme, 0092, Moche Archive, Dumbarton Oaks Research Library and Collection.
6. See Donna McClelland, Prisoners in procession, 0008, Moche Archive, Dumbarton Oaks Research Library and Collection.

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