LIVING WITH THE DEAD: A STUDY OF WARI MORTUARY PRACTICE OUTSIDE THE AYACUCHO VALLEY

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This study condenses decades of relatively untouched Wari mortuary data into a unique, comprehensive, theoretical approach to existing political expansion models. While heartland Wari sites have had thorough analysis, there is a serious vacuum in the existing literature that does not detail Wari mortuary style outside of the Ayacucho Valley and how it relates to cultural transmission. In this paper, I investigated the mortuary practices of sites outside the Wari heartland to determine whether these customs can serve as an indicator of ideological change or possible political affiliation. Additionally, Wari style burial would look like when affiliated with popular political expansion models previously theorized. After compiling articles and site reports for heartland and regional sites, I determined a set of qualifications for a "Wari-style" burial and applied that as the control group for an indicator of Wari ideology. I examined mortuary contexts at each outlying site to determine whether Wari’s occupation or influence changed the local treatment of the dead. This comparison showed that Wari’s influence varied greatly depending on the direction they expanded. Furthermore, it supports the idea that Wari developed a multifaceted, adaptive expansion style that has been only recently been suggested.

In 1571, the leader of the collapsing Inca state, Titu Cusi Yupanqui, died suddenly while in the town of Vitcos. His loyalists suspected poisoning and the two foreigners who were near Vitcos and who were in the Inca’s company shortly before his death the Augustinian Diego Ortiz and the Inca’s scribe, Martin Pando, were captured and killed. In this paper, we draw on two little-known investigations (1595 and 1599/1600) that the Augustinian Order of Cuzco conducted into the death of Ortiz to understand what occurred during that chaotic week of death and revenge killings and what eventually became of Ortiz’s remains after the Vilcabamba area was seized by the Spaniards.

JOHN L. COTTER AT HUÁNUCO PAMPA (1964)

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Paper – special session for Dan Shea

John L. Cotter (1911-1999) is well regarded for his work at North American Clovis, Folsom, Middle Woodland, and Mississippian sites, and as a historical archaeologist. A little-known episode in his long and distinguished career took place in South America, at Huánuco, in Peru’s central highlands. For two weeks in July 1964 Cotter worked as a member of John Victor Murra’s “A Study of Provincial Inca Life” project. Cotter was one of the last people to photograph Huánuco Pampa before the site’s reconstruction by Daniel Shea, Craig Morris, Gordon Hadden, César Fonseca, Luis Barreda Murillo, Delfín Zúñiga, and Peace Corps volunteers James Stanton and Mahlon Barash under Murra’s aegis and the sponsorship of the Peruvian government. Cotter recorded local Quechua names for portions of the site. He conducted test excavations in the Accllawasi and in a building on the Ushnu plaza believed to have been occupied by the Spanish. He also participated in the regional survey. Through the
study of his field-notes and photographs in the University of Pennsylvania Museum of Archaeology and Anthropology, and photographs and letters in the American Museum of Natural History, one can solve some problems posed by the site. Cotter’s unpublished observations apparently are not duplicated elsewhere.

INNOCENCE LOST: INVESTIGATING THE LINK BETWEEN ARTIFICIAL CRANIAL MODIFICATION AND DEATH
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Artificial cranial modification (ACM) is a cross-cultural body modification practiced for thousands of years worldwide. Although studies on ACM are widespread and exhaustive, ACM continues to capture the interests of scholars, and research concerning the link between ACM and death is the latest area of investigation. The purpose of this presentation is to discuss one study focusing on this topic. A study of 507 ancient northern Chilean adult and juvenile individuals was undertaken to investigate the incidence of previously identified ACM lesions in order to determine if their incidence was severe enough to increase morbidity and ultimately mortality among the surveyed populations. The presence and absence of these lesions were statistically tested among modified and unmodified crania to determine if morbidity differences among the two groups existed, along with an analysis of the proportions of deceased modified versus unmodified individuals in order to establish if increased mortality existed in either group. The results do support the hypothesis that ACM increases morbidity amongst modified as compared to unmodified individuals, but the results do not support the hypothesis that ACM increased mortality among the modified individuals.

EARLY EXPLORATIONS IN THE ARCHAEOLOGY OF RELIGION: DAN SHEA, WARI WILKA, AND ANDean ORACLES
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Paper – special session for Dan Shea

Though probably best known for his mathematical side, it is interesting to recall that Dan Shea’s dissertation research focused on the site of Wari Wilka and foregrounded the idea of Andean oracles as significant political actors integral to pan-regional developments characterizing the Middle Horizon. Such early insights and ideas resonate today with the resurgence of interest in the archaeology of religion and the investigation of non-western ontologies. This paper revisits the notion of Andean oracles, and that of wak’as more generally, in light of recent anthropological theorizing involving ideas about personhood, agency and animacy. The archaeological investigation of such phenomena in the context of the pre-Columbian Andes contributes to the larger theoretical discussion regarding the nature and role of “the sacred” in ancient societies, and the recognition and appreciation of alternative ontologies.
TRANSFORMING TRADITION, INVENTING AN ELITE: THE RITUAL FOUNDATIONS OF RECUAY POLITICAL AUTHORITY AT HUALCAYÁN, PERU

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As the communities of highland Ancash cast aside the symbols and practices of Chavín religion at the end of the Early Horizon, new forms of political status and expression emerged in the Early Intermediate Period, collectively known as the Recuay culture. Research suggests that this was a time of conflict and religious upheaval that led to the formation of new lineage-based claims to elite authority. Recuay elites built fortifications, exclusive ritual spaces, and monumental tombs with representations of powerful ancestors to establish their authority in specific places. Yet, despite these recent advances in our knowledge of late Recuay social organization, we still know little about the places and practices that first defined early Recuay authority and produced formal elite identities. This paper presents excavation data from Hualcayán, an Early Horizon ceremonial center that was drastically transformed as the community abandoned a central mound long used as a site for public ceremony, and replaced it with a series of discrete and exclusive ritual plazas containing images of elites and their ancestors. Through a diachronic study of ritual spaces and materials, this paper explores how early Recuay elites supported their claims to social difference by restricting, regulating, and redefining preexisting ritual practices.

A HYDROLOGICAL INVESTIGATION OF GROUNDWATER AND SURFACE WATER GEOCHEMISTRY IN THE ATACAMA DESERT OF NORTHERN CHILE

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The Atacama Desert of northern Chile is one of the driest regions on Earth, and understanding the hydro-climate of the region is critical to predicting water availability in the future. The unique hyperarid environment in the Atacama Desert results in the deposition and preservation of evaporite minerals, including halite and gypsum/anhydrite. These deposits can be used as tracers of aqueous transport and regional scale hydrologic variability in Atacama Desert. Preliminary isotopic (O, H, S, Cl) and geochemical data suggest that the flow of groundwater into and through the Salar de Llamra is being altered by increased mining and water consumption. Presently, there is no measurable precipitation in the Salar de Llamara; therefore, surface water in the region is exclusively the result of groundwater recharge at higher elevations. Extreme evaporative conditions result in surface waters that are supersaturated with dissolved salts and gypsum. Lowering of water table through excessive pumping could cause a local reversal of the flow direction and downward aqueous transport of salt and gypsum from surface deposits. This study establishes a baseline of hydrologic flow dynamics by which to better interpret future availability of the surface and groundwater resources in the Atacama Desert.
THE MINES OF LOS INFIELES: GEMSTONE MINING IN THE SOUTH OF THE INCA EMPIRE
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This paper presents preliminary results of research aimed at studying the organization and imperial control of the mining complex of Los Infieles, in north-central Chile, during the Inca Period (ca. AD 1450-1541). A full coverage archaeological survey was conducted in the Los Infieles area (50 km²). The survey confirmed the presence of a large mining complex focused principally on the extraction of opaline silica and chrysocolla. The materials registered during the survey suggest that in each of the five mining clusters recorded at Los Infieles similar operational sequences of mining activities were conducted. The absence of lapidary workshop remains and the small size of remaining sorted minerals at the sites also suggest that the final products obtained from the mining operations were high-quality granule and pebble size minerals. The large number of mines and their associated facilities across the Los Infieles region support the idea that during the Inca Period, chrysocolla and opaline silica had much greater economic value than scholars have thought, at least at an imperial provincial level. The evidence collected thus far also indicates that the Inca state was significantly involved in sponsoring and supporting these mining operations.

THE ARCHAEOLOGY OF PARIACACA AND HIS CHILDREN: NEW INSIGHTS INTO AN OLD ETHNOHISTORICAL SOURCE FROM THE PROYECTO ARQUEOLÓGICO HAUROCHIRÍ–LURÍN ALTO
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The Huarochirí manuscript (ca. 1608) is one of the most important sources for interpreting the indigenous Andean past. Recently, the Proyecto Arqueológico Haurochirí–Lurín Alto began the first systematic archaeological research in the area central to the manuscript’s compilation (Llacsatambo-San Damián, Huarochirí). In this presentation I share results of this research to argue that many of the traditions tied to particular places discussed in the manuscript are of late prehispanic origin. I demonstrate how narrative, material, and spatial expressions were performative practices that created new collective identities, socio-political alliances, landscapes, and shared pasts. In particular, I argue that the several of the llactas of Huarochirí–as compounds wherein wak’as unified kin groups, settlements, and territory–emerged in the interaction between these groups and the expansive Inka empire. An egg-shaped, white andesite “stone ancestor,” and a metal hand and egg pendant, both excavated from a stone platform on a hilltop equidistant from the llactas of the Checa and Concha narrators of the Huarochirí manuscript–artifacts evocative of Pariacaca’s birth as five eggs–are coupled with stratigraphic and architectural analyses of the llactas to suggest Pariacaca’s role in mediating the relationships of “his children,” settled in the area during the Late Horizon.
SURVEYS AND EXCAVATIONS ON THE COPACABANA PENINSULA, BOLIVIA

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Paper – special session for Dan Shea

This paper presents the preliminary results of recent surface surveys and excavations carried out during two field seasons of the Interdisciplinary Yaya-Mama Archaeological Project in the Titicaca Basin of Bolivia. Following extensive surveys on the northeastern portion of the Copacabana Peninsula, the multi-component site of Muruqullu was identified at an altitude of 3960 m. The surveys conducted on the stone terraces facing the lake served to confirm their initial construction in Yaya-Mama times, and subsequent reuse and expansion in Tiahuanaco and Inca times. The results of excavations include: a) two superimposed stone-lined Yaya-Mama sunken temples; b) an adjacent cemetery with stone-lined burials associated with Yaya Mama pottery vessels; c) a large a-ceramic burial structure containing multiple individuals; d) a few mostly disturbed Tiahuanaco burials, and e) some burials carved on bedrock associated with late pre-Ceramic projectile points. The later include very tall and robust individuals, and represent the first instance of pre-Ceramic burials underlying later occupations in the region.

THE APPLICATION OF ORGANIC RESIDUE ANALYSIS TO ARCHAEOLOGICAL CERAMICS: A STUDY OF ANDEAN VESSELS

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This research explores the impact of desalination on archaeological residues. Due to their porous nature, ceramic vessels can easily become impregnated with salt. Over time, the salt within the fabric of a ceramic vessel crystallizes and can weaken the structure of the vessel. This poses a problem for institutions, such as The Field Museum, whose goal is to preserve the objects in their care. Therefore, a conservation technique is needed to remove the salts from the ceramics and prevent further damage. Desalination is that technique. Desalination is the process of soaking ceramic vessels with a high saline content in a deionized water bath in order to draw out the salt. The water bath is continuously changed and the process is finished when the level of salt in the water reaches an appropriate level that is deemed safe for the vessel.

Organic residues were extracted from 13 vessels from The Field Museum and tested using Elemental Analysis-Isotope Ratio-Mass Spectroscopy (EA-IRMS) to identify the contents of the residues. Residues will be sampled before and after desalination to determine if the conservation technique alters the available organic material. The outcome of this research has the potential to determine whether archaeological ceramics treated by desalination still contain archaeological material for research and analysis and provide valuable archaeological information pertaining to vessel use in the Andean region. The research vessels were recovered from burial contexts, and the identification of organic remains contained in the vessels may provide information regarding the social status of the individual interred with them or the social lines of thinking about death and the type of objects needed on the journey into the afterlife.
COMPARING THE DIETARY AND RITUAL USE OF ANIMALS AT THE TIWANAKU SITE OF TUMILACA LA CHIMBA, MOQUEGUA PERU

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Tumilaca La Chimba is a small village site established by Tiwanaku migrants during the post collapse phase of the state. The site is located in the Moquegua Valley of Southern Peru on the banks of the Rio Tumilaca and the flanks of Cerro Baul. Organized into residential areas and four cemeteries the site allows for the study of faunal remains from both a mortuary and domestic context. This study examined how the people of Tumilaca la Chimba were using animals in their funerary ritual as compared with quotidian consumption in the domestic sphere. Specifically, I considered if the animal remains found in tombs were offerings of food or if they had another ritual significance. To answer this question faunal remains from residential areas and tombs were analyzed and compared. The sample for this research is comprised of samples from two residential structures and the faunal remains from the cemetery sectors. Overall, most specimens were identifiable to the camelid family, however the two contexts demonstrate important differences with regards to the elements present, and provides significant insights about the use of animals at Tumilaca La Chimba.

EVERYDAY MONUMENTS: RESIDENTIAL ARCHITECTURE AND BUILT ENVIRONMENTS OF CHACHAPOYA SETTLEMENTS

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Studies of monumental architecture in the ancient Andes have mostly focused on corporate, communal, and public structures. However, an impressive tradition of residential architecture that developed in the Chachapoyas region of northeastern Peru raises questions about how we identify, characterize, and socially interpret monumental constructions. This paper addresses these questions using results from recent research carried out at the site of Monte Viudo. Like other Late Intermediate Period Chachapoya settlement sites, Monte Viudo consists principally of stone, circular houses, many of which are characterized by elaborate features distinctive to this region, such as cornices, mosaic-like friezes, and platform bases. I review the major spatial and material characteristics of house architecture at Monte Viudo, and explore the unusual relationship between the features of residential and non-residential buildings at this site. Based on these data, I argue that viewing these houses as monumental constructions contributes to a more robust and nuanced interpretation of their role and significance in this and other Chachapoya communities.
MARTIN HURTADO DE ARBIETO AND THE SPANISH COLONIZATION OF VILCABAMBA (1572-1589)
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For most students of Inca studies, the history of the Vilcabamba region ends with the 1572 Spanish-led raid into the region and the subsequent capture and execution of the Inca ruler Tupac Amaru. In contrast, this paper examines the period from 1572 to 1600 and the Spanish colonization of the Vilcabamba region. As such we focus largely on the life of Martin Hurtado de Arbieto, who was named Governor, Capitan General, and Royal Justice (civil and criminal) of the newly-won region by Viceroy Francisco Toledo.

COURTING VICHUCA: MYTH AND WATER IN THE LOCAL ORGANIZATION OF SOUTHERN HUAROCHIRI, PERU
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The main goal of this research is to address how myths and traditions are masking subsistence strategies and networks of interaction. In the early Colonial period in the Central Andes, spheres of local interaction were concealed in myths and oral stories. For example, the Huarochiri Manuscript is made up of myths and rituals recorded in the highlands of Lima, Peru, during the early 17th century. So far, the Manuscript has provided the guidelines for understanding the local interaction system of a series of small communities through worship of their local deities during the Inka and Spanish yoke. Research on the southern section of Huarochiri has provided a set of myths and stories that were not recorded in the Manuscript, but that deal with interaction between local communities – coded by stories about their tutelary deities – that can be related to subsistence strategies. In this presentation, we will focus on a myth surrounding the entanglements between four huacas in southern Huarochiri. Using the myth’s narrative as a guideline, we will discuss the interaction between the communities represented by them and their mutual dependence in a shared drainage system as the motivation behind cooperation.

AMPHIBOLE STABILITY USING NEW THERMOBAROMETRIC FORMULATIONS ON CALC-ALKALINE MAGMAS OF VOLCAN DONA INES, CHILE
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Location and delineation of subvolcanic magma chambers have heavily relied on geophysical, particularly seismic, data. However, new and improved thermobarometric formulations can yield equally important constraints on the depths and conditions of magmatic storage and movement.
The objective of this study was to utilize the single phase thermobarometric algorithms of Ridolfi et al. (2010) to determine the conditions of amphibole stability in the volcanic system beneath Volcán Doña Inés, a large stratovolcano from the Mid-Late Miocene magmatic arc in the Central Volcanic Zone of the Andes, Chile. According to Moulds (1989), Doña Inés had three main eruptive vents: the main central vent; a second vent low on its flanks, called Loma Doña Inés; and a sister cone, called Gemelas.

Amphibole compositions range from tschermakitic pargasite, to magnesiohornblende, to magnesiohastingsite, with the central vent crystals exhibiting the widest variability. Not surprisingly the central vent displays the largest variation in crystallizing conditions for amphibole, consistent with a more complex magmatic plumbing system. The pressure-temperature estimates for this Miocene calc-alkaline volcano are similar to those from more recent andesite-dacite systems as compiled by Ridolfi et al. (2010), and demonstrate the consistency of the thermobarometer for subduction-related volcanoes.

THE TIWANAKU AND INKA IN PERSPECTIVE: INTRA-SITE CHANGE AND VARIATION IN THE CHARAZANI VALLEY
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The Tiwanaku and Inka polities employed varying modes of interaction to gain influence and political control in the Charazani valley. To identify the modes of interaction, I examine the intensity of ceramic use, the variation in ceramic types, and the variation in architectural features across different ecological zones and time periods. This is in order to asses changes related to the rise and fall of the Tiwanaku and Inka states. The analysis shows an increase in the intensity of ceramic use in the Middle Horizon and a reduction of such use in the Inka period. In addition, during the Inka period, there is an emphasis in the construction of imperial architecture. The Tiwanaku policy focused on modes of interactions that increase the use of ceramics, while the Inka focused their energies in constructing architecture. By comparing such variation, my goal in this paper is to demonstrate that states do not conform to set models of expansion. While, models are useful heuristic tools to test and examine, we must remember that states are made up of vested individuals with their own goals and strategies that make decisions as situations arise, which leads to varying modes of interaction.

PALMITOPAMBA: LAND OF YUMBOS AND INCAS
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Alejandra Gudiño* University of Missouri

Palmitopamba is a series of archaeological sites in the cloud forest on the western flank of the Andes Mountains in northern Ecuador. Lippi and Gudiño have been excavating three of those sites for the past several years to obtain information about the indigenous Yumbo chieftdom of the area and about the nature of an Inca presence at the site beginning around 1500. The
relationship between Yumbos and Incas has been of particular importance in our research. In these two posters we briefly summarize our research on the large monumental site, a Yumbo-Inca cemetery site, and a nearby rectangular platform mound site. We also present some information about our ongoing work with the local government to develop the sites for tourism.

FISHING FOR IDEAS: DISCUSSIONS OF COASTAL PERUVIAN SUBSISTENCE WITH DAN SHEA
Rachel McTavish* University of Wisconsin-Milwaukee (mctavis2@uwm.edu)
Paper – special session for Dan Shea

Discussions with Dan Shea over almost a decade helped to shape my view of archaeology as a discipline, first as one of his students at Beloit and later as I continued with graduate work. This presentation highlights one topic of persistent interest during the past couple years: comparing different views of the same data sets. I will use models for change in maritime subsistence strategies (e.g., DeFrance et al. 2009; Haas and Creamer 2006; Moseley 1992; Pozorski and Pozorski 2008; Reitz 1988; Sandweiss 2008; Wing 1984) as an applied example. In the Andean case, considering coastal Peru, are the changes we see archaeologically better described as gradual or rapid? A review of faunal data for the Preceramic through Early Horizon Periods of the Peruvian coast provides evidence for shifts in maritime subsistence economies and highlights issues of comparable data and potential avenues for future research.

HEAD MOTIFS ON CUPISNIQUE STYLE CERAMICS: EMBLEMS OF CULTURAL IDENTITY AND ETHNICITY IN EARLY ANDEAN ART
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The application of the term “Cupisnique” to a culture and artistic style first came into use after Rafael Larco Hoyle excavated the Cupisnique ravine located between the Jepetepeque and Chicama valleys of northern Peru. The Cupisnique culture flourished during the Initial Period (ca. 2000-700 BCE), but most Cupisnique style ceramics were created between approximately 1200 and 200 BCE. These artifacts are characterized by stirrup spouts, dark black or brown hues, and engraved head motifs on extremely well-polished surfaces.

This paper argues that the engraved head motifs on Cupisnique style ceramics can be understood as emblems of the cultural identity and ethnicity of the Cupisnique people as well as representations of socio-political power in the Cupisnique region. Several scholars, including Rafael Larco Hoyle, Walter Alva, Richard Burger, and Rebecca Stone, have previously suggested that Cupisnique head motifs depict a shaman who is in a trance or images of a sacrificial head. Such interpretations emphasize religious connotations, but I argue that these head motifs can also be understood as laying claim to social status and political rights. During the Initial Horizon period, the Cupisnique region was probably a trade center that constituted a bridge between Ecuador and the northern highlands of Peru. Traders from Ecuador brought items such as spondylus shells to the northern coast, and people from the northern
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highlands introduced the San Pedro cactus, corn, and potatoes to this region in return. Since different ethnic groups mingled along the northern coast of Peru, the Cupisnique people likely felt the need to distinguish themselves and claim ownership of their land. This paper also discusses the role of Cupisnique artists in legitimizing their cultural identity, ethnicity, and social authority through the production of their distinctive head motifs.

A BRAND NEW TOOLBOX: USING MODERN SCIENCE TO RECONSTRUCT ANCIENT RITUAL IN PERU
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Traditional archaeological practices alone are unable to recover the full potential of anthropogenic deposits since some surfaces, such as ceremonial floors, have usually been swept of debris by cross-cultural beliefs of cleanliness. Multi-elemental analytical techniques like X-Ray Fluorescence have been employed to determine the use of space through residues left behind from human activities. In addition, methodologies primarily used in other disciplines such as pollen analysis or micromorphology can illuminate the archaeological record in ways that traditional methods cannot. This paper presents the results of innovative analytical techniques used in the excavation of a series of small-scale temples at the site of Huaricanga (Fortaleza Valley) in order to explore variation in ritual practices in the evolving complex polities on the Peruvian coast during the Late Archaic Period (3,000-1,800 B.C.). The results of this project will allow us to reconstruct the ritual practices that took place within an early ceremonial structure and to shed light on an early form of South American religion.

CASA TUMILACA, CASA ESTUQUIÑA?: A DOMESTIC PERSPECTIVE ON THE MIDDLE HORIZON TO LIP TRANSITION IN THE MOQUEGUA VALLEY, PERÚ
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In many respects, the Moquegua Valley fits well with long referenced chronological models for the Andes. During the Middle Horizon (AD 600-1150), the domination of the valley by the Wari and Tiwanaku states is manifest in the presence of Wari and Tiwanaku architectural canons and ceramic styles. The Late Intermediate Period (AD 1200-1475) is characterized by defensive sites, regional politics and a localized economy. Yet, although these two temporal phases are recognized as materially discrete and understood as socially and politically distinct from one another, the mechanisms of transition from the Middle Horizon to the LIP in Moquegua remain little understood. Central to investigating this transition are Moquegua Valley sites with both terminal Middle Horizon (Tumilaca) and LIP (Estuquiña) occupations. In this paper we discuss data from one of these sites, Tumilaca la Chimba. Focusing on a domestic unit excavated in 2012, we examine preliminary evidence for re-use and modification of a terminal Middle

Presenting author (*)
Horizon structure by Late Intermediate Period occupants and consider how this initial data affects our understandings of the relationship between Tumilaca and Estuquiña populations.

ANCIENT EL NIÑO EVENTS, HUMAN ADAPTATION AND ECOLOGICAL TRANSFORMATION IN SOUTHERN COASTAL ECUADOR

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El Niño-Southern Oscillation is a warming of surface sea temperatures in the eastern Pacific Ocean. Such climatic and oceanographic perturbations have dramatic impacts upon human adaptation and sociocultural development. Multidisciplinary evidence from an artificial earthen mound at the late Valdivia ceremonial center of La Emerenciana, documents repeated site abandonment related to El Niño events. Initial site abandonment was in response to an intense or Mega-El Niño event dated to ca. 2150 B.C. associated with fossil beach ridge formation and reoccupation 14C dated 2200 to 1450 B.C., and final abandonment dated to ca. 1450 B.C. Final abandonment is associated with an earthquake and a short-lived reoccupation. Data from excavation, regional settlement patterns and shellfish frequencies are presented to determine whether repeated and final site abandonment was related to El Niño. Results indicate widespread environmental degradation and geomorphological changes to the surrounding coastline were related to El Niño, and that it was clearly a factor to sociocultural development and adaptive responses. These data explore chronology, assess the intensities, and measure the effects of ancient El Niño events upon pre-Hispanic occupations this ceremonial center and pre-Hispanic occupations in southern coastal Ecuador.

CHEMICAL COMPARISONS OF POSSIBLE LLIPTA CONTAINERS IN NORTHERN CHILEAN Graves

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Michael Deibel Earlham College; Corinne Deibel Earlham College

San Pedro de Atacama, northern Chile, has a rich set of nonlocal burial ceramics (300 BC - 1500 AD). A subset of small narrow-necked jars (some with a wooden stick) may have held llipta, an alkaline substance consumed along with coca to increase its effectiveness. A chemical analysis of pastes from vessels recovered in graves in 9 San Pedro ayllus explores differences in their place of manufacture through time. Results show the dominance of one nonlocal source and interesting inter-ayllu consumption differences. These results are juxtaposed with patterns in consumption of other nonlocal vessels in local graves.
HEGEMONY WITHOUT SOVEREIGNTY: THE CASE OF CAJAMARCA-LATE MOCHE (AD 650-800) RELATIONS IN THE JEQUETEPEQUE VALLEY, PERU
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Recent bioarchaeological and archaeological research regarding the environmentally influenced demise of the Moche (AD 200 – 800) of the Jequetepeque Valley indicates different responses by local populations, including fragmentation and resilience in the hinterland as well as the forging of new political alliances with foreigners at ceremonial centers. Biodistance analyses and recent excavations at Cerro Chepén suggest that adjacent highland Cajamarca peoples arrived in the Jequetepeque Valley and likely interbred with local inhabitants interred at San José de Moro during both the Late Moche (~AD 650-800) and subsequent Transitional (~AD 800-900) periods. At other large centers in the valley, it seems that the Cajamarca’s influence may have been limited to feasting contexts, while peoples residing at fortified hinterland settlements largely resisted external influence. Culturally, local ceramicists at San José de Moro reflected this influence by experimenting with hybrid vessels that blended local Moche forms and designs with highland ones in what Kolata has referred to as orthopraxy. The aforementioned data speak to a model of “hegemony without sovereignty” to explain the social and political relationships that existed between the foreign Cajamarca and local Moche during this period of dramatic change.

ISOTOPIC EVIDENCE FOR DIVERSIFIED CAMELID HUSBANDRY PRACTICES ON THE NORTH COAST OF PERU
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This study presents isotopic data for a large number of camelids (~100) recovered from three sites (Huaca Gallinazo, Huancaco, and Huaca Santa Clara) in the Viru Valley. These animals are derived from both residential and ceremonial contexts, and date to the Early Intermediate Period and late Middle Horizon. When examined in light of isotopic data collected from a large number of wild plant species along an altitudinal transect in northern Peru, the isotopic data strongly suggest that these animals were raised on local vegetation and not imported from the highlands. Moreover, there is a significant amount of between- and within-individual variation in isotopic composition, suggesting a diversified foddering strategy that may have been the product of small-scale camelid herding.
DEVELOPING THE MIDDLE GROUND: CHANCAY STRATEGIES OF INTERACTION IN THE HUANANGUE VALLEY
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This paper uses Middle Ground theory to explore the interaction strategies used by the Chancay during their expansion into the Huanangue Valley on the Western Slopes of the Peruvian Andes during the Late Intermediate Period (LIP) (1200-1472 AD). Middle Ground theory (White 1991) refers to the blurring of boundaries and creation of a third space that occurs as part of intergroup interaction when the power differential between groups is minimal. As such, Middle Ground theory can be helpful in understanding the processes that took place during the LIP as different groups (re)established regional networks and (re)negotiated their position on the political landscape after the fall of Wari Empire. During the LIP, the Huanangue valley was colonized by the coastal Chancay who were forced to interact both with local groups in order to negotiate land and water rights. Using archaeological and ethnohistoric data, this paper argues that the interaction strategies employed by the Chancay led to the creation of a Middle Ground between the Chancay colonists and local Huanangue groups, thus facilitating alliance building between Chancay and local communities. This, in turn, may have helped both groups stave off advances from the highland Atavillos and, later, from the Inka.

DUALISM, STATISTICS, AND COMMUNICATION: AN EXPLORATION OF STRUCTURAL PATTERNS AND NUMERICAL PROPERTIES OF THE INKA KHIPU
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The writing system of the Inca Empire was called khipu. Khipu is comprised of sets of yarn, containing numerous knots, which are tied along the length of the yarn. The patterns of khipu structure represent accounting and narrative information encoded in a double-entry method of input. Using historical and statistical analyses, this paper explores the Inkan quadripartite social or:3ganization and dualistic beliefs and their hypothesized influence on the binary structure of khipu. This paper studies the application of bootstrapping, Monte Carlo, and linear regression statistical methods coded in MatLab to the analysis of such patterns as color of cords and the numerical value of knots on khipu. The paper attempts to look at the Inca reciprocal concepts of ayni, mink’ a, and yanantin through the lens of the Andean dualistic worldview and the binary system of communication of the Incas.

ANCIENT TIWANAKU: A VIEW FROM ITS RESIDENT
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Within contemporary narratives, archaeologists are increasingly emphasizing Tiwanaku’s role as a vibrant center of festivals, rituals, and spectacles that attracted thousands. As such, the site is thought to have pulsed with an influx of pilgrims from the hinterlands and beyond who came...
together during punctual festivals at the site, then returned to their home communities after the celebrations. The present paper shifts the focus from the influx of revelers to the daily life of those that stayed on after the festivals closed. Results from recent archaeological work within the Tiwanaku neighborhood of Mollo Kontu provide insights into its permanent residents’ neighborhood-level life. These include their distinctive mortuary rituals, the culinary practices that distinguished them within this cosmopolitan urban center, their practice of a type of “urban pastoralism” unseen in the ethnographic and ethnohistorical record of the region, and their curation and reproduction of Tiwanaku ceramics for quotidian use outside of the schedule of large-scale events in the city-center. That is, this paper emphasizes that being Tiwanaku, for Mollo Kontu’s residents, went beyond the ebb and flow of festivals and visitors; it was a way of life.

USING pXRF FOR ASSESSING CONTAMINATION IN CERAMICS: IMPLICATIONS FOR HIGH SALT ENVIRONMENTS
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Archaeologists are using pXRF as a basic research tool to investigate ceramics. In the highly saline soils of the high Andes, such as San Pedro de Atacama, we take special care to remove salts from ceramics during artifact processing and storage. To explore salt/ceramic interconnections, a study with several different types of salts introduced to ceramics samples in the wet clay stage, dry salts added to post fired ceramic surfaces, and ceramics submerged in aqueous solutions of salts and then dried. A number of salt removal procedures were used to try to remove the salts that had infiltrated into the ceramic samples. Finally, pXRF was used to test how much salt was incorporated into pre- and post-fired ceramic samples and the efficiency of various salt removal techniques were assessed. Salts can be removed from ceramics the most common technique, water soaking, was not as effective as mild acid solutions in clearing several types of ionic halides. The results from pXRF were distorted due to upper level detection limits reached when analyzing samples that had remarkably high concentrations of salts on their surfaces. This study suggests that storage and sample preparation techniques need to be considered before using pXRF in ceramics.

INCA-HUANCA INTERACTION AT THE SITE OF WARIWILLKA
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Paper – special session for Dan Shea

The archeological site of Wariwillka, situated in the department of Junín 5 kilometers south of the center of the city of Huancayo, is known throughout the chronicles and oral history as the Huanca place of origin or “Pacarina.” Huanca culture flourished in the central highlands during the Late Intermediate Period from AD 1200 to AD 1460, a turbulent time that followed the end of the cohesion brought by the Huari Empire. The Huanca people, known as independent and
fearless warriors, were not a single unified polity and had dispersed fortified residential sites located throughout the Mantaro Valley. Their economy was based on agriculture exploiting the valleys (especially corn and potatoes) and livestock in the Puna.

The site of Warwilka is also mentioned in chronicles as an important regional oracle center during the Huanca and Inca times. Investigations carried out originally by Professor Dan Shea in 1960’s are important in the understanding of Inca ritual practices at the site. He found a collection of miniature Inca ceramics in a ritual context.

The subsequent work done by us, during the first season of the Proyecto Arqueológico Mantaro Sur (PAMS 2009-2010), encountered data of a similar type of ritual having been carried out at the site, one that involved both Inca and Huanca miniature ceramics in a ritual context. Furthermore, complex ceremonies seen in the excavation of Inca offerings or Capacochas, and another context such as the ritual burial of architectonical structures, give us a further understanding of Huanca and Inca interactions and dialog, which, can be trace outside the ritual uses of this site and read to understand the relationships between the Inca and the Huanca people.

LIVIN’ ON THE EDGE: RESILIENCE AND IDENTITY AT THE MARGINS OF THE JEQUETEPEQUE VALLEY SITE OF TALAMBO, PERU
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Talambo was a center of rural occupation and canal management in the lower Jequetepeque Valley neck during the Middle Horizon (600–950 CE) and Late Intermediate Period (950 –1470 CE). In addition to its role as an important Chimú administrative center, the site exhibits strong evidence for continuity and local resilience amid the political and demographic shifts during the Late Moche to Lambayeque transition. Craft production remains intact, and is in fact augmented over time, while influence from highland populations, which is so prevalent at nearby sites, is virtually absent at Talambo. I consider how cultural continuity and identity negotiation functioned in a marginal region through preliminary excavation results from Talambo.