Ancient Households on the North Coast of Peru
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Since the early discovery of dwellings at Huaca Prieta (Bird 1948), Nasca (Kroeber and Collier 1998), Pukara (Kidder 1943), and Pachacamac (Uhle 1991 [1903]), Andeanists have invested systematically more efforts in the study of households and their constituents (Aldenderfer 1993; Nash 2009; Taboada and Angiorama 2003). Scholars have looked at various forms of dwelling arrangements (Brennan 1982; Lau 2010; Topic 1980) and studied the engagement of household members with multiple phenomena, from small-scale economic production, consumption, and differentiation (Bawden 1982; Bermann 1994; Topic 1982; Van Gijsseghem 2001; Vaughn 2004) to ethnic identity and group membership (Aldenderfer 1993; Goldstein 2005; Janusek 2004; Morris and Thompson 1985; Stanish 1992; Vaughn 2005), and the interaction of domestic households with larger hegemonic political systems (Bermann 1997; D’Altroy 1992; Hastorf 1993; Jennings and Yépez Álvarez 2001; Lau 2005; Schreiber 1992; Van Gijsseghem and Vaughn 2008).

On the north coast of Peru, one particularly salient form of dwelling and social institution is materialized in walled house compounds known as cercaduras. While cercadura architecture and lifestyles are best documented from late Moche through Chimú times at sites such as Pampa Grande (Shimada 1994), Galindo (Bawden 1982), and Chan Chan (Klymyshyn 1982; Moore 2003), comparatively little is known about earlier forms of enclosed lifeways (Swenson 2004; Warner 2010). This is particularly the case in coastal Ancash, on the southern portion of the north coast of Peru, where Early Horizon studies have traditionally focused on the Chavín and
Cupisnique religious phenomena and their monumental and artistic expressions (Daggett 1987a; MAAUNMSM 2005; Pozorski and Pozorski 1987; Proulx 1985; Shibata 2010; Tello 1960; Vega-Centeno 2000). In this chapter, we focus on the emergence of urban house compounds and their associated domestic lifestyles during the Early Horizon in the Nepeña Valley, coastal Ancash. Here, settlement pattern data suggest the emergence of a multitiered regional polity centered at the complex of Caylán and the associated development of *cercadura* households.

In 2009, the first scientific excavations at Caylán, the largest Early Horizon settlement in Nepeña, were undertaken (Chicoine and Ikehara 2010). Sixteen weeks of excavations have so far brought evidence on spatial organization, architecture, and material remains (Chicoine and Ikehara 2014). Caylán’s urban nucleus consists of dense walled compounds organized into attached colonnaded patios, roofed areas, storerooms, kitchens, middens, fill lots, low platforms, and plazas articulated through baffled entries, corridors, and streets. Caylán stone masonry is very well preserved and visible at the surface. This allowed the delimitation and mapping of more than forty residential enclosures, yielding information on the spatial and social organization of co-residents at Caylán.

In the remainder of the chapter, we briefly review relevant literature on Andean household archaeology and focus on the development of complex urban societies in coastal Ancash during the Early Horizon. Literature on Andean households suggests high degrees of variability through space and time. The reconfiguration of forms of domestic arrangements can be used to explore shifts in macro-social organization, including the emergence of urbanized settlements. Preliminary spatial data on *cercaduras* at Caylán can be integrated into a working hypothesis on forms of domestic life and put into perspective based on limited excavations at Compound-E, a middle-size residential compound partially excavated in 2010. The implications of the Caylán research are manifold and help to understand broader trajectories of residential architecture and compound lifeways on the north coast of Peru.

**BACKGROUND: THE ARCHAEOLOGY OF ANDEAN HOUSEHOLDS**

Household archaeology has undergone major renovations since its foundation in processual concerns with class structure, population patterns, and specialized production in the 1960s (e.g., Flannery and Winter 1976; see Carballo 2011; Nash 2009; Pluckhahn 2010; Vaquer 2007). Archaeologists have gradually emphasized the fundamental multifaceted roles of household units in the constitution of societies (Ashmore and Wilk 1988, 1). Focus has shifted away from static views of the social and symbolic meanings of households (e.g., Blier 1987; Deetz 1982) to focus
on their active structuring agency and inherent historical contexts (e.g., Bloch 1995; James 1997; see Dean and Kojan 2001, 111–112). One of the enduring problems with households has been defining their economic, social, and political ramifications, as well as their materialization (Nash 2009, 225; Wilk and Netting 1984). In particular, researchers have demonstrated that one cannot simply equate households with the material remains of houses (Rogers 1995, 9; Wilk and Rathje 1982, 620). In the case of Caylán, for instance, it is likely that some of the largest urban compounds were built, maintained, and occupied by multiple households and groups organized at a suprahousehold level (e.g., neighborhood).

Households can be defined along several different axes including kinship, shared identity, economic production, as well as social and biological reproduction (Wilk and Rathje 1982). They are social units that play a key role in structuring human behaviors. At the same time, they are adaptable and serve the goals and strategies of their constituents (Rapoport 1969). Domestic units represent groups of people who co-reside and share domestic activities and decision-making processes (Blanton 1994, 5; see also Patterson 1999). Politically, households are the loci for power dialectics and the negotiation of hierarchies (Bowser and Patton 2004; Lyons 2007). Thomas Pluckhahn (2010, 334) puts forth a flexible and inclusive definition of households as activity groups taking part in one or more of the following practices: production, consumption or distribution, reproduction, co-residence, and enculturation/transmission (see also Ashmore and Wilk 1988, 4; Wilk and Netting 1984, 5).

At the most fundamental level, households represent basic units of economic production and cooperation (Allison 1999, 1; Ashmore and Wilk 1988, 1; Franklin 2004, xiii; Hirth 1993, 21; Robin 2003, 308; Stanley and Hirth 1993, 3). Scholars emphasize the need to clarify the scale of these actions, along with their loci, and the diversity and degrees of specialization of household activities. For instance, members of a household often engage in multiple interrelated production activities and thus can simultaneously enact multiscale interaction networks (Carballo 2011, 144; Hirth 2006, 275–300). It is indeed significant to nuance the traditional view that households typically engage in self-sufficient, low-intensity production. From that standpoint, high-intensity production is believed to involve full-time specialists working from largely nonresidential places (e.g., Brumfiel and Earle 1987, 4–5; Costin 1991, 3–18). Most scholars now agree that specialized and domestic tasks should not be treated separately (Allison 1999, 8; Cobb 2000, 186–189; Hagstrum 2001, 50–51). Field results from Caylán suggest that urban domestic activities during the Early Horizon were varied, yet focused on the secondary processing of subsistence and clothing goods, as well as tools, vessels, and body adornments. In contrast, the primary processing of agrarian and marine produce is underrepresented
and appears to have been carried out at smaller satellites, including the seaside town of Samanco (Chicoine et al. 2016; Helmer 2015; Helmer and Chicoine 2015b).

Socially, individual agency has become emphasized within the more corporate nature of larger domestic groups (Carballo 2011, 150). Here, the basic variable lies in the degree of agency granted to households in relation to the constraints imposed by large-scale, even hegemonic economic and political forces. In the Andes, household dynamics have been alternatively articulated around the concepts of verticality and horizontality (Nash 2009, 210). Models of verticality are grounded in John Murra’s (1980) account of Inka ecological complementarity or archipelago in which households are only partially self-sufficient. Tasks are assigned to households, often referred to as ayllus, which in turn are granted access to land. Domestic units contribute to communal economies. In contrast, horizontality models steer away from zonal complementarity to emphasize interactions between communities living in similar types of ecosystems (Shimada 1982). Ideas mainly stem out of María Rostworowski’s ethnohistorical accounts of north coastal communities described as parcialidades. In parcialidades, communities of specialists are under the authority of lords. Each lord rules a chiefdom, or señorío. Rostworowski (1970, 1975, 1977) describes different levels of interdependencies among occupational specialists whose leaders engaged in exchange networks through which flowed various types of resources, including fish, crops, and manufactured goods. House compounds documented at Prehispanic sites including Huacas de Moche, Pampa Grande, and Chan Chan have been favorably compared to ethnohistorical señoríos (Nash 2009, 215). In Nepeña, architectural and spatial data from Caylán, Huambacho (Chicoine 2006), Samanco (Helmer 2015), and Sute Bajo (Cotrina et al. 2003) suggest the existence of large, urban households organized as suprakin groups perhaps composed of multiple extended families into neighborhoods (Helmer and Chicoine 2015a; see Pacifico 2014; Smith and Novic 2012). The settlement hierarchy in the lower valley combined with the close stylistic and apparent economic complementarity between communities points to existence of a complex polity potentially analogous to the ethnohistorical accounts aforementioned.

EARLY HORIZON URBANISM AND THE Caylán POLITY

The valley of Nepeña is located in the modern Department of Ancash, on the southern portion of the north coast of Peru, 400 km north of Lima. The small drainage is famous for the spectacular discovery of polychrome friezes and painted murals at the sites of Punkurí, Cerro Blanco de Nepeña, Huaca Partida, and Pañamarca (figure 3.1) (Bonavia 1974; MAAUNMSM 2005; Schaedel 1951; Shibata 2011; Tello 1943; Trever 2017; Trever et al. 2013; Vega-Centeno 2000).
This may explain why so little scientific attention has been given to dwelling forms and household units and their implications for understanding ancient cultural developments in coastal Ancash. During the Early Horizon, profound socioeconomic transformations in the region contributed to the development of urban forms of community organization. Changes were perhaps most visible in the abandonment of late Initial Period ceremonial centers and the rejection or avoidance of Cupisnique and Chavin precepts (Chicoine 2010b; Shibata 2010, 2011). Various lines of faunal and floral proxies point to the increased reliance on maize as both a staple crop and to produce fermented alcoholic beverages commonly consumed in festive contexts (Chicoine 2011; Chicoine et al. 2016; Ikehara et al. 2013), as well the introduction of camelids as pack animals (Helmer and Chicoine 2015b; Szpak et al. 2016). Finally, intercommunity tensions rose dramatically as groups relocated to defensible locations and invested unprecedented amounts of time and resources in armed conflicts (Daggett 1987b; Ghezzi 2006; Ikehara 2016). The complex dynamics of these processes need further analysis but synergistically contributed to the nucleation of population at several settlements, including the primary center of Caylán.
While traditional models for the valley have centered on the relationships between local populations and the Cupisnique and Chavín phenomena (Daggett 1987a; Larco 1941; Proulx 1985; Tello 1943, 1960), recent fieldwork has allowed for a reappraisal of Nepeña’s chronology and cultural manifestations during the first millennium BC (Chicoine 2010a; Shibata 2004, 2010). Excavations of superimposed architectural contexts at the ceremonial center of Cerro Blanco de Nepeña have been particularly helpful in generating an updated chronological sequence for the Initial Period and Early Horizon. Based on changing patterns of monumental architecture, ceramic styles, and religious imageries, Nepeña archaeologists now operate a four-phases sequence: (1) Huambocayán (1500–1100 BC), (2) Cerro Blanco (1110–800 BC), (3) Nepeña (800–450 BC), and (4) Samanco (450–150 BC) (Shibata 2011).

Habitation sites and dwelling forms have yet to be documented for the Huambocayán and Cerro Blanco Phases. Cerro Blanco developments correspond to the construction of a U-shaped temple with conical adobes and polychrome murals at the center of Cerro Blanco de Nepeña. After a phase of megalithic renovations, the temple appears to gradually lose influence and is ultimately abandoned by the end of the Nepeña Phase by 500 BC. The following Samanco Phase saw the reuse of the Cerro Blanco de Nepeña structures by Early Horizon squatters. In the meantime, some groups, perhaps dissidents from Cerro Blanco de Nepeña and other Nepeña Phase centers, merged at the base of Cerro Caylán, as well as at other valley margin locations including Huambacho, Sute Bajo, and Samanco. Fieldwork at the small elite center of Huambacho identified two walled compounds consisting of rectangular plazas attached to colonnaded patio rooms of different sizes, as well as smaller roofed areas and storerooms. In contrast, more than forty compounds have been identified and mapped at the much larger and complex settlement of Caylán, bringing insights into the organization of Early Horizon cercaduras and associated domestic urban lifeways.

CAYLÁN URBAN CENTER (PV31–30)

Caylán is located in the coastal portion of the Nepeña drainage, 15 km from the Pacific coast. The site was first mentioned by Wendell C. Bennett (1939), who spent two days in Nepeña in 1935 (Proulx 1968, 9). Caylán’s architecture and dense urban layout were described by Paul Kosok (1965, 208) after a study of aerial photographs and a brief visit in 1949 (see also Horkheimer 1965, 30). The site was then revisited by Donald A. Proulx (1968) as part of the first systematic surface survey of the valley. Proulx (1973, 70, 115–116) identified a Middle Horizon mortuary component based on the presence of Red-White-Black and press-molded pottery sherds exposed
through illegal excavation activities. More recently, such artistic expressions have been assigned to Casma cultural developments and the center of El Purgatorio in the neighboring eponymous valley to the south (Pacifico 2014; Vogel 2016; Vogel and Pacifico 2011). Proulx (1985, 46–47), along with his student Richard E. Daggett (1984), revisited the site in the late 1970s and early 1980s, producing sketch maps and further documenting surface materials. Based on the presence of ceramic pan-pipes, polished lithic projectiles, and Early Horizon styles of pottery sherds, including carinated bowls ornamented with stamped circle-and-dot designs, Daggett (1987b, 1999) suggested a major occupation during the first millennium BC.

In 2009, excavations were undertaken at Caylán and confirmed that most structures and material remains belong to an intensive human occupation during the Early Horizon. Fieldwork has allowed the complete mapping of the urban core (figure 3.2). Pedestrian mapping was realized with a Topcon total station theodolite, and the spatial data were compiled into both CAD and GIS databases. Results of surface mapping indicate a complex and diverse Early Horizon settlement composed of an urban core organized as high-quality stone-and-mud compounds articulated through at least a dozen streets. Several low platform mounds and enclosed plazas dot the urban compounds. A ridge-top compound, perhaps a fortress or refuge, is located in the southwest portion of the urban area (figure 3.3). The surrounding

![Figure 3.2. Plan reconstruction of the standing stone architecture at Caylán showing the location of the excavation units and test pits](image-url)
peripheries are dotted with the remnants of stone-and-mud structures. Modern agrarian activities have destroyed large portions of the Early Horizon settlement, especially in the east sector. The extensive presence of surface ceramic scatters suggests the presence of lower-quality, wattle-and-daub architecture surrounding the urban core.

Pedestrian surface survey revealed extensive evidence for domestic activities, including dense ceramic scatters, heaps of plant remains, mixed midden areas, and 237 grindstones. The distribution of the surface grindstones confirms the importance of plant processing within the urban sector but suggests that domestic activities also extended to peripheral areas where standing stone architecture is absent or destroyed (figure 3.4). Grindstones include large anvils (batanes) (n = 36), two-hand portable grinders (chungos) (n = 166), and smaller one-hand pestles, hammers, or both (manos) (n = 35). The grinding tools are made of different varieties of local granite and are identifiable based on use-wear patterns. Although caution must be exercised when dealing with surface grindstones, as they tend to be recycled over time, the imbalance between the numbers of surface batanes and chungos—tools that are typically used in conjunction (figure 3.5)—suggests that the former might have been shared between community members, most likely at the cercadura level.
In addition to surface evidence, the excavation of 564 m² (~830 m³) yielded further evidence of the intensive domestic activities carried out at Caylán. Excavation methods included vertical and horizontal area excavations, as well as test pits and the clearing of looter pits. We excavated a total of six excavation units (Unidad de Excavación, or UE1 through 6), sixteen test pits (Hoyo de Prueba, or HP1 through 16), and one looter pit (Pozo de Huaquero, or PH1). All materials were screened through a 3 mm mesh, and recovery efforts targeted 100 percent of the archaeological remains. Preservation conditions are excellent, and a vast amount of material remains were recovered. More than 48,000 pottery sherds, 220 kg of
shells, 10 kg of animal bones, 15 kg of plants, and 90 kg of soil and other samples were collected.

**URBAN CERCADURAS AT CAYLÁN**

Based on careful pedestrian survey and the visual analysis of stone architecture, more than forty house compounds have so far been delimited and recorded at Caylán. Based on access patterns, overall spatial organization, and preliminary excavation data, the compounds are hypothesized to represent discrete residential and social units. The scale of some of the compounds aligns well with the concept of neighborhood (see Arnauld et al. 2012), while it is still unclear if the compounds are organized into broader urban districts (Pacifico 2014; Smith and Novic 2012).

The identified compounds range between 800 and 8,400 m² in total surface area, with an average of 4,500 m² (n = 42, σ = 1,713). Surface observations also suggest the existence of empty lots scattered across the urban sector, as well as monumental constructions that do not conform to the house compound forms. At the moment, three such structures are identified, including a ridge-top structure, a monumental platform complex, and a possible camelid corral or complex of storerooms. These contrast with residential cercaduras by one or more of the following features: the
scale of their architecture, the width of wall structures and entrances, and unique internal spatial organization. The functions of these anomalous structures remain unclear but could well be linked to the public administration of the city, including defense, economy, and politics. Empty lots, meanwhile, are located in between compounds. They are typically devoid of formal access and appear to have served as opportunistic discard areas.

All compounds interpreted as *cercaduras* or neighborhood compounds share a similar internal spatial logic. They have a single, independent entrance connected to one of the dozen or so streets that cross-cut and divide the urban sector. The streets themselves appear coordinated around a Main Plaza (also known as Plaza Mayor or Plaza-C), the only truly open space at Caylán, currently interpreted as the center of movement and communal city life. Based on test excavations, the ground surface of the Main Plaza appears to have been paved with a layer of small cobbles and gravel, suggesting heavy foot traffic. The open space fronts the largest mound structure at Caylán. Indeed, the 10 m high structure is part of one of the complexes interpreted as a nonresidential building. The façade of the mound is decorated with clay sculptures visible from all across the site. This contrasts markedly with mural art within the house compounds, which is typically invisible to outsiders.

*Cercaduras* at Caylán were accessed by way of a plaza—typically surrounded on one or more of its sides by outer raised platforms. Clearing operations at Plaza-A have revealed that some platforms were decorated with sculpted geometric designs. The murals were visible to plaza visitors only. The plaza platforms are typically topped by colonnades of rectangular columns that originally supported stone, wood, reeds, and clay roof superstructures. These semipublic spaces subsequently gave access to more private colonnaded patios and roofed areas interpreted as production and living spaces. In sum, each compound had its plaza to mediate the public realm accessed through streets and the domestic, private areas of the patios, production areas, and living quarters. While excavations at the large, particularly monumental Compound-A (~5,200 m²) brought insights into the architecture and acoustic properties of the plazas (Chicoine and Ikehara 2010, 2014; Helmer and Chicoine 2013; Helmer et al. 2012), fieldwork at the smaller Compound-E (~2,500 m²) yielded evidence on the spatial organization and subdivision of the more private, domestic space (Ortiz 2012). Some of the *cercaduras* were subdivided into a number of subcompounds. Most compounds appear to have been divided into two or three subunits. Work at Compound-E indicates it was organized into two subcompounds.

Compound-E is located in the southwest quadrant of the urban core, at an average elevation of 134 m asl. The compound can be accessed through a 3 m wide SW-NE street, which cross-cuts a NW-SE street (figures 3.2, 3.3). The latter is interpreted
as the main axis of movement at Caylán and leads to the Main Plaza. The entrance of Plaza-E is located ~125 m from the intersection of that street with the main crossroad. The Main Plaza, meanwhile, is located 200 m south of the main intersection. Compound-E is thus located more than 300 m from the main public area. The remoteness of Compound-E from the central public arena is perhaps informative of the status of its residents.

Compound-E measures roughly 58 m by 43 m in a NW-SE axis (58° east of the magnetic north) for a total surface area of ~2,500 m². It contains at least fifteen rooms in addition to the plaza area. Surface evidence allows the clear delimitation of twelve rooms, including Plaza-E (figure 3.6). Meanwhile, horizontal excavations (Unidad de Excavación 6, or UE6) sampled 164 m² and yielded significant evidence for domestic activities, including food processing (i.e., grinding, butchering, cooking), storing, spinning, weaving, and resting (figure 3.7). With the exception of one room (Rec-5), which was raised using burned domestic trash, dirt, and sand as fill materials (i.e., secondary deposition), most remains recovered from Compound-E were associated with the last moments of residential activities and left in situ on the plastered floors.

A total of 14,896 pottery fragments were collected during UE6, which represents more than 30 percent of the pottery sherds recovered at Caylán (n = 48,837). This is a rather high frequency considering that UE6 (~165 m³) recovered only 20 percent of the total volume excavated at Caylán (~830 m³). This suggests a higher density of artifact remains in the area. More than 99 percent (n = 14,779) of the sherds from UE6 are associated with the Early Horizon occupation, and 568 sherds yielded information about vessel forms and decorations. Comprising almost 70 percent of the total rim sherds (n = 455), neckless jars, or ollas (n = 309), dominate the assemblage. These open vessels can serve for storage or cooking, although they are more typically associated with the latter. In contrast, finer serving vessels appear in lesser frequencies, with bowls (n = 61, 13.41%), bottles (n = 10, 2.20%), and cups (n = 5, 1.10%) counting for a little more than 15 percent of the rim sherds. Considering the extensive use of gourds as containers and the perishable nature of these artifacts, serving implements are likely underrepresented at Compound-E. Finally, storage vessels take the form of large jars, or tinajas (n = 3, 0.66%), and smaller-neck jars, or cántaros (n = 67, 14.73%). Overall, cooking activities at Compound-E, and to some extent small-scale storage, appear to have produced the bulk of the broken pots.

Other fired clay artifacts include sherd discs (n = 142), panpipes (n = 108), and spindle whorls (n = 10). Sherd discs are small round objects made by recycling pottery sherds through abrasive techniques. Their function is unclear, but they could have been used as tokens for various activities, including games. Together with the presence of panpipes, they could be linked to moments of entertainment and
relaxing. Spindle whorls indicate that spinning activities likely took place within the domestic precinct. Twenty-one fragments (~27 grams) of textiles, mainly plain woven cloth made of cotton, were recovered. Of the stone artifacts recovered, the presence of an in situ batán fragment and complete chungo on the floor of Rec-6 (UE6–Ext7) is particularly indicative of the food-processing activities realized at
Compound-E (figure 3.8). The location of the grindstones gallery space created by the patio colonnades confirms the use of shaded areas for production activities.

Excavations documented 125 features associated with the Early Horizon floor contexts and their immediate use and abandonment. They were found either directly on or in the floor matrix, as well as in the layer of windblown sand on top of the floors. The features include holes and depressions (n = 47) likely used as supports for pots (figure 3.9), dried feces (n = 45), hearths (n = 11), mixed trash (n = 12), concentrations of ash (n = 8), complete broken ceramics (n = 1), as well as one complete juvenile dog (n = 1).

ARCHITECTURE AND SPATIAL LOGIC AT COMPOUND-E

In the remainder of the chapter, we focus on the organization of domestic space and the spatial logic of Compound-E, arguing that the cercadura represents a single integrated house compound. Architectural data indicate that Caylán builders prioritized a dual emphasis on (1) colonnaded patios as multifunctional activity and production areas and (2) smaller, more remote, and private roofed quarters. Each residential compound also featured a semipublic plaza that had to be traversed...
before gaining access to the production and living areas. In sum, architectural priorities included engineering privacy; mitigating sound, smell, and dust; separating production activities from resting, and creating complementary wide/open and small/covered spaces.

We number rooms as Recinto-\(x\), or Rec-x. Surface evidence indicates the existence of four distinct spatial components including (1) Plaza-E, (2) an attached annex area of four rooms (Rec-8 through Rec-11), and two residential subdivisions: (3) SE Complex (Rec-1 through Rec-6) and (4) NW Complex (Rec-7 and other rooms). The complexes are interpreted as activity, production, and living areas located behind the nested plaza. Based on their integration and graded access, all the rooms—including Plaza-E—are considered part of a single, integrated house compound. The 2010 excavations focused on the SE Complex, but surface evidence allows for a preliminary consideration of Compound-E’s spatial organization as a whole (see Hillier and Hanson 1984).

Plaza-E is the largest room of the compound, covering an area of more than 1,200 m\(^2\). The room is weighed toward the ground area (\(\sim 867\) m\(^2\)), while the raised area (\(\sim 356\) m\(^2\)) is relatively limited. Upon entering the plaza from the east, visitors were confronted with a 2.5 m tall wall platform, complemented by an additional 2 m high
roof superstructure supported by rectangular columns. The top of the wall platform would have been visible to people standing in the ground area of the plaza. Thirteen columns were visible on top of the raised platform, but many more are hypothesized based on the length of the structure. The columns’ layout and dimensions are consistent with colonnaded architecture elsewhere at Caylán and other Early Horizon sites in Nepeña (Chicoine 2006; Chicoine and Ikehara 2010; Cotrina et al. 2003; Helmer 2015). Columns average 46 cm by 52 cm in dimensions and are placed at 80 cm intervals, 2 m from the exterior walls. The bases of the columns were preserved and plastered with plain clay. It is hypothesized that residents of Compound-E could have sat or stood on top of the platform, welcoming guests and visitors who entered the ground area from the street to the east.

From the ground area, the platform was accessible through a pair of inset staircases. The top of the platform stands out as the visual focus of the plaza where the residents of the complex, and perhaps their guests, could have sought shade and sat. Both sides of the plaza ground were colonnaded. In addition to the ~769 m² of open ground area, the lateral gallery spaces provided ~98 m² of shaded areas for dwellers and visitors. Here, social encounters would have been structured through the use of a semipublic space. Attached to Plaza-E, in the SE corner, a doorway led directly to a contiguous series of four smaller rooms (Rec-8 through Rec-11). This annex consists of a 10.2 m by 9.7 m room (~100 m²) (Rec-8)—possibly a patio area—attached to a series of three small rectangular rooms with low walls (Rec-9 through Rec-11).
The smaller rooms collectively cover 45 m². They were most likely roofed and could have served as storage spaces associated with the patio Rec-8. Together, these rooms would have constituted a plaza annex. It has yet to be excavated, but based on its location and overall layout, the rooms could have been used to store goods and prepare food for plaza guests. The hypothesized storerooms (Rec-9 through Rec-11) conform to patterns of expected storage features, including restricted access, relatively small replicated size, agglutinated placement, and lack of a doorway (Warner 2010, 446; see Chapdelaine 2001, figure 5; Day 1982).

To the SE of Plaza-E’s platform, a 1 m wide and 22 m long corridor led to a dual doorway and the SE and NW Complexes, respectively. Their location behind the raised platform made the complexes invisible to plaza guests. Excavations focused on the SE Complex, an area measuring 33 m by 15.7 m (~487 m²). A series of six rooms (Rec-1 through Rec-6) were documented, including colonnaded patios and smaller roofed areas. Excavations completely cleared two of the six rooms (Rec-1, Rec-2) and sampled portions of the remaining four (Rec-3 through Rec-6), as well as a limited portion of the southern gallery space of Plaza-E. To the north, the NW Complex covers an analogous surface, with measurements of 40 m by 12.5 m (~495 m²).

The SE Complex consists of three distinct divisions (Units 1 to 3) organized through a graded system of baffled entryways (figure 3.10). The emphasis on graded access in Early Horizon cerca duras confirms the concern of urban dwellers and builders with creating hierarchical residential spaces where privacy could be architecturally engineered. The deepest and most remote subdivision, Unit 3, is composed of the rooms Rec-1, Rec-2, and Rec-3. The rooms are interpreted as areas for private domestic interactions, including sleeping. Rec-1, the most remote room of the complex, is a small roofed area measuring 6 m by 2.3 m (~13.5 m²). Rec-2 and Rec-3 are also fairly remote from compound traffic and the affluent activity areas of the Rec-4 and Rec-6 colonnaded patios. The presence of a corridor leading from Rec-4 to Unit 3 materializes the intention to separate the latter from the activity areas of patios Rec-4 and Rec-6. The desire to isolate the dormitories from the noise and smell of the activity areas likely played a key role in the design of the residential space.

Rec-2 is a small colonnaded patio room covering 26 m². The location of the columns and limited size of the room suggest that at least 70 percent of the room was roofed (18 m²). Rec-3, a larger patio covering ~46 m², displays a roofed-to-open area ratio of nearly one. The contiguous colonnaded patios Rec-4 and Rec-6 offered additional open and roofed areas for multiple types of domestic activities, including food preparation, storage, maintenance, and tool manufacture.

Rec-4 (Unit 2) is roughly quadrangular and covers an area of ~95 m². More than half of the ground area was roofed through two colonnades for an estimated eleven columns. The patio was linked to Rec-6 through a baffled entryway located in the
Rec-6 is the largest patio of the complex and the first room accessible from the carrier space of Plaza-E. It measures roughly 15 m by 15 m for a total of ~225 m² and is colonnaded on all four sides. Rec-6 is connected to a small rectangular roofed area (Rec-5) through a direct doorway. Together, these rooms form Unit 1.

Rec-5 is a small roofed area measuring 8.2 m by 4.4 m (~36 m²). The function of Rec-5 is unclear but is related to the use of Rec-6. Its entrance was sealed at some point during the Early Horizon occupation following its reuse as a refuse area and latrine. Cooking, meanwhile, would have been best performed in the open area of the patios.
In sum, only Rec-1 and Rec-5 are column-free rooms and likely to have been completely roofed. The other four rooms all have one or more of their sides colonnaded, thus creating complementary zones of light/open air and shaded/gallery space. Accesswise, it is significant that smaller rooms in Unit 3 are located at the back of the larger patios Rec-4 and Rec-6, a pattern typical of house compounds focusing on the dual design of courtyards as activity areas and smaller covered rooms as living spaces (see Frankel and Webb 2006, 299, for an example from the Bronze Age to Middle Cypriot site of Marki). From that standpoint, the colonnaded patios interpreted as production areas would have provided a buffer zone between the semipublic Plaza-E and the more private sleeping quarters.

Our excavations distinguished two distinct patterns of entryways: (1) baffled entryways for colonnaded patios and (2) direct doorways for noncolonnaded rooms. This suggests that baffled entryways were strategically designed to control foot traffic, visibility, and perhaps air, smell, dust, and sound transference between activity and dwelling areas. Direct doorways, in contrast, appear to articulate private spaces already secluded from higher-traffic activity areas and areas with little need for privacy (e.g., storerooms).

The builders of Compound-E—and other residences at Caylán (see Helmer and Chicoine 2013)—went to great lengths to maximize privacy in the context of urban nucleation and high demographic densities. For instance, Rec-1—located just 15 m as the crow flies from Plaza-E—can only be reached by foot through five doorways, four of them baffled, for a total of more than 80 m. In addition, the corridor connecting Plaza-E with Rec-6 allows the transit of only one person at a time, considerably restricting the flow of people.

It is unclear how many people lived at Compound-E. The total area for Compound-E is estimated at 2,500 m², with ~1,000 m² dedicated to domestic tasks and living areas. Meanwhile, ~1,450 m² are associated with the use of Plaza-E and its annex. Keeping that in mind, we nevertheless venture in speculating about demographic and capacity estimates at Compound-E. Scholars have considered demography and household population estimates (see Hassan 1981). The general consensus is that a strong correlation exists between the surface of roofed areas—interpreted as dwelling spaces—and the number of inhabitants. In the case of the SE Complex, roofed areas cover an area of 275 m², with 85 m² dedicated to dormitories. Based on the cross-culturally accepted ratio between 4 and 6 m²/person (Peterson 2006, 72; see Brown 1987; Casselberry 1974; Kolb 1985; LeBlanc 1971; Naroll 1962; Wiessner 1974), between 46 and 68 people could have dwelled in the SE portion of Compound-E, with the dormitories permanently designed for perhaps 14 to 21 people. Considering that a nuclear family is typically composed of fewer than 10 individuals, these estimations suggest that the SE Complex
was designed as a permanent residence for an extended family and perhaps more. Indeed, the roofed areas of the patios Rec-4 and Rec-6, as well as the room Rec-5, could have served as dwelling spaces for visitors and other constituents of the extended family. Combined with the presence of another residential complex in the NW portion of Compound-E, the spatial data suggest that residential compounds at Caylán were designed and maintained by a number of extended family groups—in the case of Compound-E, at least two. This further suggests that at least some cercaduras were organized into neighborhoods.

Residents of the SE Complex could have shared the activity areas (Unit 1 [Rec-5, Rec-6] and Unit 2 [Rec-4]) with their constituents and even perhaps servants or other attached members of the household unit. The more private living areas (Unit 3 [Rec-1–Rec-3]), located at the back of the patio areas, meanwhile, could have been reserved to family members and close relatives. Here, one has to keep in mind that co-resident groups may be composed of multiple households or form parts of larger households (e.g., Hally 2008, 273; Swanton 1928, 170–171; see Pluckhahn 2010, 334).

**DISCUSSION**

On the north coast of Peru, the transition into the Early Horizon marked a series of significant changes in architectural forms and settlement organizations (see Warner 2010, 87–96). Large open centers with axial layouts and central mounds were abandoned as coastal populations nucleated at dense settlements strategically associated with irrigation systems and cultivation fields (Billman 1996; Brennan 1982). The development of enclosed lifeways brought about major changes in the structuring properties of the built environment. Here, the changes in the domestic built environment can be interpreted as related to the insufficiencies of residences to fulfill people’s expectations (Rapoport 1969; see Van Gijseghem and Vaughn 2008 for an example from the Southern Nasca region). The basic premise here is that built settings accommodate human behaviors (Rapoport 1982). If buildings cease to meet people’s perceived needs, builders are likely to modify them or abandon them and relocate. Important changes in socioeconomic networks, ritual life, feelings of security, and patterns of status acquisition and maintenance can all impact house forms (Van Gijseghem and Vaughn 2008, 112). As demonstrated in this chapter, Early Horizon compound life in coastal Ancash was linked to a major realignment of domestic space and activities. Sociopolitically, the emergence of dense, architecturally differentiated habitation centers likely materialized the complexity of social arrangements and increased regional tensions, armed conflicts, and perhaps political centralization in some coastal areas.
Fieldwork at Caylán provides insights into urban-like forms of community organization and domestic lifeways associated with the development of walled house compounds, or cercaduras. Recent excavations and abundant material remains allow for the generation of working hypotheses on domestic life and household formations in the context of incipient urbanism in Early Horizon Ancash.

The residents of Compound-E were one of many groups who merged at Caylán. The motivations behind the emergence of the settlement are unclear, but the economic pull of the primary center; its heavy demographic weight, trading potential, and political capital; as well as the need for large-scale communal defensive strategies probably all played significant roles (Chicoine and Ikehara 2014). Preliminary data from fieldwork in 2009 and 2010 suggest that urban groups built, inhabited, and maintained house compounds where significant domestic and other productive activities were carried out. Of those, food processing and craft production are currently the most visible. The social status of each group was likely linked to its size and respective economic success. These materialized in the location, scale, and elaboration of the groups’ respective compounds, material wealth, and patterns of consumption. The competition and negotiation of residential space within the crowded urban area must have played a major role in structuring communal interactions and social arrangements.

Compound-E is located within the city center but not in immediate proximity to the central public space (Main Plaza). In addition, its dimensions and degree of elaboration are relatively limited in comparison to other larger and finely ornamented compounds (e.g., Compound-A). Plaza-E, for instance, appears to lack murals and clay friezes, which contrasts with more elaborate monumental structures at the site (e.g., Plaza-A). Yet the fine stone-and-mud masonry and repetitive colonnaded layout stand in stark contrast to the irregularly shaped wattle-and-daub residences hypothesized for the outskirt of the city.

Compound-E, like other cercaduras at Caylán, did not grow organically in a fashion typical of vernacular architecture in urban residential contexts. It is a formally designed compound that saw little de facto modification after its initial construction. Yet it was used for domestic tasks associated with two or more extended families of urban residents. Based on the spatial layouts and material assemblages, the most visible production activities include food processing, pottery work, and perhaps textile work.

The redundancy and consistency in the replicated compounds argue for rigid and shared spatial precepts. Yet the lack of specific features inside the patio rooms (e.g., storerooms, benches) argues against distinct predetermined functions. Rather, the use of the space could be altered in an expedient manner, by rearranging the semifixed elements of the built environment (e.g., pots, hearths, grindstones). The need for
cool shaded areas, in addition to the well-ventilated open air and sunny zones, was a key architectural concern. Shaded arcades produced by the colonnaded architecture, as well as the possible presence of trees inside the plazas, provided ideal spaces for residents.

More information is needed regarding storage facilities, but the sample excavated does not lend weight to production activities at a large-scale, suprahousehold level. This is different from patterns of Moche urban production documented at Huacas de Moche and Pampa Grande (Johnson 2010; Uceda Castillo and Armas 1998). Rather, the evidence from Caylán conforms well to patterns of generalized production associated with the immediate and medium-term need of multiple household members and their extended group. It is likely that production activities, at least as visible through the presence and relative frequencies of grindstones, were organized at the neighborhood level.

The presence of activity areas and associated remains within the house compounds at Caylán contrasts with data from other sites where walled enclosures were the dominant mode of spatial organization. At the Chimú site of Manchán in Casma, production activities and other domestic tasks were performed outside elite house compounds, inside perishable cane structures surrounding the formal compound architecture (Mackey and Klymyshyn 1990). Chimú cercaduras at other sites, including Chan Chan and Farfán, are also interpreted as residences for elite administrators detached from production activities (Mackey 2006). Along the same lines, John Warner (2010) interprets house compounds at the site of Jatanca (400 BC–AD 100) in the Jequetepeque Valley as mostly nondomestic in function.

Warner suggests that the absence of clear hearths, sleeping benches, and storerooms at Jatanca’s Compound 1 does not align well with expected domestic contexts. For him, the rigid and repetitive aspects of Jatanca’s compounds contrast with the more organic, agglutinated, and informal residences at other urban-like centers, most notably Grupo Gallinazo in the Virú Valley (Bennett 1950; see also Millaire and Eastaugh 2011). It is perhaps significant that, chronologically, the occupation of Compound-E at Caylán overlaps the development of analogous replicated compounds at Jatanca (Warner 2010, 9). The discovery of trash piles, broken tools, floor scatters, hearths, and potholes at Compound-E, however, contrasts with the evidence from Jatanca and suggests a more intensive domestic occupation and production activities. Along those lines, the Caylán data align better with the residential districts documented at El Purgatorio in Casma, where small-scale domestic processing coupled with episodic intensive surplus production for localized communal rituals are inferred (Pacifico, this volume).

The integration of Compound-E members within larger regional human networks remains unclear. Research at other Early Horizon sites, including the small
elite center of Huambacho and the seaside town of Samanco, suggests the existence of interdependent, perhaps specialized communities in the lower Nepeña Valley during the Nepeña Phase and in particular the Samanco Phase (Chicoine and Rojas 2012, 2013; Helmer 2015; Helmer and Chicoine 2015b). It is unclear whether urban residents at Caylán only had access to semiprocessed materials or if they could also acquire primary goods and raw materials.

More data are needed on the activities carried out within plazas, in particular, feasts. Nevertheless, research at the coeval elite center of Huambacho indicates that communal feasts were key mechanisms to negotiate authority (Chicoine 2011). Here, rooms adjacent to a large monumental plaza (Plaza-A) were used for feasting events and other gatherings, albeit of smaller scale and more fragmented composition than the events carried on inside the plaza. At Compound-E at Caylán, it is still unclear whether visitors and guests were granted access to residential areas at the back of the raised platform of the plaza. Evidence of feasting at contemporary sites suggests that this activity might be revealed during future excavations at Caylán.

The Caylán data indicate the development of well-planned house compounds with clear domestic and productive functions organized within a dynamic urban landscape with multiple organizational levels, from the centralized planning of streets and public spaces to the group-based endeavors linked to the construction, maintenance, and use of monumental house compounds or neighborhoods. As pointed out by Warner (2010) for Jatanca, the presence of multiple compounds within urban centers suggests the existence of several different social groups articulated through complex networks of political alliance, negotiation, and competition. Within emerging urban landscapes, households have the potential to become loci of power affirmation and negotiation, especially when monumental cercaduras—some lavishly decorated with sculpted friezes—likely played a major role in status acquisition and maintenance. At Caylán, intergroup hierarchies were materialized in the location, scale, and elaboration of house compounds. It is also likely that the scales of both production and consumption (e.g., feasting) acted as indices of economic prosperity and social capital.

The scale and complexity of Caylán’s compounds, in particular as viewed through excavations at Compound-E, contrast with examples of urban residences from Huacas de Moche. For instance, Claude Chapdelaine’s (2001) excavations at Compound 9 revealed more than forty rooms of different sizes and shapes—built, occupied, and remodeled over a period of more than 200 years. At least nine rectilinear rooms were enclosed and used for storage, suggesting productive capabilities beyond the household level. More than thirty elite residences had a single attached room that could have been used for feasts and maize beer production. Pending
future excavations, results from Compound-E suggest a similar annex linked to the use of a plaza space enclosed within the house compound.

At a broader scale, the emergence of enclosed lifestyles on the north coast of Peru was significant. While most research has focused on the development of Middle Horizon and Late Intermediate Period cercaduras (Bawden 1982; Moore 2003), recent findings confirm the appearance of enclosed lifestyles during the Early Horizon (Chicoine 2006; Warner 2010). It is significant to note that Early Horizon walled compounds in Nepeña contrast with Chimú cercaduras and other walled compounds documented on the north coast. As noted by Jerry D. Moore (2003), Chimú cercaduras materialized a shift in social hierarchies and a desire to exclude nonelite people from royal residences. Here, rulers and their entourage clearly tried to physically isolate themselves from the populace. The Caylán case, rather, suggests the co-residence of groups of various ranks and social roles within a dense urban setting.

At Caylán, co-resident groups could have been organized along multiple and complex networks of interactions, both vertical and horizontal (Helmer and Chicoine 2015b; Szpak et al. 2016). So far, no clear dominant group or ruling family can be recognized from surface architectural evidence. Rather, nucleation appears motivated by a desire to jointly organize defensive strategies and perhaps negotiate land tenure and water management. Yet the urban landscape was packed with groups who likely competed for influence and economic prosperity.

**CONCLUSION**

Ongoing research at Caylán challenges our traditional understanding of the Early Horizon and brings insights into ancient household institutions on the north coast of Peru. While scholars agree that households stand as basic units of socioeconomic (re)production, urban cercaduras at Caylán suggest that large, perhaps multifamily neighborhoods developed during the second half of the first millennium BC in the Nepeña Valley. Our research cautions Andeanists to remain critical and open to exactly what forms households took on the north coast of Peru in the past. At Caylán, each residential compound had an independent entrance, while internal spatial organization indicates subdivisions consistent with co-resident kin (or at least economically cooperative) groups. Preliminary excavation results and demographic estimates from the mid-size Compound-E are consistent with this working hypothesis. Yet we have to keep in mind that tensions might have arisen among the processes of urban integration, the potential for political centralization, and the apparent spatial independence of co-resident groups. Future excavations should yield data on patterns of abandonment, the curation of deserted cercaduras, land negotiations, and development of the urban landscape.
At Caylán, the hypothesized generalized patterns of domestic production suggest that urban neighborhoods—composed of several extended families—were relatively self-sufficient within the urban setting. People relied on communal builders whose work integrated different groups at the site level through shared architectural canons and spatial layouts. At the broader regional level, the Caylán community interacted with neighboring groups through subsistence exchange networks that linked inland and coastal settlements.

Finally, it is imperative to explore the relationships between the urban residents and the groups living in the periphery of the monumental core at Caylán. The mapping and preliminary observation of architectural remains indicate the presence of irregular-shaped structures with stone-and-mud foundations and possibly reed-and-mud walls and superstructures. More data are needed from other house compounds at Caylán and elsewhere in Nepeña and beyond to better understand trajectories of house compounds on the southern portion of the north coast at the onset of urbanism in the Andes.

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