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New Directions in Household Archaeology

Case Studies from the North Coast of Peru

BRIAN R. BILLMAN

The social world is accumulated history . . .

Pierre Bourdieu (1986, 241)

PROLOGUE

Imagine for a moment that we studied the Mediterranean world, not the north coast of Peru, and that this volume was about the period from AD 200 to 1460 in the Mediterranean world. In this strange parallel universe, archaeologists in the Mediterranean focused almost exclusively on the rise of Christianity. Nearly all of their research was about just one ritual of Christianity, a strange and mysterious ritual involving the transformation of wine and bread into the flesh and blood of the son of God. This ritual was performed only at monumental temples by powerful priests, who were dressed in elaborate regalia. In the ritual, a central figure was presented with the blood and flesh of the son of God, which he consumed. The main research questions were about identifying the archaeological remains of the Presentation Ritual, which was depicted in religious artwork of the period. The quest for proof that this ritual actually occurred led to excavations at the largest temple complexes, where large polychrome friezes and extraordinary royal tombs were discovered. These excavations revealed that, indeed, the Presentation Ritual did take place and that Christian institutions were remarkably stable from AD 200 to 1460. There was extraordinary continuity in iconography, religious art, and architecture throughout that long period. Rome emerged
as the first pan-Mediterranean center of the Presentation Cult, but soon after, Constantinople became a rival religious center. Archaeologists believed that in terms of iconography, art, and architecture, there was a Christian Culture West and a distinct Christian Culture East. Because of their focus on temples, royal tombs, and the Presentation Ritual in this strange and distant parallel universe, archaeologists failed to identify some of the most important historical processes in Western history. They failed to identify the fall of the Western Roman Empire, the rise and fall of the Byzantine Empire, and the rise of Western European kingdoms. Fortunately, that parallel universe really doesn’t exist. It’s mere fantasy. It doesn’t bear any resemblance to the north coast of Peru.

A ROAD NOT TAKEN

On the north coast of Peru in the 1970s and early 1980s, a cohort of young archaeologists embarked on a new direction in north coast archaeology: household archaeology as defined by Robert McC. Netting, Richard R. Wilk, and others (see Netting et al. 1984b; Wilk and Rathje 1982). Although long a staple of research in other areas of the world, most notably the American Southwest and Mesoamerica, systematic, multidisciplinary investigation of household dwellings and domestic middens was new to the north coast. These researchers sought to understand social life and social change on the north coast through the excavation of diverse samples of households, both at urban centers and in rural sustaining areas. Much was happening. John Topic had completed his magnum opus on crafting households in the urban barrios of Chan Chan (J. Topic 1977, 1982). Richard Keatinge (1974, 1975) and Shelia G. Pozorski (1979, 1982) completed a multidisciplinary study of households at Cerro la Virgen, the main settlement in the hinterland of Chan Chan (see also Griffis 1971). Pozorski (1976, 1978, 1982) had finished her dissertation, which presented the results of her rigorous quantitative analysis of a large sample of household middens in the Moche Valley, ranging in date from the start of the Late Preceramic through the Late Horizon. At the site of Moche, Theresa L. Topic (1977, 1982) conducted the first ever excavation of Moche households, giving us our first view of the layout of household architecture there. Her excavation in the nuclear core of the site revealed 5 m of stratified deposits of domestic architecture and middens. Moche wasn’t a vacant ceremonial center as others had imagined (Schaedel 1972, 1985). At Galindo, the Late Moche Phase political capital of the Moche Valley, Garth Bawden systematically excavated a large sample of household structures, ranging from the lowest status to the highest status at the site. His dissertation was one of the first quantitative analyses of variation in household wealth in the Andes (Bawden 1977, 1982). In the Lambayeque Valley, Izumi Shimada (1994)
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conducted large-scale excavation of households at the sprawling Late Moche urban center of Pampa Grande.

We were on the verge of a revolution in north coast archaeology. Sure, ciudadelas, chamber tombs, and huacas were great, but households—households were the key. The driving notion was that household archaeology was crucial to understanding the development of urban centers and the rise and fall of states and empires on the north coast. In this period, households mattered.

And then the revolution was over. Household archaeology largely ended on the north coast by the mid-1980s. Jerry D. Moore's (1981, 1985, 1991) research in the barrios of Manchán and at Quebrada Santa Cristina and Thomas and Shelia Pozorski's (1986) excavations at Pampa de las Llamas were some of the last household excavations conducted on the north coast for a decade.

Maybe it was the discovery of the polychrome friezes at Huaca de la Luna and El Brujo in 1990 and 1991 (Franco Jordán et al. 1994, 1996; Uceda Castillo 2001; Uceda Castillo et al. 1994). Maybe it was the royal chamber tombs at Sipán, San José de Moro, and Batán Grande, each one loaded with fine ware pottery (rich in iconography) and ceremonial regalia made of gold, silver, copper, turquoise, lapis lazuli, and Spondylus (Alva Alva and Donnan 1993; Castillo Butters 2001; Castillo Butters and Donnan 1994; Donnan and Castillo Butters 1994; Shimada et al. 2004). Then there were the finds of sacrificial victims at Huaca de la Luna and El Brujo (Bourget 2001a, 2001b; Verano 1998, 2001a, 2001b).

By 1990, the archaeology of the North Coast had shifted dramatically to the almost exclusive study of the elite culture of Moche and Sicán. The focus was on the excavation of elite tombs, temples, and human sacrificial victims in conjunction with the interpretation of iconographic narratives depicted on murals, metal objects, and pottery. The household archaeology of the 1970s and 1980s proved to be a road not taken and opportunities missed.

This volume picks up where the revolution in household archaeology ended around thirty years ago. Here we see some of the results of a small group who have been quietly doing detailed, multidisciplinary household archaeology on the north coast of Peru. This renaissance in household archaeology is a hybrid of many influences. For instance, my main influence is the long tradition of household archaeology in the southwest United States (for example, Lightfoot 1994; Varien 1999), while others may find their inspiration in Mesoamerica (for example, Flannery 1976; Flannery and Marcus 2005; Smith 1987, 1993; Smith et al. 1999) or the southeast United States (Pluckhahn 2010; Wilson 2008). Nonetheless, we are unified in the belief that society and social change is best viewed from the bottom up. We are also unified by a group of methods that includes 100 percent screening of excavated fill, systematic collection of samples for fine-screening and special analysis,
and rigorous reconstruction of formation processes and context. This approach is fundamentally multidisciplinary, integrating ethnobotany, palynology, zooarchaeology, bioarchaeology, archaeochemistry (residual and bone chemistry analysis), metallurgy, geoarchaeology, and ceramic and lithic analysis. It is also fundamentally context-driven in that it involves the systematic analysis and recording of the processes that formed each context (Schiffer 1985, 1987), what Kent Lightfoot (Lightfoot et al. 1998) calls the contextual approach.

In this chapter, I begin by examining the question: Why households? Drawing on the chapters in this volume, I outline a series of crucial research questions for the north coast that can be best addressed through the investigation of households. I advocate a social historical approach to understanding social change (aka bottom up), drawing inspiration from the Social History and Annals schools of thought (see, for example, Braudel 1992a, 1992b, 1992c; Hobsbawm 1996a, 1996b, 1996c). Further, I argue that Pierre Bourdieu’s (1986) concept of three forms of capital (economic, social, and cultural capital) may hold a key to addressing questions concerning the integration of households into communities and overarching political organizations. New theories and new questions require new methods, new manners of work. Household archaeology is, at its foundation, a practiced-based discipline. Based on the experience of the contributors to the volume (and my own experience in the Andes and the Southwest), I discuss four best practices in household archaeology for the north coast of Peru and perhaps beyond.

WHY HOUSEHOLDS?

The articles in this volume and elsewhere (see Costin and Earle 1989; D’Altroy and Hastorf 2001a, 2001b; Deetz 1976; Nash 2009; Robin 2003, 2013a, 2013b; Smith 1993; Smith et al. 1999) demonstrate the importance of the household perspective in understanding historical processes of social, political, and economic change. If we have learned anything over the last thirty years of theoretical debate, we have learned that people matter; people are agents of social change. However, people are not free agents; they act within historically specific structures, such as the physical environment, ecological relationships, demographic processes, gender roles, social organizations, political institutions, and, most important, the distribution of various forms of capital (social, cultural, and economic) (Bourdieu 1977, 1986). These structures shape history and are shaped by history (Bourdieu 1977).

Households are one of the most important structuring agents in human societies. Households are groups of people who (1) are bonded by marriage, blood (fictive or biological), or other means, (2) pool labor to advance the common purposes of the household, and (3) live together at least some of the time or have the right of
co-residence (see Netting et al. 1982; Wilk and Rathje 1982). One of the primary purposes of households through time has been to maintain the well-being of their members, especially the raising of children, who come into the household by birth, adoption, fostering, or captivity. Even in our modern era of mass media, schools, and government, the household remains the key locus of enculturation of children, where social norms are learned and gender roles are defined (see Brumfiel 1991; Gagnon et al. 2013; Gero and Conkey 1991; Hastorf 1991; Hendon 1997; Johnson, this volume; Lambert et al. 2012; Lightfoot et al. 1998; Roth 2010; Tringham 1991, 1994; Voss 2008; Weismantel 1988, 1989). Further, we use households to protect our families from natural disasters (floods, earthquakes, or droughts) and adapt to changing times. People use households to pool labor and risk and to acquire and hold various forms of capital.

At the household level, social statuses are negotiated, goods and services are produced, and labor is accumulated or extracted by overarching institutions or social movements. Since the beginning of full-time farming and herding, nearly all of the food consumed by people was produced by household-based farms. This has changed only recently with the creation of corporate farms and multinational food corporations. Nonetheless, even today, a significant percentage of global food production is from family farms. Based on agricultural censuses, Benjamin E. Graeub and his colleagues (2016) estimate that globally today, family farms constitute over 98 percent of all farms and that family farms work on 53 percent of agricultural land. Smallholding households are an enduring rural institution around the world (Netting 1993). Households are not passive agents but actively structure and reproduce ecological, economic, social, and political relationships.

The clear implication is that households matter because households are the fundamental social grouping in human society, infinitely varied in possible forms but universal in core. This is not to say that all households are the same throughout history and prehistory (see discussion in chapter 1, this volume). The hallmark of the human household is its diversity of forms. Variation is limited only by human imagination and history.

In the Andes, households were the foundation of political organizations in prehistory. During the Late Intermediate Period (LIP) and Late Horizon (AD 900–1533), households paid the taxes and tributes that supported the political economies of chiefly societies, states, and empires of the Andean world, a practice that continued during the reign of the Spanish Empire. Furthermore, most of the craft goods circulating in ancient Andean societies were produced within households. For instance, painted Moche pottery, ceramic figurines, and instruments were likely produced in home workshops at political centers (Uceda Castillo and Armas Asmad 1997, 1998). However, there were exceptions to household crafting,
most notably the chosen women who weaved for the Inka royalty and the craft workshops of Huanaco Pampa, which apparently were worked by mit’a laborers who traveled there to work.

Households have been overlooked for so long in the Andes and other regions for many reasons. The great monuments and works of art of the ancient Andes capture the eye and take hold of the imagination. However, they cannot be fully understood without studying the households that produced the labor, materials, and skills that built those monuments and crafted the works of art. In this volume, Johnson’s study of Moche figurines reveals that the rituals performed at the grand monuments did not encompass all Moche rituals and beliefs. A different set of rituals was performed within households, which focused on woman’s knowledge, fertility, and female activities. Figurines may have played a key role in the definition of gender roles within the household (see also Ringberg 2007).

To understand the historical development and structure of prehistoric societies on the north coast and elsewhere in the Andes, we must understand the relationships between political institutions and households, royal and noble households, royal and commoner households, crafting and farming households, and urban and rural households. From historical and ethnographic sources, we know that households are often the locus of intense political activity, such as coalition building (see Blanton 1994 for a review of this issue). The chapters in this volume provide examples of political activities within households on the north coast. Chapters by Chicoine and colleagues and Pacifico reveal that collective political action often takes place within residences. Their case studies reveal that groups of extended families formed corporate units that resided together within large, walled compounds at urban centers. Households were actively negotiating their political position in a larger urban setting by conducting elaborate feasts and performances within residential compounds.

Households can also be a source of social change. Although individuals have agency, social change happens through group action. As the fundamental human social group, households often formed the foundations of social change. When ancient tyrants imposed taxes, the impact was felt at the household level (see, for instance, Brumfiel 1991; Costin and Earle 1989; Cutright, this volume, 2009, 2010, 2011, 2015; D’Altroy and Hastorf 2001a, 2001b; Smith 1993; Smith et al. 1999). In the Andes, we have countless cases of peasant households unifying in revolt against the Spanish Empire and later against postcolonial Andean nation-states. The chronicles describe many rebellions against the Inka Empire by local ethnic groups. In the Andes, the peasants were not a “sack of potatoes,” to use Karl Marx’s infamous insult of the role of peasant households in social change. Unfortunately, very few Andean archaeologists have investigated household resistance in the prehistoric
era. Resistance is an important direction in Andean archaeology, especially for the north coast, because of the long history of the rise and fall of centralized polities.

Studying the full range of households on the North Coast allows us to investigate fundamental questions of broad anthropological interest. The chapters in this volume directly or indirectly engage with such fundamental issues, including:

- What strategies were used by royal and noble families to extract labor and resources from rural and urban households? How did those strategies change through time?
- How did households resist states and empires?
- Were rural households transformed by the formation of urban centers, ceremonial centers, and centralized polities? If so, to what degree and in what ways?
- What were the size range and the structure of urban households? How did urban households form, and how were they similar to or different from rural households?
- What were the relationships between urban and rural households?
- Did rural and urban households adopt the beliefs and religious practices associated with states and empires? Is there evidence of resistance to state religions?
- What were the economic impacts of states and empires on households?
- How did social stratification develop over the longue durée of prehistory? What forms of capital did royal and noble households control? How was capital distributed across households?
- How did gender roles and relationships change over the longue durée of prehistory? How did the formation of centralized polities impact gender roles?

TOWARD NEW DIRECTIONS IN HOUSEHOLD THEORY

To investigate these questions, we need to do more theory building. General theories of political power are crucial to our understanding of north coast polities. In this conceptual territory, we need to continue to build on the theoretical work of Bray (2003), Costin and Earle (1989), D’Altroy (1992), D’Altroy and Earle (1985), DeMarris et al. 1996, Earle (1997), Earle and Spriggs (2016), Haas (1982, 1987), Hastorf (1993), and Schreiber (1992).

A promising addition to this long tradition of the study of political power in anthropology is the notion of capital. Pierre Bourdieu (1986, 241) defines capital as “accumulated labor (in its materialized form or its ‘incorporated,’ embodied form) which, when appropriated on a private, i.e., exclusive, basis by agents or groups of agents, enables them to appropriate social energy in the form of reified or living labor.” In other words, capital is accumulated labor that has the potential to yield
gains for the holders. This resonates with the conception of political power (aka social power) as the ability of leaders to get people to do things through the application of positive or negative sanctions (Adams 1975; Earle 1997; Haas 1982; Mann 1986). In essence, political power is based on the control of capital because political power is based on the control of accumulated labor that yields gains.

Human capital can take many forms or guises (Bourdieu 1986). In our contemporary world, capital is monetized in a myriad of financial instruments, such as paper and electronic money, stocks, bonds, futures, loans, insurance, reinsurance, derivatives, and credit default swaps, to name a few. Bourdieu (1986) proposes broadening this conception of capital by defining three forms of capital: economic, social, and cultural. All three forms are accumulated labor, but by different means and in different forms. Politics and daily life are structured by types and quantities of capital held by households, political organizations, and other institutions (Bourdieu 1986).

The logic of this theoretical approach implies that to understand the rise and fall of ancient states and empires, we must understand changes in the distribution of various forms of capital across a wide range of households. Our challenge is to examine how households were linked together into durable networks of human capital.

For instance, the primary source of economic capital in prehistoric agrarian societies on the coast of Peru was irrigation systems. These systems were the result of modest to truly massive investments of labor and expertise (Billman 2002, 2010; Hayashida 2006; Huckleberry et al. 2012; Moseley and Deeds 1982; Ortloff et al. 1985; Pozorski 1987). They were durable capital investments that yielded substantial, sustainable annual returns in the form of rents, foodstuffs, and industrial crops (cotton, for instance). Sustaining these systems of economic capital—this vast human-made landscape—required continuous investment of labor and expertise. The distribution of forms of economic capital across households, and the networks of households through which economic capital flowed, structured ancient political and social life on the coast. Other potential forms of ancient Andean economic capital may have included rights to fisheries, herds, pasture, bosque seco, and mines and control of craft workshops. For instance, control of potters, metalsmiths, and other crafting households was an important source of capital for Moche and Chimú leaders (Billman 2010; J. Topic 1977, 1982; Uceda Castillo and Armas Asmad 1997, 1998).

Bourdieu (1986, 249) defines social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition—or in other words, to membership in a group—which provides each of its members with the backing of the collectivity-owned capital, a ‘credential’ which entitles them to credit, in the various senses of the word.” In other words, social capital is labor that is accumulated through social networks, such as kinship networks (e.g., moieties,
clans, or lineages), systems of reciprocity, feasts, clubs, churches, secret societies, and political patronage networks. In the Prehispanic era on the north coast, social capital no doubt took many forms. In the LIP, groups of commoners formed *parcialidades*, which were probably corporate, resource-owning lineages (Cock 1986; Netherly 1977, 1984, 1990; Ramirez 1996). Each *parcialidad* specialized in an occupation, such as farming, fishing, or crafting; and each paid “rent” to a *curaca*, who “owned” the land or fishery. These *curacas* were organized into noble or royal lineages, which were arranged in a hierarchy with the reigning royal lineage at its paramount. For households in the LIP, membership in a *parcialidad* may have been the primary means of accessing social capital.

Cultural capital is labor accumulated in the acquisition of knowledge, such as time spent in formal education, apprenticeship, religious training, pilgrimages, rites of passage, and other forms of the quest for knowledge (Bourdieu 1986). Cultural capital also includes labor expended in the acquisition of the manners and tastes of a particular class, occupation, caste, or other group identities. Cultural capital is the basis of social distinction (Bourdieu 1984). The origins and structure of social stratification cannot be understood without an understanding of the production and distribution of cultural capital and cultural goods (often called “prestige goods” in the archaeological literature) (see, for instance, Bray 2003; Hastorf 2003). Sacred knowledge, iconography, rituals, sacred objects, and ancestral mummies were perhaps some of the dominant forms of objectified cultural capital on the coast perhaps as far back as the Late Preceramic Period.

Economic, social, and cultural capital can be embodied, objectified, or institutionalized. For instance, cultural capital can be objectified in iconographic texts, ritual objects, monuments, temples, sacred places, and landscapes; embodied by dress, speech, and manners, including tattooing and cranial modification; or institutionalized by the creation of formal positions of authority, religious or bureaucratic offices, schools, laws, and formal ritual practices (Bourdieu 1986).

Economic, social, and cultural capital are also fungible. One form of capital may be converted to other forms of capital. How households, groups, and leaders converted capital is key to understanding social processes (Bourdieu 1986). On the north coast, cultural capital may have played a key role in accumulating economic and social capital. In the Initial Period and Early Horizon in the Moche Valley, leaders invested far more labor in the construction of monuments for the public performance of ritual than was invested in irrigation (Billman 2002). Irrigation systems were small and were likely built and maintained by small rural communities (Billman 2002). Ritual performance (aka cultural capital) may have been the primary means by which supralocal leaders tapped into the economic capital of small autonomous irrigation systems.
HOUSEHOLD HISTORIES AND THE SOCIAL HISTORY OF ANCIENT HOUSEHOLDS

Households are fundamentally labor accumulated in various forms. Historically, people have used households to acquire, defend, and transmit capital to subsequent generations. Likewise, political organizations, such as factions, states, empires, and institutionalized religions, have relied on households as sources of economic, social, and cultural capital. Consequently, the investigation of household histories (individually and in groups such as communities and neighborhoods) is crucial to understanding how households and polities were linked by the flow of various forms of capital.

One might call this approach to investigating households biographical or historical. However, I think of it as social history in the tradition of the French Annals School (see, for example, Braudel 1992a, 1992b, 1992c) and the British Social History movement (see, for example, Hobsbawm 1996a, 1996b, 1996c). By social history, I mean the view of history from the bottom up. Rather than focusing exclusively on rulers and their customs and practices (the capital of “haute” culture), a social history approach contextualizes the elite realm of rulers within the wider world of farming, crafting, and fishing households (see discussion of fields in Bourdieu 1977). Social history is the integrated history of political, social, economic, and ecological change from the perspective of the masses. Regardless of whether one embraces Bourdieu’s conception of forms of capital, the chapters in this volume demonstrate the utility of a social historical approach to households.

This emerging emphasis on the social history of households has brought fundamental changes in the way archaeology is done on the north coast. The great diversity of household forms and their flexibility in the face of change present archaeologists with many challenges. Excavating a household is different from excavating cemeteries and mounds (no surprise there). Household archaeology is, in essence, a group of flexible best practices in fieldwork and analysis rather than a rigid rulebook of recipes. Best practices are derived from lessons we have learned through the critical examination of collective experience. The term tried and true comes to mind.

Our collective experience over the last twenty years of household archaeology on the north coast of Peru has demonstrated that four best practices are key to doing good household archaeology:

- Documentation of the occupational history of dwellings, especially the history of remodeling and the duration of occupation
- Comprehensive data recovery through 100 percent screening of all fill types (with a few exceptions) in combination with the systematic collection of floor and bulk fill samples from all contexts for fine-screening and special analysis
Documentation of Household Histories

To build a social history of any valley on the north coast, the history of a large sample of households from a cross-section of society must be documented: rural and urban commoner households, rural and urban elite households, and fishing and crafting. One of the keys to social history is understanding the political and social landscape in which households were situated through the integration of settlement pattern data and household histories (e.g., see Varien 1999). Although time-consuming, the systematic documentation of a comprehensive sample of households is essential for understanding the social history of regions and social processes.

The main physical manifestation of ancient households is the residential structure or structures and their associated activity areas, extramural features, and trash deposits—aka the home (Moore 2012; see also chapter 1, this volume). Understanding household histories requires complete or near-complete surface collection and excavation of dwellings, as well as sampling of middens and extramural activity areas. Although a time-consuming process, comprehensive documentation of floors, features, walls, and associated middens is central to the process. For instance, one must systematically record the number of layers of plaster on floors and walls, bonding/abutting walls, sealed doors, sealed floor features, remodeling of hearths, and similar items. When complete stripping of plaster and floors cannot be implemented, strategically placed test pits (aka windows) can provide this information. Micromorphology, geochemical analysis, and analysis of microartifacts from floors hold much promise for taking the analysis of households to a new level (see Parker and Sharratt 2017; Parker et al. 2018).

In addition to new methods, doing household archaeology requires the development of special kinds of middle-range theory. To do household archaeology well means developing usable middle-range theories of spatial grammar, gendered use of space, duration of occupation, room function, household demography, household development cycles, seasonality of occupation, and modes of abandonment. These are key dimensions of household life, which must be analyzed before we can get to broad questions of social change. We cannot skip ahead. We must build upward toward grand conclusions by constructing chains of inference concerning the quotidian aspects of household theory. To develop middle-range theory, we need more ethnoarchaeological studies of fishing, herding households, vernacular architecture, and other traditional practices on the
north coast (for example, see Hudson’s 2011 study of contemporary Huanchaco fishing households).

Estimating the duration of occupation of dwellings is key to understanding social organization (chapters by Duke and Zobler, this volume; Pauketat 1989; Schlanger 1991; Varien 1999; Warrick 1988). Long multigenerational occupations of great houses may signal the development of hereditary distinctions and of accumulated, heritable capital (see chapters in this volume by Chicoine et al., Pacifico, and Morrow). Among rural farmers on the north coast, the construction of durable multigenerational household compounds from stone and adobe may indicate the development of hereditary rights to arable land and the formation of smallholder households (Netting 1993). Within urban centers, long-term occupations of residential compounds may signal the development of hereditary occupations. For instance, the superposition of four potting households at the site of Moche indicates the long-term presence of households of potters in one particular neighborhood at the sites, perhaps for several centuries (Uceda Castillo and Armas Asmad 1997, 1998). This suggests the emergence of hereditary occupational specialization in pottery production. These types of durable household compounds contrast with the short-term residences of new immigrants or transitory, seasonal workers.

Estimating the duration of occupation of households, therefore, is essential for understanding households and social change (see chapters by Duke and Zobler, this volume). Although there is a large, diverse literature on duration of occupation, few of these techniques have been applied on the north coast (for exceptions, see Moore and Gasco 1990; Ringberg 2012). Duration of occupation can be estimated from discard rates of cooking vessels (see, for instance, de Barros 1982; Deboer 1974; Pauketat 1989; Varien and Mills 1997; Varien and Potter 1997; Wilson 2008) and from studies of the use-life and durability of vernacular architecture (Lightfoot 1994; McIntosh 1974; Moore and Gasco 1990; Wilson 2008). More ethnoarchaeology and experimental archaeology needs to be done on the various forms of traditional, vernacular architecture on the north coast (for examples from other regions, see Deal 1985; Deetz 1982; Graham 1993, 1994; Hayden and Cannon 1982a, 1982b; Joyce and Johannessen 1993; Kamp 2000; Kent 1992; Kramer 1982; Lawrence 1999; LeBlanc 1971; LeeDecker 1994; Murray 1980; Narroll 1962; Oswald 1987; Rathje and McGuire 1982; Rocek 1988; Stevenson 1982).

Household development cycle is another crucial dimension of social life (Goody 1971; Netting et al. 1984b; Prossor et al. 2012; Weismantel 1989; Wilk and Netting 1984; Wilson 2008). Households have cycles of growth and decline. Within an urban neighborhood or rural village, there may be the remains of households that appear poorer than others because they are smaller and have fewer of certain types of artifacts, such as fineware pottery. However, these differences might not reflect
hereditary social stratification but rather differences in household cycle. Such dwellings might be small and have limited artifact assemblages because they were abandoned in the early stage of development, not because they occupied a lower class status. Newly established households, formed by young married couples, may appear poor compared to their parental homes (Weismantel 1989). To find evidence of poverty in prehistory, we must compare household structures of similar duration of occupation. We must look for long-term evidence of enduring poverty. For instance, Zobler’s excavations at Talambo (this volume) revealed an initial occupation consisting of the remains of a modest *quincha* domestic compound, which was transformed into a more durable stone and adobe compound in the second phase of occupation. Might this superposition be the result of the household development cycle rather than social status?

Duration of occupations and household cycle studies are also essential for examining household resilience. Chapters by Cutright and Zobler in this volume underscore the importance of duration of occupation as a measure of household resilience in the face of climatic perturbations, such as El Niño events, and the rise and fall of regional polities. This research indicates that some households in the Jequetepeque Valley were more resilient because of their location in relation to the valley’s irrigation system and their position in the regional social landscape.

In addition to issues of resilience, social stratification, and status, house histories can reveal the impacts of political domination. At important junctures of social change, such as empire conquest, households may shift in size, composition, and residence in response to new imperial taxes (see, for instance, Brumfiel 1991; Costin and Earle 1989; Cutright, this volume, 2009, 2010, 2011, 2015; D’Altroy and Hastorf 2001a, 2001b; Smith 1993; Smith et al. 1999). Consequently, understanding the construction history and remodeling of residential structures is also a key to understanding regional political change.

### Comprehensive Data Recovery

In combination with comprehensive surface collection and excavations of dwellings, a social historical approach to households and social change requires a focus on “small things forgotten,” to use James Deetz’s (1976) famous phrase. This means screening 100 percent of the fill from dwellings and middens, combined with systematic sampling for pollen, phytolith, macrobotanical, microartifact, and geochemical analysis. We should collect a 5- or 10-liter sample from every context investigated as well as systematically collect samples of floor material.

The issue of screening is one that divides Peruvian and North American archaeologists. In the United States and Canada, where monumental architecture and royal
tombs are largely absent, archaeologists primary deal with small residential sites and hunting-and-gathering camps. Consequently, North Americans automatically screen all deposits unless there is a clear and compelling reason to skip screening certain fill types. Our default setting is screening. In contrast, Peruvian archaeologists, especially those on the north coast, come from a different tradition, one that focuses on temple and tomb excavations. Typically, massive volumes of looted back dirt and wallfall must be removed to reveal the architecture, murals, and burial chambers. However, when this monumental approach is applied to household excavations, the result is the excavation of large areas without screening or only limited screening of certain features, such as burials. This approach has been useful in that it has revealed internal layout of households and the spatial organization of residential sectors at urban centers (Chapdelaine 2001, 2002, 2003; Uceda Castillo et al. 1997, 1998, 2000, 2004, 2006, 2008). However, much information is lost, ultimately limiting the kinds of questions we can ask.

Comprehensive screening of household architecture and domestic middens is essential for understanding the socioeconomic status of households, household activities, use of space, household histories, and formation processes, to name a few. There is no substitute, no viable alternative. For instance, when digging floors, point-plotting of artifacts in contact with the floor is not sufficient for understanding the activities that happened on the floor. Many of the larger items on the floor may have been deposited after abandonment of the room, either as trash or by natural agents, while large items associated with room activity were removed prior to abandonment or scavenged after abandonment (Cameron 1991; LaMotta and Schiffer 1999; Lightfoot 1993; Schiffer 1985; Tani 1995).

Experience demonstrates that the small items, such as bone or shell fragments, carbonized seeds, and small artifacts, are the best indicators of room activity. These small remains cannot be quantified without the screening of floor fill and the collection of samples for fine-screening and special analysis. In the American Southwest, archaeologists excavate the fill in contact with the floor as a separate level, known as “floor fill.” This is usually an arbitrary level of fill within 5 cm to 10 cm of the floor. Screening and bulk sampling of this floor fill layer can reveal a wealth of information on the use of floor surfaces and abandonment processes.

Comprehensive screening, however, should not be limited to floor fill. Even seemingly sterile room fill, or at least a significant sample, should be screened. Too often, room fill is seen as an inconvenience that must be removed as quickly as possible to get to the “in context” goodies. However, room fill can reveal the history of the abandonment of the room and its transition into the archaeological record. We really cannot understand floor assemblages without understanding fill-associated fill assemblages. Screening allows the archaeologist to systematically identify the
processes that formed episodes of fill through the recovery and analysis of ecofacts and artifacts from the fill.

Perhaps equally important, the process of screening forces us to slow down and look at the structure of the fill as well as its cultural and natural constituents. Screening gives us a lot to think about as well as the time to think, observe, and mull over ideas as we work our way down to floors.

Systematic Identification of Fill and Context Types

Screening is not just about artifact and ecofact recovery. It is also about systematically and rigorously defining formation processes, fill types, and contexts. Identifying how deposits are formed is the single most important inference in household archaeology (no doubt this is true for archaeology in general). Human actions result in assemblages of artifacts and ecofacts, but not all assemblages are the direct result of human actions. Distinguishing between sediments formed from natural processes and those formed by human actions is crucial, requiring multiple lines of evidence for accurate interpretations. Every subsequent inference we make will probably be wrong if we don’t get this right.

While it is possible to identify fill types and formation processes without screening, it is easier to do this effectively and accurately when all or most of the fill is screened. Too many important details are lost when screening is not done. Screening forces us to look at the cultural and noncultural constituents of the fill (known as clasts in the parlance of geomorphology).

Most of my time digging is spent taking notes, talking about the fill and architecture with the excavators, and regularly scraping, poking, and picking at fill with my blunt-nosed trowel. I also spend a good deal of time at the sorting table to get a handle on the type, size, and shape of rocks in the fill (e.g., rounded, subangular, or angular); the quantity, type, and sizes of artifacts and ecofacts; and the state of preservation and modification of cultural constituents.

For instance, a valuable piece of information is sherd size. Average sherd size is a good proxy of formation processes. Primary trash deposits are often characterized by the presence of many large sherds (especially large conjoining pieces). With movement from primary to secondary to tertiary contexts, sherds are broken into smaller and smaller pieces. Also, modern and prehistoric foot traffic and salt crystal formation from ocean breezes can chew up sherds.

Sherd wear, such as eroded surfaces or rounded edges, is another indicator of the processes that reworked deposits after their initial deposition by human agents. In the lab, sherd size and wear (both use-wear and postdepositional wear) can be systemically analyzed, and field observations can be tested. In addition to sherd
size and wear, analysis of formation processes must involve analysis of other clasts as well as the structure of fill. Multiple lines of evidence must be used to infer formation processes. None of this, of course, is possible without screening and bulk sample collection.

Exceptions to screening can be made only after we have determined with certainty how a specific stratum of fill was formed and that little meaningful information will be lost by not screening. Also, sometimes constraints on time, such as the imminent destruction of the site or part of the site, require us to cut corners on screening.

In addition to examining the clasts in each layer of fill, we must examine the structure of the fill as it is being excavated as well as the relationship of fill layers to architecture and features. Alas, we are all too likely to cut corners by rapidly shoveling out fill, believing “it’s okay; all will be revealed in the profile.” However, a profile is a two-dimensional slice of three-dimensional layers of fill. I first became aware of the limits of profiling when I worked with complex superpositions of floors and trash deposits at Cerro la Virgen in the Moche Valley. We found that excavation usually revealed far more stratigraphic complexity than was observable in the profile. Typically, many more floors were found during the excavation than were visible in the profile.

While working with Gary Huckleberry on the north coast as well as with other geoarchaeologists in coastal California and in the American Southwest, I noticed that geoarchaeologists treat a profile differently than do archaeologists. Many times I’ve cut a nice, straight profile, outlined the fill layers, and blown off every speck of dust, only to see—to my horror—the geoarchaeologist attack the pristine profile with a geologic hammer or small pick. The reason for this is that geoarchaeologists want to see the structure of the fill, the range and density of clasts, and the orientation of sediments and clasts, among other things.

My point is simple: fill types and contexts need to be defined through critical examination of fill during excavation. If carefully excavated and screened, the formation processes of each layer of fill can be identified, described, and then systematically coded. Likewise, the context of fill can be systematically and consistently coded. By coding fill and context, analysts can sort their data by the same categories, such as primary trash, secondary redeposited trash, wallfall, general architectural fill, floor fill, floor contact, subfeature fill, or construction fill. Systematic coding of provenience data and the construction of a relational database are the twin foundations for quantitative, multidisciplinary analysis.

Quantitative Multidisciplinary Analysis
Household archaeology requires a multidisciplinary team of researchers. Household excavations often yield an extraordinary quantity and diversity of ecofacts
and artifacts. This is especially true for the north coast, where preservation is often ideal because of hyperarid conditions. This means collaboration among ceramists, paleoethnobotanists, zooarchaeologists, and archaeochemists (for residue and isotope studies). Additional collaboration may be necessary with metallurgists, textile specialists, lithic analysts, geoarchaeologists, palynologists, and bioarchaeologists. The project leader as director of excavations should be tasked with description, analysis, and interpretation of architecture and stratigraphy. To be effective, analysts need to work off a descriptive manuscript on the excavations and architecture in draft form, ideally with accompanying photographs, maps, profiles, and cross-sections.

To integrate all these various lines of investigation by specialists, a project needs a well-designed relational database (usually in Access). On our projects in the Moche Valley, we use a provenience designation system and a specially designed Access database. The mother file, or Provenience Data file (PD file), contains all of the data on each provenience investigated (whether that be a level in a unit, a surface collection unit, a test trench, looter hole, profile, grab sample, or any other unit of space). The type of unit, feature information, context, fill type, methods employed, dates, recorder, elevations, disturbance, and other descriptive provenience data are coded and entered into the PD file. All of the information in this file is linked to specialist data files through the use of provenience designation numbers, known as PD numbers. There is a PD log for every site, with proveniences investigated designated as PD 1 through PD \( n \). A unique number is created for each item in the catalog by combining PD numbers with their associate Field Specimen numbers (e.g., PD 1 and its associated FS 1, 2, 3, and so on, equals 1.01, 1.02, 1.03, and so on).

A PD system and relational database ensures that all of the analysts are using the same provenience data when they build tables or do statistical tests. It also enables analysts to sort their data by fill types, context, feature types, room types, and so on, which are coded in the Provenience Data file. A combined PD system and relational database also allows researchers to do multivariate spatial analysis of patios, rooms, and structures by integrating all specialist data (see, for instance, Allison 1999; Flannery and Marcus 2005).

One final point on multidisciplinary analysis is the importance of standardized measures and tests. Many different statistical tests and quantitative measures are used in this volume. We need to cooperate more in this area so we can compare households across our projects. Three specific measures are ideal for cross-project analysis: ubiquity, abundance, and richness. These measures have become standard in paleoethnobotanical analysis (Gumerman 1991, 2002; Hastorf 2003; Hastorf and Popper 1988; Popper 1988; VanDerwarker and Peres 2010; VanDerwarker et al.
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They also can be used in artifact analysis (Earle et al. 1987). Another important standard measure is the ratio of corn kernels to cobs, which can be used to track tribute payment and use (Cutright 2009, 2010, 2015; Scary 2003; Welch and Scary 1995). Likewise, we need to standardize the analysis and reporting of faunal remains (see Reitz and Shackley 2012; Reitz and Wing 2008). Surprisingly, no one has studied the frequency and distribution of bone elements on the north coast of Peru. By looking at the distribution of body parts of deer and camelids between households or between sites, we can examine status difference, and differential access to prime cuts as well as regional systems of exchange (Jackson and Scott 2003; Miller and Burger 1995; Pohl 1994). Also important are data on the age distribution of camelids and deer in assemblages, which can be used to reconstruct herd management and cropping patterns.

CONCLUSION

In sum, archaeological research on the north coast of Peru since 1990 has focused almost exclusively on the cultural capital of the Moche and Chimú nobles and royalty: art and iconography, public architecture, wealthy tombs, and elaborate rituals. Although these were important forms of cultural capital, we cannot understand ancient societies on the north coast without understanding the distribution of economic, social, and cultural capital across households. By doing household archaeology, we are essentially recasting the study of north coast prehistory as a study of long-term social history. Only time will tell if household studies will flourish on the north coast or if this will be another revolution lost.

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NOTES

1. Bawden’s work was truly pioneering. Since his excavations at Galindo, the analysis of household wealth has become a mainstay of household archaeology (see, for example, Abrams 1994; Carnean et al. 2011; Costin and Earle 1989; Cutright 2009, 2010; Cuéllar 2013; D’Altroy and Hastorf 2001a; Earle et al. 1987; Flannery and Marcus 2005; Gumerman 1991, 2002; Jackson and Scott 1987; LeCount 1999; Lightfoot et al. 1998; Netting 1982; Pohl 1994; Rathje and McGuire 1982; Robin 2013a, 2013b; Smith 1987, 1993; Smith et al. 1999; Vaughn 2004; Webster and Gonlin 1988; Webster et al. 1998; Welch and Scary 1995; Wilk 1983; Wright 2014).

2. This volume provides a glorious diversity of definitions of the term household. While some researchers focus on social structure (such as Lévi-Strauss; see Zobler, this volume), others define households by the activities they share, that is, by the functions households perform (Chicione et al., this volume; Lightfoot 1994; Netting 1993; Wilk and Netting 1984; Wilk and Rathje 1982). As Pacifico and Johnson discuss in chapter 1, there are many layers to the concept of households. Rather than striving for a consensus on a single definition, we need to embrace conceptual diversity.

3. There are, of course, exceptions to this, especially in utopian movements. Shaker communities, which began in the United States in the 1800s, prohibited procreation; not surprisingly, those communities didn’t last long.

4. By families I am broadly referring to groups of people closely related by blood, marriage, adoption, or other means. I’m not referring to some imagined, modern American nuclear family from the 1950s.

5. I use the term adapt in a broad sense, meaning to adjust to changing circumstances. I’m not using “adaptation” in the biological or ecological sense or in the sense of old-school, processual ecofunctionalism (for instance, Binford 1962, 1968; Isbell 1978; Plog 1974). Rather, I use the term to acknowledge that people, individually and in groups, are capable of developing solutions to problems presented by historical circumstances. People are also capable of disastrous failures, by which I mean environmental degradation, political and social chaos, genocide, world wars, and other historical horrors of human society.

6. Netting’s research on smallholder economies has much to offer north coast archaeologists. Netting (1993, 2) defines smallholders as “rural cultivators practicing intensive, permanent diversified agriculture on relatively small farms in areas of dense population. The family household is the major corporate social unit for mobilizing agricultural labor, managing productive resources, and organizing consumption.” Further, he states: “Smallholders practice intensive agriculture, producing relatively high annual yields or multicrop yields from permanent fields that are seldom or never rested, with fertility restored and sustained by practices such as thorough tillage, crop diversification and rotation, animal husbandry, fertilization, irrigation, drainage, and terracing. I’m not talking about amber waves of grain.
but about gardens and orchards, about rice paddies, dairy farms, and *chinampas*” (Netting 1993, 3). This is likely a good model for examining changes in agricultural production since the introduction of irrigation agriculture on the coast circa 3,000 BC.

7. I’m not using the terms *states* and *empires* to mean evolutionary types (such as Service 1972); nor do I mean European notions of the nation-state (as conceived by Locke, Hume, Ricardo, Marx, Engels, and others). Rather, I am referencing the long indigenous tradition of centralized polities in the Andes, such as the Wari, Chimú, and Inka, as well as smaller formations such as the *señorios* of the Peruvian coast and the chiefdoms of the Ecuadorian highlands. Much of our understanding of Andean statecraft comes from ethnohistoric accounts in Spanish and indigenous chronicles and court documents.

8. Bourdieu’s definition is based on conventional definitions of capital found in the classic works of political economy by Marx, Smith, and Ricardo.

9. My inclusion of 100 percent screening of fill and systematic collection of samples for special analysis may seem out of place in a chapter on “Future Directions” in household archaeology. However, the limited use of these practices on the north coast and in many other regions in the Andes still remains a fundamental impediment to advancing our knowledge of prehistoric social change. Most of the publications on household archaeology on the North Coast are still based on excavations of large areas without screening. Consequently, there is little contextual information on the distributions of artifacts and ecofacts and formation processes. Quantitative analysis and comparisons of artifacts and ecofacts within and between households are difficult, if not impossible.

10. Mode of abandonment is largely overlooked in Andean archaeology. One of the most important results of mode of abandonment studies is that floor assemblages cannot be assumed to represent the activities that took place within rooms. Associated middens adjacent to domestic structures are often the best places to investigate household activities and differences in status or wealth.

11. “Thus, without accurate estimates of the length of occupation, we cannot adequately evaluate any anthropological theory—for example, theory concerning the development of political complexity—that involves the interpretation of assemblage diversity, settlement patterns, or population size” (Varien and Potter 1997, 196).

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