

ARTÍCULOS

WHAT WAS THE CHIMÚ EMPIRE? A SELF-CRITICAL ESSAY ¿QUÉ FUE EL IMPERIO CHIMÚ? UN ENSAYO AUTOCRÍTICO

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Abstract

This essay offers a historical account of Chimú studies, beginning with the influential Chan Chan-Moche valley project and considering both the project's intellectual foundations and the lasting impact of its perspective on subsequent research. Based on the author's experience conducting archaeological investigations in Casma and Tumbes, the essay explores how the top-down perspective of the Chan Chan-Moche Valley Project can be usefully complicated through the addition of a complementary bottom-up approach.

Keywords: Chan Chan, Moche valley, Chimú, history of archaeology.

Resumen

Este ensayo ofrece un relato histórico de los estudios Chimú, comenzando con el influyente Proyecto Chan Chan-Valle de Moche. Mediante el análisis de la bibliografía consultada en las publicaciones centrales del proyecto y los enfoques de las tesis realizadas por sus miembros, se explora los fundamentos intelectuales del proyecto y el impacto duradero de su perspectiva en las investigaciones posteriores. El papel de la etnohistoria se volvió

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más central con el tiempo en las interpretaciones del proyecto, pero estas mantuvieron en mayor parte una perspectiva desde arriba (“top down”). Basado en la experiencia del autor en investigaciones arqueológicas en Casma y Tumbes, el ensayo explora cómo este enfoque “top down” puede volverse más complejo mediante la incorporación de un enfoque complementario desde abajo (“bottom up”) y subraya la necesidad de investigaciones futuras sobre todos los aspectos de los chimú.

Palabras clave: Chan Chan, valle de Moche, Chimú, historia de arqueología.

In this essay, I explore some of the key themes, theoretical problems, and assumptions that have shaped archaeological understanding of the Chimú Empire over the last fifty years, emphasizing the influence of the Chan Chan-Moche valley project co-directed by Michael Moseley and Carol Mackey and implemented by numerous scholars. This project, in turn, has had significant resonances for understanding the prehistory of the north coast of Perú, and has influenced research elsewhere in the Andes. This essay is subtitled “un ensayo autocrítico” to signal that these prior accomplishments have influenced my own archaeological investigations on the Chimú in the Casma valley and Tumbes region of far northern Perú. I contend that all us who work on the prehistory of the north coast—or any portion of the Americas, for that matter—should be constantly engaged in active, critical inquiry of our own approaches, methods and interpretations as well as those of other scholars. I use the word *critique* in the sense, as the Oxford English Dictionary defines it, “An essay or article in criticism of a literary (or more rarely an artistic) work; a review.” Finally, I refer to this as “un ensayo autocrítico” to denote that I assess my own archaeological insights and oversights as relating to our understanding of the Chimú.

The View from Above: Chan Chan and Chimor

As a foreigner, this was my first view of Chan Chan, an aerial photograph made in 1931 by the Shippee-Johnson Expedition that I first saw in a seminar at UC Santa Barbara taught by Dr. Alexandra Ulana Klymyshyn in January 1979 (**Figure 1**). Key aspects of these and other images of Chan Chan and the Moche valley were obvious and intriguing, in particular the scale and architectural complexity of the *ciudadelas*¹ and the stark difference between irrigated fields of the Moche valley and the desert dunes flanking them.

But another, and somewhat more subtle, implication of these images was its overarching, “top-down” perspective that shaped insights in the Chimú and of other Andean societies. As Douglas Schwartz (1982:ix) wrote in the foreword to *Chan Chan: Andean Desert City*.

Chan Chan is one of the most extraordinary archaeological sites in the Western Hemisphere, rich in architectural and artistic splendor. Once possessing a social and political system of great complexity and a highly efficient economic

organization, this great urban administrative center was the source of ideas that were crucial in shaping the succeeding Inca empire.

Several significant assumptions flowed from Schwartz's introduction, which accurately reflected the ideas and interpretations proposed by Moseley and the other participants in the School of American Research seminar that led to the volume. First, Chan Chan was the premier Chimú settlement in both size and complexity and was the source of major socio-political structures and practices that not only shaped the north coast but also were incorporated into the Inca Empire. Second, this implied that other Chimú sites could be evaluated against the archaeological "yardstick" that Chan Chan embodied. For example, if burial platforms were associated with the rulers of Chan Chan (Conrad 1974, 1982), would any Chimú sites outside of the Moche valley contain similar structures? If other Chimú sites had walled enclosures, were they smaller or less complex than Chan Chan's *ciudadelas*? (**Figure 2**)



Figure 1. Aerial view of the Chan Chan archaeological site. Photo taken by the Shippee-Johnson mission in 1931. Asset ID: 334881, American Museum of Natural History Library.



Figure 2. Aerial view of the Rivero and Tschudi palaces at Chan Chan. Photograph taken by Michael E. Moseley. Courtesy of the Michael E. Moseley Archive, Laboratory of Andean Archaeology, Department of Anthropology, University of Florida.

These and other important research questions led Carol Mackey (2009) to conduct a multi-valley reconnaissance of Chimú sites and the 1981-84 investigations at Manchán, co-directed with A. Ulana Klymyshyn and Miguel Cornejo (1981-84), followed by Mackey's projects at El Algarrobal de Moro (1995-1998) and the Proyecto Arqueológico Farfán co-directed with Enrique Zavaleta (2000) and César Jáuregui V. (2001- 2004). Other significant studies included excavations by Thor Heyerdahl, Daniel Sandweiss, and Alfredo Narváez (1995) at Túcume. And although a number of significant studies have been directed by other scholars, it is essential to recognize the pivotal contributions Carol Mackey has made to our understanding of north coast societies, influencing subsequent generations of archaeologists.

In addition to these personal influences, I believe it is essential to place our understanding of the Chimú and specifically the investigations of the Chan Chan-Moche Valley Project within their historical and theoretical contexts. While I do not intend to revive theoretical debates of decades past, it is worthwhile to note that neither Harvard nor Berkeley were intellectual centers of the "New Archaeology" theoretical position in archaeology that was so important at other research institutions in the late 1960s and 1970s. Separate from all the *sturm und drang* of the period, the adoption of an explicitly scientific approach in archaeology that employed hypothesis testing with the goal of arriving at

broad insights into human experience had a belated appearance in north coast and Chimú archaeological studies. For example, the 1982 volume, *Chan Chan: Andean Desert City* – the result of an April 1976 Advanced Seminar at the School of American Research— **does not cite a single article by Lewis Binford** in its bibliography, despite Binford having a significant –some would argue defining— role in shaping Americanist archaeology in the late 20th century (e.g. Binford 1962, 1977). Yet, before I allow academic outrage to erupt—“How could they not cite Lewis Binford?”— I hasten to confess, I did not cite Binford in my *own* doctoral dissertation (Moore 1985).

In that light, it is interesting to see who *was* being cited by the archaeologists involved in the Chan Chan-Moche Valley Project as reflected in the bibliographies in *Chan Chan: Andean Desert City* (**Figure 3**). I am interested in the influences external to the project itself, so I have excluded references made by project members to each other’s (or their own) publications (**Table 1**). Obviously, the works of John Rowe were highly influential, cited significantly more frequently than Gordon Willey, which is curious since the Chan Chan-Moche Valley Project was inspired and, in many ways, modeled on the Virú Valley Project, a point I will return to below.

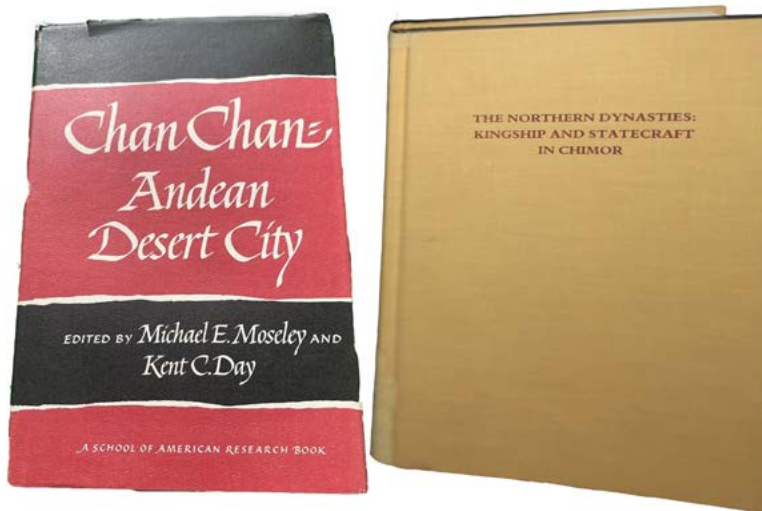


Figure 3. Two fundamental volumes in the studies on Chimú archaeology.

John Rowe’s influence is obvious. Rowe’s works cited include his 1948 article “The Kingdom of Chimor,” and the 1969 “The Sunken Gardens of the Peruvian Coast” which summarized ethnohistoric and archaeological sources for the region and his own observations at Chan Chan, noting “Chanchan[sic] is the only urban settlement of any size on the Peruvian coast which is known to have sunken gardens associated with it, and the sunken gardens at Chanchan are a minor adjunct to an impressive system of canal irrigation” (Rowe 1969:324). Significantly, Rowe’s 1948 article “The Kingdom of Chimor” and his

1946 “Inca Culture at the Time of the Spanish Conquest” are respectively cited 13 and 9 times, suggesting the influence of then-available information regarding the Inca Empire that was applied to interpreting the Chimú.

Table 1.

Comparative Influences. Most cited sources in *Chan Chan: Andean Desert City* (1982) and *The Northern Dynasties* (1990). Does not include self-citations or citations of members of the same research project.

<u><i>Chan Chan: Andean Desert City</i> (1982)</u>		<u><i>The Northern Dynasties</i> (1990)</u>	
Rowe	27	Rostworowski de Diez Canseco	23
Kosok	14	Schaedel	17
Kroeber	11	Donnan	16
Schaedel	10	Rowe	13
Wiley	9	Netherly	12
Uhle	8	Kosok	9
Murra	6	Shimada	9
Squier	5	Cabello Balboa	8
Zuidema	4	Espinoza Soriano	6
Tschudi/Tello (empate)	2	Means	6
		Menzel	6
		Moore	6
		Salomon	6
		Vargas Ugarte	6
		Zuidema	6

No incluye referencias a obras del autor mismos ni a las del mismo proyecto.

Less than a decade later, the situation had changed dramatically as indicated by the sources cited in (1990) *The Northern Dynasties: Kingship and Statecraft in Chimor*, edited by Michael Moseley and Alana Cordy-Collins. Not only was the importance of Rostworowski’s research recognized—she and Moseley were co-organizers of the symposium on which *The Northern Dynasties* volume was based—but other ethnohistoric sources for the North Coast were prominent.

The Chan Chan-Moche Valley Project: Scope, Organization, and Results

Tantaleán has cogently observed that (2016:196):

es mucho más lamentable que este proyecto nunca evacuó un informe final de sus investigaciones, salvo algunas recopilaciones que fueron más de interpretación que de presentación de corpus de datos, tales como *Chan Chan: Andean Desert City*, editado por Michael Moseley y Kent Day (1982); *The Northern Dynasties: Kingship and Statecraft of Chimor*, editado por Moseley y Cordy-Collins (1990); o el libro *Chan Chan: Metropoli chimú*, editado por Rogger Ravines (1980).

Tantaleán is correct in this observation, but actually under-states just how decentralized the investigations were. It is important to understand how the Chan Chan-Moche Valley Project was organized. A number of the members of the Chan Chan-Moche Valley Project received their Ph.D.s at Harvard University (including, in order of dissertation completion, Kent Day 1973; Richard Keatinge 1973; Paul Ossa 1973; Geoffrey Conrad 1974; Alexandra Ulana Klymyshyn 1976; Garth Bawden 1977; John Topic 1977; Theresa Topic 1977; and Alan Kolata 1978). Other scholars like Thomas Pozorski and Shelia Pozorski (née Griffis) initially were involved in the Chan Chan Moche Project as Harvard/Radcliffe undergraduates, but obtained their Ph.D.s in 1976 at the University of Texas, Austin where Richard Schaedel chaired their doctoral committees.

It is also worth noting how brief the fieldwork was given the enormous scope of the project. The archaeological investigations were focused in 1969 – 1974. In addition to the doctoral dissertations cited above, one of the most significant results of the research was the boxed set of (1974) *Twenty-Four Settlement Plans of Chan Chan, Peru* published by the Peabody Museum. From a current perspective when we have ready access to Google Earth imagery and even more detailed and subtle photogrammetric methods have been applied to Chan Chan (e.g., Colosi et al. 2009; Fangi et al. 2005; Pierdicca 2018; Pierdicca et al. 2016), these maps and survey methods might seem archaic. However, the value of the twenty-four architectural plans of Chan Chan was recognized by contemporary scholars who had worked on other large prehistoric urban centers.

For example, René Millon (1921-2016) –who as Deborah Nichols observed “conceived and directed a research program unprecedented in the history of archaeology, comprehensively mapping the great ancient city of Teotihuacán in the Basin of Mexico” (Nichols 2017:2)— offered the following assessment of Moseley and Mackey’s *Twenty-Four Settlement Plans of Chan Chan, Peru*, writing “**It would be difficult to overestimate the importance of this publication.** It consists of a brief descriptive and explanatory text without interpretations, 22 large folded plans of the central five sq km of ancient Chan Chan at a scale of 1:600, a sheet of ‘profiles’ of its immense, high-walled compounds, and an overall plan of covering c. 25 sq km at a scale of 1:6,000” (Millon 1976:243, [emphasis added]).

In a similar vein, Craig Morris argued:

A relatively complete architectural plan is probably the single most important kind of information that can be provided in an urban size archaeological site. Chan Chan is the largest pre-Columbian center on the South American coast, and was one of the largest and most important settlements in the entire Andean area. The publication of a set of detailed plans of the city is a long-awaited and enormously important contribution to reconstructing the development of Andean civilization and to the comparative study of urbanism in a broader perspective (Morris 1976:407).

Drawing on his own experience at the Inca center of Huánuco Pampa (Morris and Thompson 1970), Morris observed “Those of us who have had experience with the mapping of large sites know what a difficult and frustrating experience it can be—even if most of the architecture is exposed as is the case at Chan Chan.” Morris further noted, that “one of the most commendable aspects of the present publication”—i.e. *Twenty-Four Settlement Plans of Chan Chan, Peru*— “is the authors have attempted to advise users of the plans of their accuracy limitations and of how their accuracy varies with the nature of the material being mapped” (Morris 1976:407). Thus, the walls of the *ciudadelas* and other monumental architecture could be considered to be accurately rendered, while “... the more rustic and originally less well-built constructions, the rendering is little more than schematic.” Morris recognized that this differential rendering of distinct classes of architecture was present in almost: “all of the site maps I know show this bias... and at least here we are advised of the situation,” although adding, “It is never the less lamentable to perpetuate an emphasis on spectacular remains and the activities associated with them at the expense of the more common architecture, its uses and, its users” (Morris 1976:407; cf. Morris 1985).

To some extent, this visual bias was counter-balanced by specific investigators’ excavations in less monumental settings at Chan Chan, including Alexandra Ulana M. Klymyshyn (1978) excavations of the “intermediate architecture”/elite architecture and John Topic’s (1977) investigations of the houses and workshops associated with the lower class of Chan Chan society, who occupied “small, irregular agglutinated rooms or “SIAR.” Thanks to these maps, we have records of sectors of Chan Chan that have disappeared due to urban expansion and the heavy rains during the major ENSO events of 1982-1983, 1997-1998 and 2016-2017.

Two points deserve clarification. First, the terminological distinctions between ‘*ciudadelas*,’ ‘intermediate architecture,’ and ‘small, irregular agglutinated rooms’ braid together distinct etymological histories. As Pillsbury and Leonard (2004:248) observe, “The term *ciudadelas* (citadel) has been applied to the monumental compounds at Chan Chan since the nineteenth century,” including by archaeologists from the Universidad Nacional de Trujillo before the Chan Chan Moche Valley Project began (for example, García 1952 and Marmanillo 1953). In contrast, the classification of SIAR—for ‘small irregularly agglutinated rooms’ (J. Topic 1982:146)— has its antecedents in the “functional” terminology Willey devised for describing archaeological sites in the Virú valley (Willey 1953:6-9). Conceptually “between” these two classes of architecture were walled architectural compounds that were more formal than the SIAR but were smaller, less complex and lacking in key features such as burial platforms; Klymyshyn (1976, 1982) alternatively referred to these as ‘intermediate’ or ‘elite’ compounds.

Second, the archaeologists on the Chan Chan-Moche Valley Project approached the study of architectural patterns as relatively straightforward material palimpsests of ancient human behavior. In the first lines of the document accompanying the Chan Chan architectural plans, Moseley and Mackey eloquently write, “Ancient settlements resemble

fossil shells. Both were purposefully structured by organisms to support life, only to be stripped of vitality by time's retreating tides. Yet, preserved in these inert structures is an imprint of the different creative forces that cast both shells and sites into distinctive forms."² (Just as there are no references to Binford in the Chan Chan volume, neither are Michael Schiffer's then-contemporary discussions mentioned regarding the "Pompeii premise," C-transforms, nor N-transforms, concepts potentially relevant for interpreting the archaeological record of Chan Chan (Schiffer 1985; cf. Binford 1981).

If the ideas of the "New Archaeology" had little impact on archaeological investigations of the Chimú, other sources were profoundly influential, particularly the expansion of ethnohistoric information for the coast of Perú by Maria Rostworowski de Diez Canseco, Patricia Netherly, and others (**Table 1**). Not only did these and other scholars introduce new insights into north coast societies in late prehistory, but their scholarship weakened the intellectual grasp Inca ethnohistory had on archaeological interpretation. Previously, the argument ran along the lines that since the Inka had incorporated political strategies from earlier Andean societies including the Chimú, then it was possible to use Inca ethnohistoric sources as bases for interpreting Chan Chan and other Chimú sites (e.g., Conrad 1981). In short, the "top-down" approach to Chan Chan's architecture subtly but profoundly shaped archaeological approaches to the Chimí Empire as a whole. And this certainly shaped my own attempts to understand the Chimú Empire in the Casma valley.

The View from Below: Chimú Political Integration and Commoner Class in the Casma Valley

The chance to be a member of the Proyecto Chimú Sur was one of the most transformative events in my life. Andean archaeology was a marvel, and it remains so. As a graduate student at UC Santa Barbara, I had studied with Ulana Klymyshyn, but all my archaeological experience had been in California on shell middens and residential sites excavations focused on artifact and ecofact recovery. I actually intended to do my doctoral research in Baja California, a project I resumed eleven years later. (Before I went to Perú, the only architecture I had excavated was the foundation of a Spanish Colonial period corral at Mission Santa Ynez.) But I was invited to join the Proyecto Chimú Sur and I jumped at the opportunity.

Carol Mackey, Ulana Klymyshyn, and I drove from Lima to Casma on February 8, 1981. Because of delays in obtaining permits, excavations did not begin until March 13th. As at Chan Chan, the initial steps involved wall clearing and mapping Manchán, beginning with the adobe architecture and then moving to the barrios of *quincha* (cane-walled) constructions (**Figure 4**). In the course of this, we decided that I would focus on excavations in the barrios, presumed to be the houses and workshops of commoners and comparable to the SIAR studied by John Topic. In my then brief archaeological career, the Manchán barrio represented the first time I could excavate cultural middens and know whether I was inside or outside of a structure. Further, by focusing on these areas of cane-

walled structures as opposed to the adobe constructions, I could reasonably argue that I was looking at archaeological remains of “commoners” analogous to what John Topic had studied in the Chan Chan SIAR.

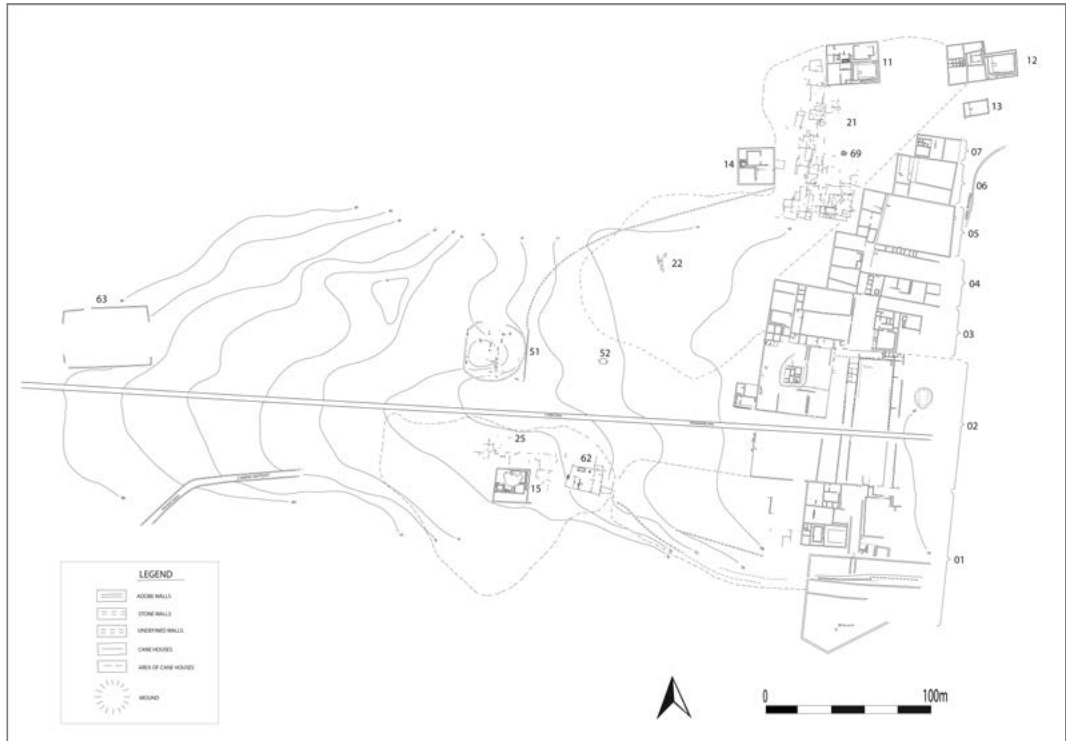


Figure 4. Manchán base map.

I envisioned my research as a comparative study to see whether the command economy proposed for Chan Chan was equally true in the Chimú provinces (Moore 1981, 1985). Marshall Sahlins’ writings on the domestic mode of production in *Stone Age Economics* (1972) were central to this research (as also to my colleague Charles Stanish [1992]). Thus, I designed my excavations, data recovery strategies, and analyses in the Manchán barrio to compare 1) household patterns of production and 2) household patterns of consumption to determine if the command economy proposed for Chan Chan and the Chimú empire’s core extended to the southern frontier and the Casma valley. In essence, I concluded that the Chimú Empire did *not* have the same pervasive impact on Manchán’s commoner households as Topic had identified in the Chan Chan barrios, and understanding these variations required a focus on “los de abajo.”

This led me to explore another point of view on the Chimú and other Andean sociopolitical systems, a “bottom-up perspective” (Moore 1981, 1985, 1988a). I have never seen this perspective as an alternative or substitute for a “top-down” perspective, but

rather as a complementary point of view that archaeologists need to embrace if we are to understand the political and social dynamics of ancient societies. However, rather than a simple project of exerting elite will and designs on a passive commoner class, I wanted to understand the variations and dynamics of these imperial negotiations. As I wrote:

Every political organization, whether Melanesian bigmen or the British Empire has faced a central problem: how to obtain the wherewithal for independent action... Usually the solution involves diverting labor, production, and/or wealth from private means to public goals, and the precise steps taken to channel resources from the domestic economy to the public realm are the very warp and weft of policy. Identifying the specific policies that link household and state or production group and polity is essential for characterizing the political organization because it illuminates, independent of rhetoric, what that political organization really did, at least in one sphere of action (Moore 1989a:682).

Of course, empire was not built on beer alone. In my dissertation research in the Manchán barrio I examine distinct sets of archaeological data to contrast patterns of production against patterns of consumption (Moore 1985). For example, I contrasted the obvious evidence for the consumption of marine resources—readily accessible varieties of shellfish and nearshore varieties of fish—against evidence for production in the form of fish hooks and nets (Moore 1985:246-274). One sector of the non-elite cane dwellings in the Manchán barrio had a noticeably higher concentration of copper ore, prills, and metal artifacts such as fish hooks, needles, and tweezers, and we prepared a point-provenience map of the entire area, literally a survey conducted on our hands and knees and flagging every piece of ore, copper object, or prill (Moore 1985:305-310). This led us to excavate in the most dense concentration area where we uncovered a specialized hearth (unlike cooking hearths previously excavated) and an ore-splattered *tuyere*/blow-tube tip. As I subsequently concluded, “The Manchán barrio data are significant that simple copper metallurgy occurred in commoner households without elaborate technologies, discrete workshops, or full-time craft specialization” (Moore 2005:147)³.

Of course, my research in the Manchán barrio identified just one potentially unique configuration of household organization, labor, and economic activities. I never considered the Manchán barrio to be the *ur*-pattern of Chimú sociopolitical organization, but simply one possible configuration of relations of power, class, and economic production in a complex empire that adapted to varying sociopolitical challenges during the centuries of its existence (Moore 1992).

The View from Below: Quebrada Santa Cristina and Raised Agricultural Fields

We also investigated another site in the Casma valley where it seemed that command economy model might be relevant: the site of Quebrada Santa Cristina, located in the lower Casma valley and associated with a large complex of raised agricultural fields. At the time of our research at Quebrada Santa Cristina, raised fields were becoming a significant focus

of research in different portions of South America, explored in investigations by William Denevan (1970, 2002), Jeffrey Parsons and William Denevan (1967), Alan Kolata (1986, 1991), Clark Erickson (1985, 1987, 1988, 1992) among others, investigations that tended to focus on seasonally inundated lowland regions or the highland marshy areas surrounding Lake Titicaca. However, in the 1980s raised fields were not particularly well-documented in the north coast of Perú (**Figure 5**). In a preliminary article, Thomas Pozorski and colleagues described the Casma valley fields, identifying two zones of fields on the southern and northern margins of the lower Casma valley and suggesting that the intervening area may have also been cultivated in this way, perhaps extending over 3100 hectares (Pozorski et al. 1983:409).

In 1986, Miguel Cornejo, Janine Gasco, and I co-directed a relatively brief project to document the fields and map the adjacent settlement of Quebrada Santa Cristina (Moore 1987a, 1987b, 1991). To be honest, I was actually more interested in Quebrada Santa Cristina than the raised fields per se (**Figure 6**). Frankly, what caught my attention were the *quincha* walls and the architectural pattern of the settlement, such as the construction of large blocks of rooms, communal kitchens, the abandonment of the site indicated by unfinished spaces, and the presence of a single level of occupation. The ceramics were exclusively Chimú and Casma styles (Mackey n.d.). First, the structures in Quebrada Santa Cristina were built to enclose large areas with a perimeter wall and then built interior walls to define the spaces inside. Second, the cooking hearths and kitchens were concentrated in several spaces in Quebrada Santa Cristina suggesting communal kitchens, while in Manchán each *quincha* house had its own cooking hearth and milling stone (*batán*) (Moore 1988b). Third, in Quebrada Santa Cristina food resources were limited to basic “storable” foods—such as corn, beans, etc.—without the diverse fresh fruits and vegetables in the diet at Manchán. Further, we did not find evidence in Quebrada Santa Cristina of various activities such as weaving, wood-working, fishing, or metallurgy documented for the Manchán barrio. Therefore, I proposed that Quebrada Santa Cristina was a workers’ camp established by the Chimú state during the construction of the raised fields of the Casma valley, probably in response to a destructive El Niño in the fourteenth century, as presented in several papers and publications (Moore 1987a, 1987b, 1988).

However, I soon turned to other research topics and regions, initially with the goal of documenting the far northern frontier of the Chimú Empire, which sources identified as the Tumbes valley. My research at Quebrada Santa Cristina was displaced by these and other matters. A multi-year program of archaeological reconnaissance, site mapping and excavations failed to document a clear Chimú imperial presence in the Tumbes valley, although the influence of Lambayeque and Chimú-Inca traditions was documented (Moore 2008; Moore et al 1997, 2005, 2007).

Thus, it was a pleasure to receive an email from Seth Price in 2020, then a doctoral candidate at the University of Arkansas who conducted field investigations of the Casma valley raised fields. Price had experience in the study of soils and access to analytical methods that we did not have in 1986, including direct, absolute dating of the raised fields. In his doctoral dissertation, Price wrote:



Figure 5. Quebrada Santa Cristina 1986 work in progress (Inset: Close up of Quebrada Santa Cristina wall bases 1984).

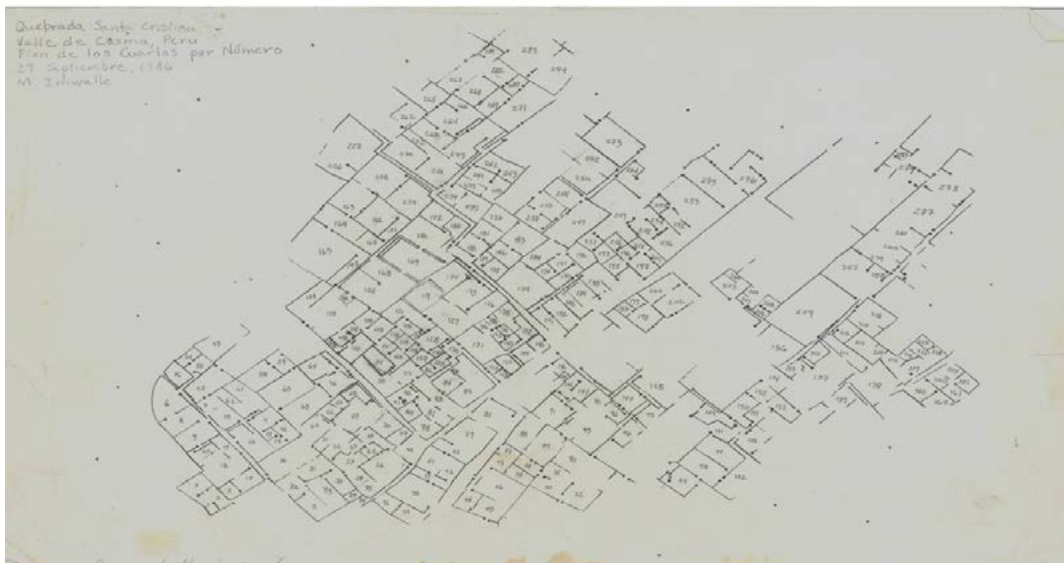


Figure 6. Quebrada Santa Cristina Final Base Map 1986.

Radiocarbon dating from this project supports the Late Intermediate Period cultivation hypothesis but with some caveats. There are two distinct spatial clusters of dates. Samples 1 – 4 are located in the central-eastern fields near Profile 1, while Samples 5 – 11 are in the southern area near Profile 2. The central-eastern cluster dates from 1046 – 1379 CE, while the southern cluster ranges from 1511 – 1950 CE. Samples 1 and 2 are the best preserved, and due to their location in Profile 1 (a well-preserved raised field) are our best representations of ancient cultivation activities. These dates support the argument of some cultivation during the Late Intermediate Period, with summed probability results highest at 1300 CE.... These dates also bring up the possibility that the fields were in use before the establishment of Quebrada Santa Cristina, especially given Samples 3 and 4 dating to 1096 and 1189 CE. Another possibility is that these samples represent “old carbon.” Old carbon can result in erroneous dates earlier than when the material was burned. When radiocarbon dating wood, events are dated to the growth of the tree ring, meaning that the carbon sample could date further back than when it was burned. **Overall, this data brings up the possibility that the raised fields were in use before Chimú expansion into the Casma valley and that the fields were expanded with the establishment of Quebrada Santa Cristina** (Price 2023:37-38; [emphasis added]).

At this point, I made an accidental discovery, not in the field but rather in my office: I “discovered” a box containing radiocarbon samples for C14 dating from Quebrada Santa Cristina. We had collected the samples in 1986, obtained permission to export them to the United States, but did not have the funding to run the samples. Only in 2024 did I discover the samples and had some extra funds to send the samples to Beta Analytic for analysis. The results are presented in **Table 2**.

Table 2.

Absolute dates from Quebrada Santa Cristina. The very early dates probably reflect the “old wood problem”, while the later dates correspond to the Chimú ceramics characterizing the archaeological assemblage.

Beta Lab #	Field Number	Unit Coordinates	Other Unit Number	Level	Material	Weight	Collection date	
Beta - 644714	QSC-1	225 N/175E	UNIT 15	3	charred material	48.4	9/1/1986	6588 - 6435 cal BC (95.4%)
Beta - 644715	QSC-2	155N/59E	OPERATION F--PIT 2	1Y 2	charred material	50.6	9/3/1986	1408 - 1463 cal AD (93.6%); 1472-1480 cal AD (1.8%)
Beta - 644716	QSC-3	175N/25E	UNIT 14	3	charred material	11.3	9/3/1986	5720 - 5616 cal BC (85.3%); 5587 - 5566 cal BC (10.1%)
Beta - 644717	QSC-4	175N/25E	OPERATION A--UNIT 2	3	charred material	19.0	9/1/1986	1393 - 1449 cal AD (95.4%)

Given the wildly divergent absolute dates, several points require clarification. First, Quebrada Santa Cristina has a single occupational layer, consistently associated with Chimú ceramics as classified by Mackey (n.d.). There is no evidence for an Archaic occupation at the site. For these reasons, I conclude that Quebrada Santa Cristina was occupied between ca AD 1400 – 1460. I believe that the earlier radiocarbon assays reflect the “old wood” problem (for a review, see Contreras 2022).

But the AD 1400 – 1460 dates for Quebrada Santa Cristina support Price’s suggestion that raised fields were used in the Casma valley *before* the Chimú expanded into the region based on his absolute dates 1046 – 1379 CE from some of the raised fields. Rather than a top-down imposition of imperial infrastructure, it now seems probable **that the Chimú appropriated, organized, and supported an adaptive agrarian strategy that had been devised at the local level several centuries before the Casma valley was incorporated into the kingdom of Chimor.**

These reevaluations of the Casma raised field data also support insightful comments by Ari Caramanica about prehispanic agrosystems and adaptations based on her work in the Pampa Mocan in the Chicama valley. As she writes, “The arid desert coast of northern Perú has traditionally been viewed either as existing in stasis, or as experiencing punctuated change from sudden flood events, followed by a return to system equilibrium” (2022:1410). I think Caramanica’s observation is accurate and it certainly characterized my original interpretation of the Casma valley raised fields as being a response to an El Niño event (Moore 1988, 1991).

But rather than being a reflexive reaction to specific environmental disasters—events that certainly impacted societies throughout the ancient Americas (Sandweiss and Quilter 2008)—human societies also developed strategies for mitigating environmental impacts. Although some of these strategies involved projects organized and directed by complex polities, not all of them necessarily did. Some could be developed and applied by local communities without direct control by chiefdoms or states. There is still important research needed to document and understand the varied and sophisticated strategies deployed by prehispanic societies on the north coast of Perú.

More recent archaeological research on the southern and northern frontiers of the Chimú Empire strongly suggests that the Kingdom of Chimor incorporated more socio-political variability than was envisioned initially by members of the Chan Chan—Moche Valley Project. For example, archaeological data at the Manchán barrio in the Casma valley documented a domestic economy involving production for household consumption and limited production for external consumption (Moore 1981, 1985, 1987), an arrangement distinct from the elite-controlled, command economy envisioned for Chan Chan and Chimú sites in the Moche-Chicama (e.g. Topic 1990; Topic and Moseley 1983).

Similarly, investigations in the Casma valley at the site of Quebrada Santa Cristina and an associated complex of raised agricultural fields originally interpreted as an imposed agrarian project organized by the Chimú state in the aftermath of a 14th century El Niño (Moore 1988, 1991) has been shown to be an agrarian innovation that pre-dated the Chimú presence in the Casma valley, an agrosystem that was adopted by rather than imposed by Chimor (Price 2023, 2024). An analogous pattern of bottom-up rather than top-down agrarian innovation has been documented by Caramanica in the Chicama valley.

Finally, despite ethnohistoric accounts stating that the Chimú Empire extended its control north to the Tumbes valley (e.g. Rowe 1948; Richardson et al. 1990), a concerted

effort by Moore and colleagues to identify, map and excavate Chimú sites in the Tumbes and Zarumilla valleys resulted in no clear evidence for a direct Chimú occupation in this section of far northern Perú (Moore 2007, 2008a, 2008b, 2010a, 2010b; Moore et al. 1997, 2005, 2007, 2008).

Rather, there was interaction between the Tumbes/Zarumilla and regions further south—perhaps involving trade in *Spondylus* shells or other products (Moore and Vilchez 2016)—that resulted in rare examples of press-molded blackware Chimú-Inca ceramics being present at major regional centers (Cabeza de Vaca), ceremonial sites (Santa Rosa), and modest rural households (Loma Saavedra). But based on current evidence this was not the result of Chimú imperial integration of the Tumbes-Zarumilla region, but associated with the incorporation of the region into *Tawantinsuyu* and the continued prestige of blackware ceramics. Of course, this interpretation could be revised in light of future archaeological evidence in the intervening Chira, Piura, and other regions.

Conclusion

The papers in this volume point to important directions for future research on the North Coast and beyond. My mentor and colleague Carol Mackey once related that when she approached a granting agency who had supported the Chan Chan—Moche Valley Project about funding for the Proyecto Chimú Sur, the representative told Carol, “Sorry, we’ve done the Chimú.” The papers in this volume indicate that was incorrect. Obviously, there is more to be learned about the Chimú and the other complex societies of the north coast. We can all look forward to future studies that illuminate those prehispanic societies from multiple perspectives—top/down, bottom/up, and sideways. There is still important archaeological research to be done, as the contributions in this volume clearly demonstrate.

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Notes

¹ In this essay, I will follow long-standing nomenclature and terminology applied to Chan Chan and other Chimú sites by the Chan Chan-Moche Valley Project and other scholars to avoid confusion.

² Ironically, this conception parallels Walter Benjamin's comments in *The Arcades Project*: "The original form of all dwelling is existence not in the house but in the shell. The shell bears the impression of the occupant. In the most extreme instance, the dwelling becomes a shell." (1999:220). The parallel seems to be accidental as Benjamin's text was unpublished and untranslated at the time of Moseley and Mackey's writing.

³ Moore (2005) *Copper Metallurgy in a Prehistoric Household, Casma valley, Perú. Ñawpa Pacha* 28 (1):141-149. Although this report was accepted for publication in the late 1980s, it unfortunately remained unpublished during Ñawpa Pacha's extensive publication hiatus. During that interim, I reported on these findings at scholarly conferences, only to have an eminent Andean archaeologist – not a Chimú specialist, but someone with experience studying north coast prehispanic metallurgical sites— dismiss my findings, stating "That's not how they did it."

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