

## GENERAL INTRODUCTION

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This third collection of articles from the Northeast Conferences on Andean Archaeology and Ethnohistory (NCAAE) demonstrates the high level of commitment and interest which the NCAAE meetings have generated. The articles in this volume, like those in the previous two NCAAE volumes (Sandweiss, ed. 1983; Kvietok and Sandweiss, eds., 1985), cover a wide range of geographical regions, research issues, and methodological approaches, united by their focus on the past cultures of the Andes. Each contributes in its own way to a changing perspective on our understanding of that world by questioning some of the traditional interpretive models we have created in the past.

Breaking from the chronologically-ordered schemes of the previous volumes, we have chosen to group the articles in this book on the basis of methodological categories. One category is primary archaeological fieldwork, as seen in the Malpass and Netherly papers. These investigations add to a slim body of published data for their respective study regions. A second category includes the analytical papers by Kaplan and Bonnier, Chiswell, and Arnold, which indicate the growing application of basic laboratory methodology to archaeological studies in the Andes. The botanical papers (Kaplan/Bonnier, Chiswell) report on the results of flotation analysis from highland sites, long thought to be an unrewarding endeavor in this area because of poor preservation. The results of these studies indicate the necessity for re-evaluating that assumption. Arnold uses standard metallographic techniques to document a previously unreported variation of metal casting in the Andes. The final grouping of papers represents the synthesis of field and analytical data (laboratory or archival) for the purposes of explanation and testing of past generalizations. Wallace and Daggett shed new light on the nature of population interactions during the Early Horizon and the Early Intermediate Period. These papers synthesize data from two areas of Peru which have been relatively neglected in past research, the north-central coast and the south central coast. Topic draws upon years of field experience in the Huamachuco area to construct a temporal seriation of niched halls spanning at least 400 years. The Dillehay/Netherly and Barnes papers focus on the potential for retrieving social information from archaeological, historical, and ethnological studies.

We chose to order the articles according to the above categories in order to symbolize the varied input from which the volume has benefited and the methodological standards it tries to uphold. Interpretation of past social systems has gained credibility due to the effective combination of archaeological fieldwork and laboratory and historic analyses as seen in the Netherly, Netherly/Dillehay, and Barnes contributions to the volume. The ability to model socio-political systems in the absence of a historic record implies a belief in

historic continuity, but it also implies the construction of a solid theoretical framework and research design to allow one to arrive at conclusive results. Analogously, the study of Inka prehistory has been aided by the existence of a rich historical record that has been studied by numerous scholars. Several contributions in this volume (Malpass, Chiswell, Topic) complement the ethnohistoric record by integrating it with recent archaeological fieldwork and analysis of the archaeological finds. Malpass and Topic are concerned with the continuity of Inka-associated constructions, and their recent excavations add temporal depth to the terracing and niched hall traditions. Chiswell provides a conservative confirmation of the hypothesis of functional differentiation in Inka storehouses through the results of her excavations and subsequent botanical analysis. The multiplicity of methodological alternatives and the structure of the scientific method provide the continuity in the presentation of these articles, but also the dimension which collectively links them closer to the Andean past.

Patricia Netherly reports on the Tahuin project, a salvage archaeology program initiated in 1978 in Southern Ecuador. Extensive survey and limited test excavations were carried out in the Arenillas valley, much of which is now inundated by the Tahuin dam. The project area crosscuts several ecological zones: mangrove-forested coastline, coastal backswamp, desert scrub, tropical dry thorn forest, and humid tropical montane forest. The middle Arenillas valley, an area with rich and level bottomland, was the area selected for intensive testing. Human occupation of this zone was dense, and Netherly suggests that a two-level site hierarchy existed. A number of the inland sites were observed to have extensive shell middens dominated by the marine mollusc *Anadara tuberculosa* and dating to the Early to Middle Jambeli phases. Midden excavations at one of these sites, Romero, uncovered a broad band of marine shell and a high percentage of marine fish remains, with comparatively few terrestrial faunal remains. The faunal assemblage is dominated by large marine fish and young shellfish, perhaps selected for ease of transport.

Netherly suggests that the midden contents are atypical for the region; the only comparable site is Loma Alta, 15 km. inland on the Valdivia river. A period of inter-regional, socio-political cohesion during the Early to Middle Jambeli phases may explain the restricted temporal and spatial location of these sites with marine-focused midden contents.

Michael Malpass presents the results of a multi-disciplinary project studying the terrace systems in the Colca valley of southern Peru. The project brings together the collaborative efforts of geographers, archaeologists, ethnohistorians, and soil scientists to study the processes behind the high level of terrace abandonment in the Andes, estimated by the principal investigator (William Denevan) as approaching 60 percent.

Malpass approaches the paucity of prior archaeological research in the area by first summarizing the ethnohistory of the Colca valley. Two principal ethnic groups occupied the region protohistorically, the Quechua-speaking Cavanos and the Aymara-speaking Collaguas. Malpass finds that one expression of their ethnic identities is seen in occupational site segregation within the valley. The Cavanos occupied the temperate zone of the valley, while the Collaguas occupied the central and upper portions of the Colca basin and also maintained close ties with the coast and altiplano. The nature of the Inka presence in the valley is very vague, but it is known that the Collaguas maintained a strong ethnic

identity throughout the Late Horizon.

Turning to the archaeological data, the local Chuquibamba ware, related to the Churajon wares of the Arequipa region and the Colloa and Allita wares from the altiplano, dates from the Late Intermediate Period-Late Horizon. Inka influence is difficult to distinguish in this local tradition, but architectural styles may help to distinguish the Collaguas from the Inka settlements. Excavations in the terraces and adjoining structures at three sites (Chijra, Chilacota, and Yurac Ccacca) defined at least three phases of terrace construction, spanning the Late Intermediate Period and the Late Horizon. Dating is based on reconstructed building sequences and associated ceramics. The nature of the terrace fill presents potential interpretive problems for the ceramic dating, but proportional differences in the ceramics found in primary, domestic refuse suggest functional differences between construction phases. Additional support for the terrace sequence comes from architectural variation. The formal organization of the later-phase terraces is similar to Inka terraces elsewhere in the Andes, while the earlier phase is distinguished by random organization of terraces.

A general pattern emerges of early phase construction of the upper terraces (Chijra, Chilacota), which dates to the Late Intermediate Period and is probably related to the Collaguas occupation. The lower terraces were constructed in the late phase (Yurac Ccacca) and may represent a noncontemporaneous occupation or a re-use and remodeling of terraces in the Late Horizon. Future research priorities are aimed at refining the archaeological dating and focusing efforts on answering the questions of large-scale terrace abandonment.

Dwight Wallace provides an important overview of the Topará tradition, one which is not a changing perspective, but a rather newly emerging one. Tello and Strong both uncovered Topará or Topará-influenced materials during the course of excavations at Paracas and Cahuachi respectively, but it was the work of Lanning and Wallace that isolated the ceramic phases and cross-dated them. Briefly, the six phase sequence proposed by Wallace consists of: Los Patos, Jahuay 1, Jahuay 2(A&B), Jahuay 3, Chongos, and Quebrada. This sequence spans the time from the late Early Horizon to the early Early Intermediate Period. Wallace suggests that Topará cross-dates with the Miramar style of the central coast, with influences seen in Ocucaje phases 8, 9, and 10 and Early Intermediate Period 1 of the south coast Ica valley. The Topará sequence is followed by the Carmen phase, dating to Early Intermediate Period 3-4. Carmen is fully out of the Topará tradition. Stylistic evidence from Topará textiles suggests a tradition which is reflected in the Geometric substyle of Paracas textiles, but is quite distinct from it.

Wallace provides a concise description of the ceramic tradition, which can be summarized as consisting of technologically refined wares with very simple or no decoration, quite distinct from the contemporary wares in nearby areas such as Paracas. Geographic variation is carefully considered both between and within single phases, as collections are used from sites from the Cañete valley south to the Ica valley, and from sites of different functions. Wallace goes on to integrate his ordered ceramic data with observations on associated changes in textiles, adobe brick sequences, and settlement patterns.

The data on Topará settlements show several interesting patterns. Wallace finds that temple mounds with little or no associated occupational debris are

locationally segregated from habitation centers. This town-ceremonial center pattern is common on the south coast during the Early Intermediate Period and was first recognized by Strong in his interpretation of the occupational record of Cahuachi. The best data on the ceremonial centers is from the Chincha valley, where nine mounds are recorded, all aligned perpendicularly to the ocean. The mounds are constructed of solid fill and consist of linearly aligned, stepped structures. This site type and construction technique were Early Horizon innovations on the south coast. The habitation centers are large, agglutinated villages recorded from Cañete and Pisco. In the case of Quebrada (Cañete) and Chongos (Pisco), these village sites have aligned structures. The southern expansion of the Topará tradition coincides with the construction of fortified village sites in the Ica valley.

Wallace concludes by suggesting that the one-sided nature of the southern expansion of the Topará tradition may be the result of state-level organization. If future investigations follow the questions posed by Wallace in his summary and incorporate the same breadth of data, we may be able to grapple with these kinds of issues in the future.

The paper by Richard Daggett presents a synthesis of fieldwork carried out on the north-central coast. The new field data are incorporated into a reconsideration of the traditional model of Early Intermediate Period political unity. Daggett reviews the earlier work of Tello, Schaedel, Collier and Thompson, Proulx's and his own survey data from Nepeña, and recent work by Fung and Williams, Wilson, Pozorski, and Bonavia. He outlines the historical scarcity of research in this region and the kinds of evidence available to test the model of political unification. The absence of Moche influence in the Casma, Huarmey, and upper Nepeña valleys suggests that the north-central coast was outside the area of Moche-based political unity. In contrast to the horizontal or coastal unification, Daggett finds evidence for vertical or coastal-highland interactions in the upper Nepeña valley sites. This pattern is also supported by the distribution of Recuay sites in the Santa valley recorded by Wilson and the broad similarities in artifact assemblages between central coast and north highland sites during the early Early Intermediate Period. Daggett suggests a marked upper valley Recuay occupation of the entire north-central coast during the Early Intermediate Period.

Daggett concludes that a distinct change in settlement patterns took place during the Early Intermediate Period on the north-central coast, distinct from the contemporary patterns recorded for the north and central coasts. The early Early Intermediate Period of the Nepeña valley is characterized by dispersed settlements in the upper valley, and the late Early Intermediate Period by the construction of large adobe pyramids in the lower valley. Supportive data from adjacent north-central coast valleys suggest that the traditional Early Intermediate Period model of horizontal unity may be replaced by a vertically oriented model characterized by dispersed, low visibility settlements.

Material culture studies are integral to the ideas of testing traditional assumptions in archaeology, particularly when advanced analytical techniques are used. Stuart Arnold's work on metallurgical casting techniques in the Andes is based on metallographic examination of polished and etched cross-sections of bronze bola weights and spindle whorls. He suggests that both objects are examples of investment molding, or the molding of interior space to serve a specific function. Cross-sections of the bola weights reveal an interior

transverse bar which is cast as part of the bola weight body. This bar provides a means of cord attachment to the weight and is one of many alternatives to serve this function. Arnold suggests that the investment molded transverse bar was selected based on cultural standards of design efficiency and may have been restricted in usage. The spindle whorl axial cross-sections reveal a complex internal contour that serves as an interior support and as a means of clamping the whorl to the spindle. If correctly interpreted, these results document a new technique for the manufacture of spindle whorls, one that is radically different from the previously reported punch and hammer technique. It is not known if investment molding was restricted in usage to certain kinds of whorls, spindles, functions, time periods, or geographical regions.

The results of both spindle whorl and bola weight analyses indicate the inherent shortcomings of material studies guided only by assumptions of labor efficiency, rather than by sensitivity to relative cultural values. Arnold concludes that the complex casting technique used on the objects he analyzed may be a reflection of the high value of cloth in Andean cultures or simply a technique that was restricted in usage to certain classes of spindle whorls and bola weights.

Two papers (Kaplan/Bonnier, Chiswell) deal with ethnobotanical research, specifically phytolith analysis. Phytoliths, or biogenic opals, are particularly common in grasses, so phytolith analysis is expected to be especially useful for sites located in the puna and other high altitude biozones dominated by grasses. As the technique is new in the Andes, results thus far are limited but intriguing. At the site of Piruro (Preceramic Period-Early Formative Period and Late Intermediate Period), at 3800 meters above sea level in Huanuco Department, Peru, Lawrence Kaplan and Elizabeth Bonnier found differences in the phytolith content of surface control and prehistoric sediment samples, as well as variations in the percent composition of phytolith types in different parts of the site. With further study, they hope to be able to distinguish activity areas within the site and to differentiate sterile fill from cultural matrix on the basis of phytolith composition. The authors also signal a potential problem for high altitude sites: the ubiquity of grasses in the puna zone may lead to uniform deposition of phytoliths in cultural and non-cultural sediments. Nevertheless, although substantive results to date are few, Kaplan and Bonnier point the way to the potentially important data that phytoliths can generate. They also include an appendix detailing the method of sample preparation so that non-specialists can gather phytolith data for future analyses.

Coreen Chiswell's paper presents a problem-oriented application of phytolith analysis. Her ultimate objective is to identify storage in Middle Horizon sites in the Huamachuco region of northern Peru, especially at Marcahuamachuco, a large site conspicuous for its apparent lack of storage facilities despite its distance from agricultural land. In order to provide a model of how storage might be reflected in phytolith samples, Chiswell excavated, floated, and studied the contents of Late Horizon qollqas in the Huamachuco area. Qollqas are structures known from ethnohistoric sources to have been used for storage; two types are present in Chiswell's study zone, and she hypothesized that the different forms reflect different stored contents. Macrobotanical analysis suggested that maize and tubers were the principal contents of the contrasting qollqa types. Phytolith samples were collected from modern specimens of 35 plant species or plant parts likely to have been stored in qollqas, and using only short-celled phytoliths, four species (all grasses, including maize) could be

distinguished. Analysis of sediments from the qollqas supported to some degree the results of macrobotanical and architectural differentiation of the maize vs. tuber storage contents of the two types of storage structure. Chiswell suggests that further research, including greater numbers of modern comparative specimens and the use of phytoliths other than the short-celled variety, may well increase the precision of the results and allow the identification of storage facilities and their contents in sites such as Marcahuamachuco.

John Topic's paper also concerns the Huamachuco area, but focuses on a particular type of monumental architecture, the niched hall. Topic identifies a local tradition of long, narrow buildings beginning in the Early Horizon or earlier and continuing through the Middle Horizon. A high degree of synchronic and diachronic continuity make temporal seriation difficult, but attribute analysis allowed Topic to differentiate between Early, Transitional, Classic, and Late groups at two sites, Marcahuamachuco and Viracochapampa. This sequence spans the period from about 400 A.D. to 800 A.D. or later. Topic suggests that niched halls spread from Huamachuco to Pikillacta in Cuzco during the Middle Horizon, and that the Inka structures known as **kallanka** were derived from the Pikillacta version of the niched hall and thus ultimately from the Huamachuco architectural tradition.

Patricia Netherly and Tom Dillehay identify dual patterning in Andean archaeological sites in the Chillón and Zaña valleys of the Peruvian coast and suggest that this patterning reflects dual division, the basic Andean organizational principle known from ethnographic and ethnohistoric studies. The authors believe that dual opposition was used in the Andes to order relations between different groups across space and to allow potentially competitive groups to share access to spatially restricted resources. According to the Netherly and Dillehay, dual division and the associated concept of **chaupi** (the intermediate) were given concrete, spatial expression in Andean sites through the use of natural features such as streams and manmade features such as walls. The authors have found evidence of possible dual patterning as early as the Middle to Late Preceramic Period at the Cementerio de Nanchoc site in the Zaña valley, and they find further evidence of duality in sites of subsequent periods. These findings suggest to Netherly and Dillehay a continuity in archaeological, ethnohistoric, and ethnographic traditions spanning thousands of years, much like the temporally more restricted continuities that Topic sees for Middle Horizon to Late Horizon architectural traditions.

Similarly, Monica Barnes stresses the continuities of prehispanic traditions in art, architecture, and iconography from pre-Conquest times into the Colonial Period, as seen in the church of San Cristóbal at Pampachiri, in Apurímac Department, Peru. The church was built in the late 16th or early 17th century, probably around 1580. Barnes relates the iconography of the main façade of San Cristóbal to the drawing by Santa Cruz Pachacuti Yamqui of the main altar at the Coricancha, the main Inka temple in Cuzco. In the same way that Netherly and Dillehay saw the Andean principle of symbolic dual organization of space given concrete expression in prehistoric sites, Barnes sees the abstract cosmology of the Inkas given visual representation at the Coricancha, at Pampachiri, and presumably elsewhere. The concretizing of abstract concepts would appear to be an Andean tradition spanning thousands of years through various conquests and other alterations.

As we noted in the introduction to a previous volume of Northeast Conference papers (Sandweiss and Kvietok 1985: 2), there has been an increasing trend in Andean studies towards the integration of ethnohistoric and archaeological data. Such a merging requires at least an implicit belief in the continuity of traditions through the Prehispanic Periods and into historic time. In the present volume, this belief in continuity has been made explicit by several authors. Changes occurred continually before and after the European invasion of the Andes, and the study of these changes is fascinating in itself. However, the continuities are also important (see J.V. Murra, cited in Rowe 1984: 650), and their identification can provide a set of keys to unlock the Andean past. Indeed, faith in the utility of interaction between ethnohistorians and archaeologists based on strong prehispanic through posthispanic continuity is implicit in the concept of the Northeast Conference on Andean Archaeology and Ethnohistory. It is our hope that this trend towards the investigation of Andean continuities will continue to be as productive as in the present studies.

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