

THE NEPENA VALLEY SURVEY: A RETROSPECTIVE VIEW

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When I was first asked to prepare a contribution to this festschrift honoring our colleague and friend, Richard Woodbury, I wanted to write a piece that not only portrayed an aspect of my own fieldwork, but one which would also reflect some of the mutual interests we share in archaeology. This was relatively easy to accomplish. Woodbury and I have both worked extensively in arid regions (he in the Southwest and in Mesoamerica and I on the coast of Peru). His interest in ancient irrigation systems overlaps with my work in the Nepeña Valley on the north coast of Peru where ancient fields, canals and reservoirs abound. We both have had years of experience working with archaeological ceramics as a method for developing chronological control, and we share a deep interest in the prehistory of Latin America.

Dick and his wife Nathalie have long been interested in the history of American Archaeology, especially with the personalities involved and the impact of their accomplishments. In 1973 Dick published a biography of the pioneer archaeologist Alfred V. Kidder and has recently completed a manuscript on a history of the Pecos Conference, which was initiated by Kidder in 1927 and was a precursor of many of the specialized regional conferences that abound today. Nathalie's interest in the history of the discipline is reflected in her long-standing position of Obituary Editor for the Anthropology Newsletter and her popular "Past is Present" column in that same publication.

With this orientation of the Woodbury's in mind, and after recently having re-read Gordon Willey's interesting book Archaeological Researches in Retrospect, I decided to write a retrospective analysis of my fifteen year archaeological survey of the Nepeña Valley on the north coast of Peru. Following Willey's style, I will attempt to do this in a somewhat informal manner, pointing out the many accomplishments of the survey, but also critiquing aspects of my theoretical orientation and techniques. I hope that this

retrospective assessment will demonstrate the changing perceptions that the ongoing fieldwork afforded me as well as my continuing attempts to improve the survey techniques through time.

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Today the north coast of Peru is alive with archaeologists, with significant research being conducted in almost every valley system. That was not the case 25 years ago when as a "newly ordained" professional I left the security of Berkeley and began my teaching career at the University of Massachusetts. After two years of adjusting to my new lifestyle, including the preparation and teaching of five new courses, I was again anxious to get back into the field and to begin a new line of research. Unfortunately political conditions in Peru in 1967 were such that only well-connected foreign archaeologists could ever hope to receive the necessary permits to undertake fieldwork. For a young and relatively inexperienced archaeologist like myself, the best way to get involved in a field project was to attach oneself to an on-going project headed by someone who had the clout to get the "Resolución Suprema."

It was then that I learned through the grapevine of a proposed 10 year project being organized by Junius Bird of the American Museum of Natural History in New York. Bird was attempting to raise money to excavate and restore the famous Moche ceremonial center of Pañamarca located in the Nepeña Valley, some 300 miles north of Lima. Pañamarca was well-known for its well preserved polychrome murals which depicted iconographic scenes identical to those found on Moche ceramic vessels. Bird and Froelich Rainey of the University of Pennsylvania Museum hoped to clear the site of Pañamarca and then eventually turn the site over to the Peruvian government as a tourist attraction.

I contacted Bird in late 1966 to inquire whether there might be a place for me on the team. Bird replied that he was still in the process of raising money, but that it would be very useful if I were to go down to the Nepeña Valley and undertake a surface survey in order to determine the nature and variety of the sites there. He further assisted me by providing me with funds from the American Museum to enable the purchase of a set of aerial photographs that had been taken by the Peruvian Air Force in 1944 for the Ministry of Agriculture. Thus, in the Spring of 1967 I found myself with a research project, but alone in an unfamiliar part of Peru.

Preparation for the survey was necessarily brief but thorough. A number of explorers, and later archaeologists, had briefly visited the valley and some had published short sketches of a few of the major sites, but for the most part the Nepeña Valley remained an archaeological unknown. I reviewed all the published sources on the valley, especially the descriptive accounts by Squier (1877), Bennett (1939), Soriano Infante, (1941), and Schaedel (1951a and 1951b). The only previous scientific excavations conducted in the valley had been performed by Julio C. Tello in 1933 when he cleared the early temples of Punkurí and Cerro Blanco ((Tello, 1933a, 1933b, 1933c, 1933d, and 1943; Mejia Xesspe, 1963). His work, while brief in duration and never properly published, demonstrated the presence of very early ceremonial architecture in the Nepeña Valley. Tello later was to argue that the Nepeña Valley was a coastal center for Chavin influence during the Early Horizon. The presence of these early sites in the valley and their potential for shedding light on the dynamics of the formation of complex society on the coast of Peru attracted me then and became a focus of my own later research in the valley.

In 1967 the Nepeña Valley was essentially one large sugar estate made up of a number of haciendas amalgamated under the control of the Negociación Azucarera Nepeña, S.A. (NANSA). The principal stockholder of NANSA was the International Basic Economy Corporation (IBEC), a Rockefeller subsidiary with offices in New York. Through the generosity of the administrators of IBEC and NANSA, I was able to secure room and board at the Hacienda San Jacinto, the major population center in the valley, conveniently located in the middle valley area.

The technique I used in 1967 was closely modeled after that used by Gordon Willey in his classic settlement pattern study of the Virú Valley to the north (Willey, 1953). Willey used existing aerial photographs of the Virú Valley as the foundation for the site location map he produced, thus saving a great deal of time normally spent on drawing a base map from scratch. Architectural plans and site maps were also made by photographically enlarging portions of the aerial photos, drawing a series of plans based on the images, and then checking and correcting the plans by means of observations on the ground. It was a brilliant time saving device which I copied in my own project.

I was fortunate in being able to purchase a set of aerial photographs for the Nepeña Valley from the Servicio Aerofotográfico Nacional (SAN) in Lima. The thirty

large sheets in this set covered the majority of the valley and were at a scale of 1:10,000 which allowed me to discern many of the sites directly. Matte acetate overlay sheets were prepared for each of the thirty sheets of the aerial photograph set, and sites and their boundaries were drawn on them as they were located and cataloged. The aerial photographs were indispensable as an aid for locating and easily mapping the sites.

Aside from locating and cataloging new sites in the valley, it was important to be able to date them as well. Ceramics proved to be the most useful indicator of age because of their durability, sensitivity to stylistic change, and their frequency of occurrence on the sites. I had prepared for the survey by studying the ceramic types and sequences from the valleys adjacent to Nepeña before arriving in Peru. Of particular importance were the ceramics collected in the Casma Valley by Donald Collier and Donald Thompson, some of which I studied at the Field Museum in Chicago. I also carefully read the published reports of the ceramic sequence for the Virú Valley (Collier, 1955; Ford, 1949). Many of the styles and ceramic types were distributed over a wide area of the north coast in pre-Columbian times, and these previously dated types allowed me to tie the Nepeña Valley sites into this known sequence through the technique of cross-dating. Ceramic types that were unique to the Nepeña Valley were dated through seriation with known styles and types.

Although ceramic analysis has always been one of my strong points, I also have a great interest in architectural style and the use of architecture for dating purposes. It soon became apparent that different building materials (adobe forms, type of stone masonry, use of megalithic blocks) as well as the form of constructions, varied through time and could be used for chronological purposes. As the survey progressed, other materials such as spindle whorls, stone tools and pan pipe fragments were also used as an aid in dating sites.

1967, the first year of the survey, was a time of trial and error for me. This was my first independent archaeological project, and I had a great deal to learn. Because I was working with a shoe-string budget (\$1600 for almost three months in Peru), I had to work alone. In retrospect, I see a number of disadvantages in attempting to carry out a project of this nature by oneself. I am certain that I would have been able to more accurately observe and record information from each site had I brought a colleague or student with me into the field. I would also have benefited from being able to talk over my impressions with someone and profited from another person's ideas.

The first areas I surveyed in 1967 were those in the more accessible parts of the valley, i.e. those closest to the Hacienda San Jacinto and those on or adjacent to the valley floor. I soon observed that the form and positioning of each site varied through time and location within the valley. The vast majority of the sites were situated on the borders of the valley rather than on the fertile valley bottom, or on plateaus or mountain ridges overlooking the valley floor. At the time it was difficult to determine whether this pattern of settlement was due to cultural factors or to variable levels of preservation caused by ecological factors such as alluviation of the valley bottom. After working in the valley for several seasons, it is now apparent that the patterning of the distribution of sites was determined more by cultural preferences than by the effects of natural processes. Comparison of settlement patterns in other north coast valleys supports the contention that the ancient inhabitants preferred to avoid placement of their sites on land that was subject to flooding or was potentially more useful for agricultural purposes.

A major problem that confronted me (as it had Willey in Virú) was the multiple occupation of most of the sites that were recorded. In spite of extensive looting at each site, I could never be certain that the surface artifacts represented all of the occupational history of the site. When architecture was present, it was difficult to sort out which period of occupation it belonged to. Over time this problem was resolved through patterns of association that became evident after visiting hundreds of sites, and most importantly, through the isolation and study of single occupation sites.

One of the objectives of the survey was to determine the function of each site discovered. In many cases the function was obvious: a cemetery or a habitation site. In most cases, however, the function was ambiguous. For example, in the upper valley a large number of "ridgetop sites" were recorded. These consisted of either a flattened hilltop sometimes surrounded by a crude wall, or in other cases of one or more rooms constructed of fieldstone and sunken partly into the hilltop. Pottery, spindle whorls, stone tools and pan pipe fragments were associated with these sites, suggesting domestic activities, but the location of the sites also suggested a defensive and/or administrative function as well. Small terraced platforms also appeared on ridgetops, further confusing the issue.

In an article which appeared in 1972, Moseley and Mackey critiqued Peruvian settlement pattern studies for their use of simple site taxonomies that were "insensitive to

the range of human activities that went on..." (Moseley and Mackey, 1972:67). They suggested a functional approach making use of "small site methodology" in which specific activities could best be studied in the uncluttered setting of a single occupational site having a single function rather than in large, complex sites where a number of functions must be sorted out. In later years of the survey, I took this critique to heart and applied it to the early sites in the sequence with variable amounts of success. I also did not use the same complex taxonomy for classifying my Nepeña Valley sites that Willey had used in Virú. Rather, I developed my own taxonomy as I went along, modifying it when necessary.

The recording and naming of sites posed additional problems. I used the now standard technique of site designation developed by John Rowe for systematically recording sites in a survey. Rowe had given each Peruvian valley a specific number; the number for the Nepeña Valley was PV 31, meaning Peruvian Valley number 31. Each site discovered in the valley was listed sequentially, e.g. the first site became PV 31-1, the second PV 31-2 etc. The first site in my survey was not random, however. I was aware that the year before my arrival in Nepeña, Christopher Donnan, then working in the Santa Valley to the north, had visited Nepeña and had made a brief survey of several sites in the middle valley area. I attempted to relocate the 6 or 7 sites he originally recorded and to designate these as the first sites in my survey. Working from scanty records provided by Donnan, I am not positive I selected the same 6 sites he had previously recorded. By trying to correlate his six sites with mine, I was attempting to avoid confusion, but in the process I may have compounded it. My advice to others in similar circumstances is to start from scratch unless positive identification of previously designated sites can be established.

In addition to the numerical site designations, local names were applied to the sites where possible, but this too can lead to problems. I remember one particular (PV 31-56) which was designated on the topographic map as a place called "Siete Huacas." I used that designation in my 1967 monograph but later learned that Tello had referred to this site as Kushi Pampa in his writings. In later monographs I switched to this name for the site. One of my colleagues, who later studied an unfinished sculpture I had published from this site, became confused as a result of my shift in site names and thought that two different sculptures had been discovered, one at Siete Huacas and one at Kushi Pampa. Where multiple names have been applied to a site, care must be taken to select the correct one. Rowe's numerical scheme of designation avoids this problem by eliminating the

need to use local names, but we still tend to personalize the sites by the use of these sometimes faulty local designations.

A final problem that I remember from 1967 was how to determine where one site ended and another began. Often I would find an occupational cluster in one spot separated from another cluster of artifacts or architecture by a geographical gap of several hundred meters. Was I dealing with a single site or with separate sites? Looking back after many years of experience, I now think I was more of a "splitter" than a "lumper", creating several sites out of what should have been a single site. I attempted to remedy this in my later reports by talking about "site clusters" in which I included those large sites which I had previously split into several parts.

By the end of the summer of 1967, I had recorded 110 archaeological sites in Nepeña, and I felt satisfied that I had made a good start at understanding the nature of the sites in the valley. The following year I published the first of three monographs on the archaeology of the Nepeña Valley (Proulx, 1968). It was a modest beginning with descriptions of the 110 sites, a great deal of background information on previous work in the valley and present conditions, as well as the first attempt at a cultural history for the valley based on a combination of ceramic analysis and architectural studies. The illustrations included a number of photographs of pottery from private collections in the valley, and this caused me a bit of trouble in later years. Some of the Peruvian authorities accused me of obtaining these vessels through unauthorized excavation, but the matter was quickly resolved when I convinced them that these vessels had merely been photographed as part of my extensive interviews with the residents of the valley, many of whom owned private collections of local artifacts. The drawings I made of the surface sherds for the monograph were crude and revealed my lack of skill in artifact illustration. If I had it to do over again, I would have entrusted this task to a more qualified person.

Junius Bird was very pleased with the results of my survey, but regretfully a complex variety of circumstances prevented him from raising the funds for the large scale project he and the others had planned for Nepeña. I had a decision to make about what I would do. I was now familiar with the valley, had made many contacts in Peru, and most importantly saw the need to complete the systematic survey I had begun in the valley. Up to this time no complete valley survey had been published except Willey's. I knew the potential value that a complete survey could have for the interpretation of settlement patterns over time and for developing a cultural history for the region. I also realized the

importance of the valley for understanding the rise of complex society on the north coast. I convinced myself that I should carry on with the survey.

I managed to obtain enough grant money, thanks to the American Philosophical Society, the American Council of Learned Societies and the University of Massachusetts, to plan a return trip to Peru in 1970. All was in readiness for my departure when, three weeks before I was to leave for Nepeña, the largest earthquake of the century hit northern Peru. The epicenter of the quake was directly offshore of the Nepeña Valley. Almost every standing building in the valley was leveled, communication was cut off, and in the highlands, where the worst effects were manifested, complete villages such as Yungay were buried under a thick mantle of mud. Over 70,000 people lost their lives in northern Peru due to this quake.

Naturally I was forced to cancel my plans for that year. I spent several anxious months trying to assess the damage and trying to learn the fate of my many friends in the valley. It was fortunate that the catastrophe happened before I left for the field, for I would have been isolated in Nepeña for quite awhile had I been there.

I did return to Nepeña in the summer of 1971. A number of changes had taken place, not all due to the earthquake. I was shocked by the extent of the damage in the north. Despite the passage of a year, San Jacinto consisted of a jumble of temporary shacks. The sugar factory was functioning, but barely. The good people of San Jacinto provided me with quarters to live in spite of the great inconvenience my visit put on them. I will always be grateful to their generosity in this time of adversity.

The other major adjustment was that there had been a military coup in Peru in 1968 following my first visit. There was now a nationalistic military government in place, a government whose social reforms included the expropriation of the large sugar estates (and many industries as well) from their private owners. San Jacinto was one of many peasant controlled Cooperativas, managed by an elected committee of peasants under the direction of a resident military officer. Life at San Jacinto had become much more somber and tense due to the earthquake and the new regime.

The goal of the 1971 survey was to continue the exploration of the valley, particularly the more inaccessible parts which had not been visited in 1967. I also planned to undertake minor test excavations in a few selected sites to verify the

chronological sequence and to learn more about the function of some of the sites. I applied for a digging permit well before arriving in Peru, but due to the usual bureaucratic tape, I did not receive permission to excavate until several days before my scheduled departure for the States. As a result, the planned test pitting was delayed and indeed never has been accomplished to this date.

I recall the 1971 fieldwork as being the most difficult I had experienced due to the poor conditions following the earthquake. Sanitation was poor, accommodations cramped, communications poor, and I suffered from poor health much of the summer. I did force myself to work each day, and by the end of my fieldwork in November, I had recorded an additional 110 sites, making a total now of 220. I had learned from my past experience and feel I did a more complete job of survey this second time around. I knew what to look for, and, in addition to the more traditional types of sites such as cemeteries and habitation areas, I explored prehistoric roads and canals as well as petroglyphs, ancient fields, and walls. Fortunately most of the archaeological sites were unaffected by the earthquake, with the exception of a few having high walls of stone, like Kushi-Pampa (PV 31-56) or of adobe, like Huacatambo (PV 31-94). I have never ceased to be amazed by the skills of the ancient inhabitants of Peru who knew their environment much better than Spanish conquerors and took precautions against natural calamities.

With the completion of the 1971 fieldwork, I felt I had a good grasp of the archaeology of the valley; the cultural history and the changing settlement patterns for each period had been worked out. My second monograph on the Nepeña survey (Proulx, 1973) was much more detailed than the first, containing descriptions of the newest group of 110 sites, sections on cultural history, ceramics, roads canals, site complexes as well as settlement pattern maps. I also tried to illustrate a new selection of sites and ceramics. Many of the latter were photographs taken of specimens in unreported private collections from the valley which are thought to have valley provenience. In 1971, under Peruvian law, individuals could retain private collections if they were registered with the government. I assumed that most of the collections held by people in the valley had been collected locally, and upon questioning, the owners would often cite the general location where the individual vessels had been collected. Since my surface collections rarely turned up complete pots, I was anxious to photograph as many of these private collections as possible for comparative purposes. Naturally, since these collections are undocumented, it is possible that some of the pieces were collected outside the Nepeña

Valley, but I am reasonably confident that the majority of the sample I photographed and published are indeed local in origin.

Eight years were to pass before I was able to return to Peru. Various obligations, including a three year stint as department chairman, prevented me from continuing the research at the previous levels. By 1979, when I finally returned to Nepeña, my objectives had shifted. Part of the shift was involuntary in nature. The ramifications of the "New Archaeology" with its emphasis on process and the testing of hypotheses had made getting funding for more traditional archaeological pursuits (like surveys and chronological studies) difficult. Partly out of necessity I had to redesign my strategy.

I had always been interested in the rise of civilizations and the process of state formation. In Peru, the Chavin Culture had traditionally been considered the first "civilization" ever since Tello's pioneering work. One of the reasons I was so interested in the Nepeña Valley was the presence there of two small temples excavated by Tello in 1933, Punkurí and Cerro Blanco. Tello hypothesized that the Chavin Culture originated in the highlands and from there spread to the coast. The Nepeña Valley was seen as a center of this coastal manifestation of Chavin.

I had discovered a number of Early Horizon (contemporary with Chavin) sites in Nepeña during the surveys of 1967 and 1971. I was curious about the role that Chavin played in the formation of complex society in the valley, and I decided to orient the 1979 fieldwork toward answering some of these questions. My previous discovery of early fortifications dating to the Early Horizon also played a role in the research, for it attracted the interest of Robert Carneiro and other supporters of the "Circumscription Theory." Had Nepeña been invaded by Chavin colonizers in the Early Horizon, or was the evidence for warfare a manifestation of local conflict and increasing social complexity within the valley boundaries? With these thoughts in mind, I submitted several large grant proposals directed at testing the nature and spread of the Chavin manifestation in the Nepeña Valley through selected excavation and ancillary laboratory analysis of ceramics, pollen, and other materials.

I was unsuccessful in getting the major funding I needed. Part of the blame can be attributed to the weakness of the proposal, but other factors were involved as well. Unfortunately for me, a number of new archaeologists working on the north and central coasts were beginning to question the pre-eminence of Chavin as the "mother culture" of

all later Peruvian civilizations. Moseley's work on the coast suggested that permanent settlements and the beginnings of class stratification began in the late Preceramic Period and was based on a maritime economy that preceded the introduction of agriculture. (Moseley, 1975) Large religious complexes, dating to the late Preceramic and Initial Periods, were being discovered up and down the coast along with evidence for stratification and "corporate labor practices" (Feldman, 1981; Donnan, 1985). Later, work in the highlands would also demonstrate the presence of early temples and social complexity dating to the period prior to Chavin (Burger and Salazar-Burger, 1980; Izumi and Sono, 1963). This new orientation toward the earlier manifestations of complex society in Peru decreased interest in Chavin and placed its role as a model and source for later civilizations in doubt.

As I look back at that period of the late 1970's and early 1980's, I recall my own struggle to assimilate the new evidence coming to light in that exciting period with my preconceived notions of the role of Chavin in ancient Peruvian society. As I readily admitted in my third monograph on Nepeña (Proulx, 1985), my own perceptions of Chavin underwent changes as a result of the 1979 fieldwork. But in 1979 I felt the need to demonstrate one way or another what role Chavin may have had in the formation of complex society in Peru from the perspective of the Nepeña Valley. The harsh criticism of Chavin manifested at that time (e.g. Pozorski, 1983; Moseley, 1985) led to it being downgraded to a minor local highland phenomenon. The fact remains that we know far too little about the nature of Chavin and the mechanism of its spread. I felt that the Nepeña Valley was an ideal location to test theories about Chavin, both because of its relative proximity to the site of Chavin de Huantar and because of the previous rich discoveries of early sites found in the valley.

Because my major grant proposals were not funded, I modified my plans. I again was able to secure several small grants from the American Council of Learned Societies, the American Philosophical Society and the University of Massachusetts. Funds allowed me to take a graduate student into the field with me for the first time. My focus remained the Early Horizon, and the goals I set for myself were (1) to locate additional Initial Period and Early Horizon sites in order to increase the sample size of these sites and to categorize them into functional types, (2) to revisit previously recorded early sites in the valley to map and study them more systematically, (3) to select sites and activity areas within sites for future excavation, (4) to undertake settlement pattern studies with the object of identifying site clusters and/or the ranking of contemporary sites into primary

and secondary centers, (5) to attempt to determine the nature and length of Chavin influence in the valley as well as to identify and understand any local cultural developments, (6) to make architectural studies with the purpose of using architectural styles as a possible time marker, and (7) to work out a more exact chronology for the Initial Period and Early Horizon using ceramics and other artifacts.

By 1979 the Nepeña Valley had recovered from the effects of the earthquake (it would never again regain the charm of the past which disappeared along with its 19th century buildings and ancient trees), but a depression in the sugar industry brought on by several years of decreased rainfall in the highlands, led to hard times for the people of the valley. We were fortunate in being offered a vacant house at San Jacinto for our headquarters. Although sparsely furnished, the house provided us with room to spread out our surface collections, and we enjoyed more privacy than I had encountered in previous years.

Working with a companion had many advantages over my earlier solitary endeavors. I felt more secure in exploring the more remote areas of the valley, confident that if I had an accident or needed aid, someone would be aware of my predicament. In the three months we were in the field, numerous ridgetop sites, situated high above the valley floor, were investigated as well as other remote areas of the valley and its tributaries. Together we were able to cover a site more thoroughly, make larger and more accurate surface collections, and, most importantly, we were able to discuss our interpretations as we went along. My graduate student, Richard Daggett, was an excellent choice for an associate, and this being his first trip to Peru, he learned a great deal about the country and of the techniques of archaeological survey and ceramic analysis. We have continued to share ideas on the interpretation of the data to this day.

Together we reinvestigated many of the Early Horizon sites I had previously recorded, but our incursions into new areas of the valley permitted us to add an additional 40 sites to the roster in 1979, making a grand total of 260 sites surveyed in the valley up to that point. The majority of these new sites dated to the Early Horizon and/or to the following Early Intermediate Period, for we were consciously looking for sites of these periods and by now recognized the settlement patterns sufficiently as to know where we were likely to locate them. In reality, many of the sites turned out to be multi-occupational, so that most periods in the cultural history of the valley were represented in our new sites.

Increased attention was given to ceramic analysis in 1979, for my goal of understanding the nature of outside influences on the valley during the early part of the cultural sequence depended on strict chronological control. As in previous years, I concentrated on the collection of diagnostic sherds, i.e. those that were decorated or identifiable as to form (such as rim or base sherds). For cross dating and seriation, diagnostic sherds have always been the most valuable. We did, however, collect an adequate sample of plainware and/or body sherds in order to insure completeness of the sample. The rationale behind emphasizing diagnostic sherds will not be argued here (see Proulx, 1985:183-186), but some specialists have criticized this technique preferring to collect random, complete samples.

One change I would make if I were to do the survey again with the benefit of hindsight would be to attempt to increase the surface sample size. In 1967 and 1971 when working alone, I was restricted by time and energy from collecting large samples from large sites. If I had enjoyed the benefit of a student assistant, such as I had in 1979, I feel I could have done more with the chronological studies at an earlier time. During all three field seasons I was further hampered by Peruvian regulations which prevented the exportation of artifacts from the country, even for study purposes. As a result, studies of the ceramics and other artifacts had to be built into the daily fieldwork schedule, necessitating the expenditure of valuable time that could have been used for further field investigations. The ceramic analysis, therefore, was rather hurried, and I have not been able to go back and look at the actual specimens again as my ideas developed. As a way to alleviate this problem, I took group photographs of all the surface collections made during the surveys in order to have a permanent record of the artifacts and as a means of checking my conclusions once I was back home. This procedure was followed by Daggett in 1980-81 when he returned to Peru, and has proven to be of immeasurable help.

Thus the 1979 fieldwork did not include the necessary excavation that could have helped resolve pressing problems about the role of Chavin influence in the valley and the nature and function of some of the important sites. My funding only allowed for a continuation of the surface survey, with special emphasis on the early sites in the valley. Yet I consider our work in 1979 to have been very successful, for we were able to suggest an preliminary division of the Early Horizon into two, (later expanded by Daggett to

three) phases, each characterized by differing ceramic and architectural styles. All of the goals stated above were achieved to greater or lesser extent.

Following the 1979 season, Daggett decided to do his dissertation research in the Nepeña Valley since he was now familiar with the area, knew the chronological sequence, and had made valuable contacts at San Jacinto. I originally suggested that he survey the unknown inter-mountain area between the town of Jimbe in the upper valley at 1200 meters and the Callejon de Huaylas at 3000 meters on the other side of the Cordillera Negra. My plan was to have him test various hypotheses about coastal-highland interaction with particular emphasis on evidence for direct contacts between Chavin and Nepeña.

Daggett was awarded a Fulbright Fellowship in 1980 for his dissertation project, and he and his family spent one year, from summer 1980 to summer 1981, in Peru. Once in the field he discovered that the plan, while meritorious, was physically and logistically difficult and potentially unrewarding vis-a-vis the Chavin problem. His limited research in the tributaries above Jimbe suggested that few sites existed in the zone between 1500 and 3000 meters, and that pottery, characteristic of Early Horizon sites in the valley proper was not to be found in this zone (Daggett, 1984:44-47; 52). Consequently, he changed his focus to a study of the Early Horizon sites in the valley proper.

This change in plans caused me a bit of difficulty, for I had planned to continue this line of research myself in succeeding years, and more directly, I was in the middle of writing up the results of the 1979 field season, and Daggett's continuing research would affect almost all of the interpretations I was attempting to make from the more limited evidence of the 1979 work. I reluctantly decided to suspend work on the monograph until I could be certain that my monograph and Daggett's dissertation would not overlap to any great degree.

Despite the frustration I felt at the time, Daggett's research in the valley turned out to be first rate, and he has contributed significantly to our knowledge of the nature of the Early Horizon occupation in Nepeña. Daggett surveyed an additional 103 sites in the valley, bringing the total number of recorded sites up to 363. Most of these dated to the early part of the cultural sequence. He discovered a large number of these sites in the upper valley area, in the vicinity of Jimbe, where we had not had the time to explore in 1979, but he also found many Early Horizon sites on the ridges overlooking the middle

valley. I had missed these in the earlier years of the survey, but once the settlement patterns for the Early Horizon had been established by us in 1979, Daggett went back and applied his knowledge to previously explored parts of the valley.

Daggett's dissertation was completed in 1984 (Daggett, 1984) and it contains a wealth of data. Using the preliminary analysis of the ceramics we made in 1979, and reported by me in 1985 (Proulx, 1985:183-215), Daggett undertook a similiary seriation of the pottery which allowed him to subdivide the Early Horizon into three phases. His own surface ceramic assemblages from the sites he discovered played the primary role in this seriation. For each of the three phases he analyzed settlement patterns, site functions and presented a general cultural history for the valley. He also attempted a correlation of his findings with discoveries made in adjacent valleys. Although his dissertation focused on the Early Horizon, data on the preceding Initial Period and Succeeding Early Intermediate Period was included. A complete listing of Daggett's publications stemming from the Nepeña work can be found in the bibliography.

No further work has been done on the survey since 1981. Daggett and I have completed our systematic survey of the main branch of the Nepeña Valley from the ocean to the town of Jimbe at 1200 meters, a span of about 50 kilometers. The 363 sites discovered represent the majority to be found in the main valley system, yet areas still remain which have not been adequately explored. In particular the Vinchamarca tributary needs to be surveyed, and more attention needs to be paid to the shore area and the alluviated lower valley bottom to insure that no sites were missed during the early years of the survey. I still feel it would be productive to undertake a scientific investigation of the intermountain region between Jimbe and the Callejon de Huaylas, for the sporadic work done in this region by Wilfredo Gambini indicates that many important discoveries may await the archaeologist (Gambini, 1975 and 1984). Both Recuay and Moche graves have been reported in this area and other data on coastal-highland interaction could also be acquired.

I am often asked what I consider to be the major accomplishments of the Nepeña Valley survey, a survey which spanned the course of 14 years and included 21 months of fieldwork. Among the the achievements I would single out are the following.

1. the subdivision of the Early Horizon into phases, the earliest characterized by fieldstone structures on ridgetops, pottery decorated with stamped circles and

dots, and the presence of clay pan pipes and ground stone projectile points or knives. Chavin influence was present in the early phase. The early phase was followed by a later phase of purely local development characterized by large complexes constructed of megalithic architecture and having pottery decorated with pattern burnishing.

2. the discovery of Early Horizon fortresses in both phases, among the earliest dated in Peru, suggesting the role of conflict or warfare in the formation of complex society.
3. discovery of 42 sites in the valley with Recuay style pottery, indicating a strong influence or colonization of parts of the valley during the Early Intermediate Period (200 B.C. to A.D. 600) by peoples from the Callejon de Huaylas.
4. verification that the Nepeña Valley had been incorporated into the Moche empire during the Early Intermediate Period and was the seat of a major Moche ceremonial complex (Pañamarca) with its elaborate murals. Nepeña was, however, the southernmost valley of this polity, and remained on the fringes of the political and military activity.
5. the discovery, through settlement pattern analysis, that the Nepeña Valley was divided into two territorial units during the Early Intermediate Period, one controlled by the Moche in the middle and lower valley and the other by Recuay in the upper valley. The two cultures appeared to coexist in the same valley system with the Moche too weak in this frontier of their empire to occupy the territory controlled in the upper valley.
6. evidence for a population explosion in the Nepeña Valley during the Middle (600-1100 A.D.). More than half the sites in Nepeña have Middle Horizon occupation levels, with many older sites being reoccupied by the Huari-influenced populations.
7. discovery of a large number of petroglyphs, ancient walls, roads and canals in the valley, many of which date to the Middle Horizon and Late Intermediate Period.

8. verification of the site of Huacatambo (PV 31-94) as the Chimú administrative center for the Nepeña Valley during the Late Intermediate Period (1100-1460 A.D.) and the location of several additional important Chimú sites.

Until recently, the Nepeña Valley survey was the only complete published survey of a coastal Peruvian valley other than the seminal study of the Virú Valley executed by Willey in the late 1940's (Willey, 1953). In the last decade others have begun or completed similar surveys in other coastal valleys, the most notable example being David Wilson's monumental survey of the Santa Valley, just to the north of Nepeña, where he has recorded and mapped over 1000 sites (Wilson, 1985 and 1988). It is gratifying to see that the collection of basic data has not disappeared in this age of processural archaeology, and I am pleased that our work in Nepeña may have spurred others to produce similar results.

Hindsight has demonstrated that certain aspects of the survey could have been improved by more sophisticated techniques. No archaeologist should ever be completely satisfied with his earlier work; we learn from our past mistakes and, hopefully, make appropriate changes in our later work to avoid the same pitfalls. While I have critiqued many aspects of the Nepeña Valley survey so that others may benefit and learn from my experiences, there is much of which I am proud. The survey was successful and hopefully has contributed to our overall understanding of the cultural history and developmental processes of civilization in the Central Andes.

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