

UNIVERSITY OF CALIFORNIA

Los Angeles

Leon Viejo, Nicaragua:

A Community of Contact

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Anthropology

by

Deborah Ellen Erdman Cornavaca

2003

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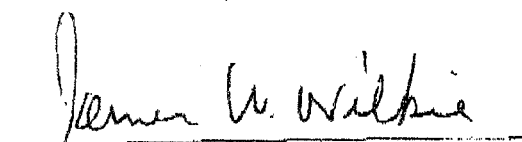
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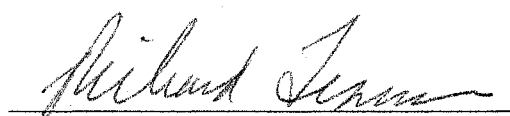
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In Memory of
Professor Jim Hill
A True Scholar and Gentleman

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ABSTRACT OF THE DISSERTATION

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by

Deborah Ellen Erdman Cornavaca

Doctor of Philosophy in Anthropology

University of California, Los Angeles, 2003

Professor Richard Leventhal, Chair

Leon Viejo offers the rare opportunity to examine the earliest years of contact between Spanish and native groups living side-by-side. This dissertation examines the archaeological evidence from excavations of two house mounds, one Spanish and one native, to gain insight into the first century of contact. Since the contact period is a time of such rapid and substantial change, it is characterized more by disorder rather than an organized social system. The broad theoretical framework of Interpretive archaeology is used to pursue a detailed contextual analysis of the data. This theoretical approach allows for a common framework to evaluate the data from both groups. The goal of the analysis is to learn about the lives of Spaniards of Leon Viejo

and their native neighbors rather than attempt to create a model for contact between cultures. The small-scale excavations provided detailed contexts within which to evaluate the data. The thick description of the data is used to elucidate where meaningful comparisons can be made and what parts of the material culture are relevant to interpreting the relationships between the individuals and the groups of contact. The interpretations of the data begin at the smallest contextual level of the excavations and the households that were uncovered and then move to broader contexts to expand the analysis. The Spanish domination of natives that is so often presumed is supplanted with a view of their dependency on the native community for basic survival. In final analysis, it becomes apparent that while the Spaniards and the natives were two distinct cultural groups, they were living together in an early contact community.

PROLOGUE:

THE FORMATION OF AN ARCHAEOLOGICAL MIND

PART ONE

Some of my earliest childhood memories are from a year I spent living in India when I was three with my parents and sister. In the playground at my preschool I remember how all play would come to a halt when a plane flew overhead. All the kids would look up with marvel and amazement at this flying object in the sky. I remember vividly looking up and thinking, 'that is how I got here.' I wondered whether the other kids considered me with the same wonder and curiosity. During that same year, Professor Greg Possehl came to visit us. To a small three year old just his presence was immense but the stories of his work at Mohenjo Daro became a fascination of mine for years to come. It was from the ripe old age of three, therefore, that I realized that people saw the world around them in profoundly different ways depending on experiences and contexts.

As a teenager I remember swearing up and down that I would never become a professor. Both my parents were professors, and that seemed reason enough to reject teaching as a career choice. I now know that the more time I spent saying never, the more inevitable the path became. During college my career plan, which was to go to law school, allowed me the luxury of picking any major I was interested in pursuing. I chose Classical Archaeology and had the opportunity to spend three months in Greece and Turkey visiting classical ruins that are credited with being the seeds of Western Civilization.

During that time I remember a discussion I had with my mother about archaeology. She said to me that the subject fascinated her but she never understood how archaeologists arrived at the conclusions they presented. That comment, although

casually made, had huge impact on me. So much of the thrill and excitement in archaeology is in the process of discovery and yet by the time we present our conclusions, too often we omit the processes that brought us to that point.

Finally, while studying in Greece during college, I was given the opportunity to study up-close the miniature frescos from Akrotiri at the National Museum of Archaeology in Athens. The interpretation of these frescoes was the topic of a paper I completed for my adviser. His fundamental criticism of my paper was that I had not separated the description from the interpretation of the frescoes. I was infuriated when I read that because he had missed my whole point. The way in which these frescoes had been removed from their archaeological context and reconstructed at the museum, with many broken pieces placed where they made the most sense to the conservators, meant that the process of description *was* interpretive. In particular in this instance, it was impossible to separate the interpretation from the description, but I began to wonder in general whether it was ever truly possible.

PART TWO

This is not the dissertation that I envisioned for myself when I began graduate school. In terms of geographic region, temporal focus, and theory, my dissertation has taken me places I never expected to go. But then again, my path has taken unexpected turns long before I started my graduate work at UCLA. So perhaps in retrospect, I should not be surprised by the twists and turns along the way.

My start in American anthropological archaeology came as reaction to the frustrations I experienced, as an undergraduate, in Classical archaeology. With the shift in disciplines, my geographic focus shifted from the Old World to the New World, which I envisioned as a temporary change. I found the pre-Columbian cultures in the Americas distressingly recent compared to the Ancient Greeks. But ultimately the new World proved fascinating, and more foreign, despite being closer to home. My doctoral

research moved me from pre-Columbian periods in Mexico to the colonial period of New World, which again I never anticipated. But the shift did reunite me with a bit of the Old World, albeit in new surroundings.

When I moved from Classics to Anthropology, I initially found the structure of Processual archaeology comforting. As time passed, however, the limitations outweighed the benefits in terms of explanation and interpretation. Other theoretical frameworks became more appealing for my research. Ironically, my earlier training in Classics probably contributed to my ultimate reaction to standard practices of Processual archaeology, as I longed for more freedom in my explanatory models.

PART THREE

I chose a career in anthropological archaeology due to a congruence of coincidences my senior year at Dartmouth College. First, after seeing many of my friends go to law school and emerging as people I did not recognize, I abandoned my own plan to pursue a career in law. I lost confidence that I would be able to maintain my value system in the context of the legal profession as it functions today.

Second, I had the opportunity, and honor, to take a course taught by Professor Cyrus Gordon, who showed me the broad reaching and profound implications of the interpretation of past in life today. It was at that time that Martin Bernal's first volume of *Black Athena* was published, which argued the significance of interpretation of the past on modern life. Bernal struck close to my heart when he argued that the Nazi interpretation of history, including ancient history, was used as justifications for their atrocities. Despite the fact that the atrocities are now recognized, much of ancient history is still told in the same manner. Third, I had become disgusted with the department of my chosen major, Classical Archaeology. The views of many of the professors seemed as antiquated as their chosen topic of study.

Finally, I had the good fortune of being a student of Professor Deborah Nichols in the Anthropology Department during my difficulties with the Classic Department. It was Professor Nichols who offered me my first, and marvelous, opportunity to participate in a field project she was co-directing with Professor Elizabeth Brumfiel. After that first field season in Xaltocan, Mexico I was determined to go to graduate school in anthropological archaeology with a commitment to teaching the past, not only as a subject intrinsically fascinating, but also socially relevant.

I had no idea at the time that my own convictions would land me in the midst of a heated debate in anthropological archaeology. But by the end of my first year in graduate school at UCLA, I realized where my interests would fall in the theoretical divide. Professors Richard Leventhal, Jim Hill, Tim Earle, and Louise Krasznejewicz are responsible for allowing me to make educated and independent decisions regarding my interests. Their training and guidance have been pivotal in my intellectual development, despite the fact that clearly I cannot follow in the footsteps of all of them. Professor Jim Hill, perhaps the farthest theoretically from this dissertation, pushed me in his first year course on Archaeological theory to be clear about my position since, he said, "I may not agree with your position, but I do not want to see you as road kill." I hope, at a minimum, to have honored his wish.

PART I: THE CONTEXT OF A PROJECT FROM THE GROUND UP

CHAPTER 1:

SETTING THE STAGE: ARCHAEOLOGICAL RESEARCH IN NICARAGUA

Sandino's Legacy

Sandino is considered the father of the revolution that defined life and politics in Nicaragua at the end of the last century. Sandino himself lived and died long before the revolution in his name emerged in the late 1970's. But in many ways Sandino outlives the revolution -- a revolution that came to a disappointing end for the Sandinista's with their defeat in a democratic election for President in 1990. Although the Sandinista Revolution is today viewed largely as a failure today, Sandino has not lost his stature. A larger than life statue of Sandino stands on the precipice of an ancient volcanic crater near the center of old downtown Managua, the capital of Nicaragua. This huge, austere statue, erected by the Sandinistas, but left by following governments and still adorned with red lights during the Christmas season, remains an important national symbol. It reminds Nicaraguans of the promises and hopes of the Sandinistas as they overthrew Somoza's dictatorship.

But Sandino's symbolism extends far beyond the revolution that he fathered. Sandino's statue, preserved and elegant, presides over a country that has endured much more than the rise and fall of a revolution. And despite the continued defeat of the Sandinistas in national elections, Sandino has become a symbol that encapsulates the major conflicts, ironies, and tragedies of modern Nicaragua.

The statue of Sandino, visible as one passes along a major road through Managua, seems to emerge from the earth on the ridge of a large volcanic crater. The ancient volcanic crater that it stands above, although no longer active, provides a reminder of the precarious relationship between humans and nature that has characterized life in Pacific Nicaragua for millennia. The Pacific side of Nicaragua is littered with volcanoes, all ancient, five still posing serious threats of eruption. In the past five years alone there have been three serious volcanic eruptions and there is a constant threat of many more. These volcanoes have played a major role in determining where and how people live on this land since long before Sandino arrived. And no matter how grand and imposing Sandino appears above the crater, humans stand in the shadows and at the mercy of these volcanoes.

Beyond the base of the crater to the north is the old center of Managua with Lake Managua only a short distance away. Until 1972 this part of Managua was the political and commercial center of the most modern and wealthy Central American country. Under the Somoza dictatorship there was a reasonable amount of stability that brought in international business and investment. The devastating earthquake on Christmas Eve of 1972 destroyed almost every inch of this part of Managua, and along with it the vulnerable stability that a dictator maintains. Among the few buildings that endured the violent shaking was the Hotel Intercontinental - an institution that epitomizes the opulence and greed of the Somoza era. Sandino's statue was erected after the earthquake, directly above the Intercontinental as if to cast a watchful eye on symbols of Somoza's wealth.

Somoza did not fare as well as the Intercontinental. Somoza's actions immediately following the earthquake, as Nicaragua struggled to cope with the

overnight loss of over 10,000 people, their homes and businesses, contributed to his downfall. Somoza's reckless use of international aid money gave the Sandinistas much-needed momentum and popular support in the mid-1970s. It was from the ruins of this busy part of Managua that Sandino emerged as a symbol of people's new hopes placed in the hands of the Sandinistas.

Today, beyond the Intercontinental and a new luxurious indoor mall, Sandino's view is of acres of open land where cows graze and squatters set up shacks to live along with parks and monuments that seem oddly out of place. There is no monument for the people killed by the earthquake, but the eerie emptiness of this part of Managua is a powerful memorial. Every time I drive through this part of town, some reminder of the earthquake shakes me -- whether it be a gutted building that 27 years later still has not been torn down, a field of cows where once stood department stores and banks, or the old movie theater now converted to an evangelical church. When living in Managua I go through this part of town daily, for although the commercial center was never rebuilt here, the center of government, including the National Palace and Museum where I work, has remained beneath Sandino's watchful eye, even if just out of his reach. That the commercial sector moved to more stable ground, while the center of politics remains, illuminates the constant struggle in the complex relationship between politics and economy in Nicaragua, a country which once again has returned to capitalism in search of political stability.

My initial reaction was one of bewilderment and disbelief at the extent of human suffering and natural devastation, and the ironies and juxtapositions that seem to go unnoticed. Years later, I am surprised to find that my sense of wonder has not gone away or even diminished. I find it impossible to become complacent amidst this

volatile and vibrant social and natural landscape. The ironies persist: the juxtaposition of human versus nature, opulence versus desolate poverty, stability versus turbulence, and enduring legacies versus passing moments -- all beneath the statue of Sandino.

The impact of these stark contrasts condensed in a small part of Managua affects me not just emotionally, but also intellectually. I am witnessing the power a natural disaster can have on political stability. I hear first hand the impact such a disaster and a decade of war can have on the psyche of a people - robbing them of dreams, aspirations, hope, and national pride. I see the challenges of rebuilding a nation of people who feel neither allegiance to nor confidence in their government and no sense of shared national identity.

All these issues are just as relevant when examining changes brought about by the arrival of the Spaniards in the sixteenth century as they are today. And Sandino's statue itself points out the enduring nature of symbols long past when their original context has faded -- how symbols are maintained while their meanings are changed or even lost. These are all issues that have direct relevance to my work and influence my thinking from the conception of my project in Nicaragua to the present, when I decide how best to share the results of four years of archaeological research.

Research Contexts: Nicaragua and Abroad

Two broad contexts provide the initial shape and direction of my research: my intellectual training and Nicaragua's socio-political situation. The intellectual traditions within which I have been educated, and continue to function form the

foundation of any research I choose to pursue. Broadly, I am referring to the mainstream (Processual) approach of American archaeology, somewhat integrated with European approaches and alternate paradigms (post-Processual being the most obvious). More specifically, I am referring to the combination of specialties that my work includes, each specialty having its own set of approaches and theoretical frameworks. My research crosscuts colonial archaeology, which frequently falls under the theoretical umbrella of historical archaeology, and the archaeology of indigenous societies, which has a multitude of approaches that predominantly fall within anthropological archaeology. Understanding, using, and manipulating these theoretical approaches and divisions are processes fundamental to the development of, and funding for, my research.

The socio-political situation in Nicaragua has played a significant role in my conception of this project and my ability to carry it out. Nicaragua as a nation is a relatively new democracy, and an emerging capitalist economy, in search of stability and national identity. The way archaeology is practiced and treated in Nicaragua, and the way the country's ancient past is viewed by Nicaraguan officials and archaeologists, influenced the direction and course of my work from the earliest meeting, when I was offered the opportunity to work at Leon Viejo, to the final stages of data analysis and presentation.

Some may see these factors as providing a backdrop that hangs passively in the background of my research, a backdrop that could be removed with no significant impact on my project or its results. But I view these contexts as canvases that provide the foundations and set the limits of my research, ultimately affecting the way in which the whole work is perceived. These contexts are not the sole determinants in

designing and conducting my research. They do not directly determine the way in which, for example, I excavate a unit or classify a particular artifact. But that does not mitigate the impact these contexts have had on the choices I make in deciding, for example, where I can work, how I can present my work to receive funding, or how I choose to organize my data. Their presence is subtle yet critical, hard to articulate and yet impossible to ignore. Just as certain canvases provide distinct opportunities for particular paints and brushes, so can the choices I make based upon intellectual and socio-political contexts change the final outcome and presentation of my research.

Along the way, I have had to acknowledge that these two contexts - the American intellectual traditions and the Nicaraguan socio-political condition - are not always consistent in the ways they direct my research.¹ The quirks and rigors of these contexts force a balancing act and sometimes-difficult choices. For example, analysis methods in Nicaragua differ from the Processual norms I had learned in the United States. The methods conventionally used in American Processual archaeology would not provide meaningful data to the Nicaraguan National Museum's data bank. I feel strongly that my work needs to contribute to the Nicaraguan efforts to accumulate additional knowledge as well as meet the standards of my intellectual training. Therefore, I had to make choices as to which would take precedence or how I could meet both standards simultaneously.

¹ Nor for that matter are these two broad contexts always internally consistent. Within each there exists a great deal of variation and choice for me, which provides me with more room to maneuver but also more complexities to address. Some of these are discussed in more detail in the following sections.

Another, more familiar, challenge has been the limitations set on my use of land due to questions of land ownership in the post-Sandinista era and the reluctance of the Office of Cultural Patrimony to assist me. The standard approaches to a site by Colonial or pre-Columbian specialists in American archaeology, were not feasible at Leon Viejo. Working at Leon Viejo has required alternative approaches to meeting the intellectual demands of my training while working within the limitations of Nicaraguan politics. The intellectual and socio-political contexts discussed here are pivotal to many basic choices. Since these contexts underlie my research, they are the starting point for understanding the methods and results of my project at Leon Viejo.

Intellectual Tradition, part 1: Processual Archaeology

When I first considered working at Leon Viejo, I set out to learn about the state of archaeological research in Nicaragua. It quickly became apparent that the vast majority of research had been conducted on indigenous cultures prior to the arrival of the Spaniards. Although very little research has been done in the vicinity of Leon Viejo, the knowledge accumulated about indigenous cultures of the Pacific is relevant to understanding changes in their lives at contact. More significant than research results, however, was to understand the framework within which previous research about Nicaragua's past was conducted. Specifically, although Nicaragua has received attention by an international group of archaeologists, it is within the American tradition of theory that the results are most often contextualized and presented.

Processual archaeology, with all its variety, is undoubtedly the dominant approach in American archaeology today and the theoretical foundation of most

archaeological training in American universities. It is the standard, or accepted paradigm, by which research projects are evaluated or compared. Indigenous cultures of the Americas have provided a major testing ground for the development of Processual archaeology since Binford's presentation of the approach in the 1960's. Although Leon Viejo is primarily a contact site,² the impact of Processual archaeology on the study of indigenous cultures of the Americas makes it a relevant factor in evaluating past, and designing future, research.

Despite the fact that Processual archaeology has been the dominant theoretical framework for research in the Americas for nearly four decades, the impact of Traditional archaeology still looms large in conceptualizing Nicaragua's past. Archaeological research in Nicaragua began in the Traditional period of archaeological thought in America, sometimes referred to as the Classificatory-Descriptive Period (Willey and Sabloff 1980:34). Within this framework, scholars identified cultural cores and examined the diffusion of cultural traits across space and through time. Central America was considered at the edge of two high culture areas without itself achieving the level of "intensive organization" seen in cultures of Mexico and Peru (Kroeber 1930:20-21).

Under Traditional archaeology, efforts focused on affiliating cultures of Central America, considered as peripheral to high civilizations, with the dominant civilizations to the north and south. In this conceptualization of the Americas, Central American cultures were derived from, and dependent on, the neighboring civilizations for cultural identity and meaning. Logic dictated, therefore, that research

² As a contact site, the most likely approach would come from Historical archaeology which tends to deviate from the mainstream Processual approaches since it combines historical, textual, and material approaches.

focus on the centers of cultural meaning to establish which civilizations the cultures of Central America most resembled. High civilizations defined cultural meaning for the remote areas, and the internal variations within Central America were significant only in terms of evaluating which civilization had the greatest influence in particular zones (Lange et al. 1992:276).

Processual archaeology, for all the changes it introduced, failed to deviate from this basic conceptualization of Central America's indigenous people, but it altered the picture by offering new explanations for the derivative status of Central American cultures. New models and concepts, such as complex societies, core and periphery, migration, and trade and exchange, replaced diffusion as explanatory tools. Arguably, the view of this region's indigenous cultures as derivative of and peripheral to neighboring complex societies became even more entrenched in early Processual work through these new models. Waves of migrations, along with trade and exchange, were responsible for populating and defining society and culture in Central America (e.g. Fowler 1989). Most research continued to focus on linking the region either to the south or to Mesoamerica (Lange et. al. 1992).³ The internal social and cultural identity, and all its variation, continued to be neglected by most American scholars, who preferred to apply models of diffusion and external influences across the region (Lange et al. 1992: 273).

Slowly, Processual archaeology began to recognize the presence of significant internal variation across Central America. Although such variation begged for studies

³ The assumptions are simplistic even if migration and trade were primary factors in populating and bringing goods to Central America. Processual Archaeology failed for a long time to depart from the notion that symbols, as they travel through time and space, can change meaning. Therefore, even if the region used many symbols seen among the Aztec, Maya or Inca, there should not be the assumption that these symbols maintained the same meaning in their new contexts (Lange et. al 1992:268-9).

focusing on the indigenous cultures themselves, research agendas remained centered on examining the region in relation to surrounding areas. Within Processual archaeology's constructs, explaining the variation as dependant on external factors was more important than understanding the nuances of the multi-cultural region. Following the legacy of Traditional archaeology, Central America became divided into 'spheres of influence', and debate focused on which areas fell under the influence of which major cultures. The result was the proliferation of terminology for Central America (for example, the Greater Nicoya Archaeological Subarea and the Intermediate Zone). The Intermediate Zone,⁴ as Central America had been dubbed previously, was divided into bounded sections, each with its own name affiliating it to surrounding complex societies.

Nicaragua became classified as part of the Mesoamerican sphere of influence. In the 1970s, Willey proposed that, "Nicoya-Pacific Nicaragua can be considered either as part of Mesoamerica...or as a subarea of the Intermediate Area." (1971:342-44). As classifying Pacific Nicaragua as part of Mesoamerica became widely accepted, scholarly attention focused on identifying the Mesoamerican influence present in the region (e.g. Stone 1977; Willey 1966; Baudez 1970). Ultimately, Processual archaeology did little to enhance research in Pacific Nicaragua, or any part of Central America, as a region with unique, varied, and independent cultural identities intrinsically worthy of investigation.

⁴ The Intermediate Zone was a term introduced by Willey to define the area between western Honduras and northern Peru (1959:184). This conceptual term was created under and is a persistent artifact from Traditional Archaeology. When used carelessly, it reinforces stereotypes about the region.

The failure of Processual archaeology to consider Central America as an independent region, different from but equal to its neighbors, arises from two fundamental problems. The initial obstacle stems from certain theoretical presumptions fundamental to Processual thought. Processual archaeology has excelled in the evaluation of complex societies such as the Aztec and Inca. This analysis takes place within an implicit (and sometimes explicit) evolutionary framework that treats other indigenous societies of the Americas as simple and less evolved (Lange et. al. 1992:278; Cohn 1996:4). Although labels changed, from 'cultural center' to 'complex society', the focus of Processual research in the Americas remained as it had in Traditional archaeology -- on the so-called great civilizations surrounding Central America. Areas without complex societies were seen as less evolved, and consequently less important to examine.

The second problem, a corollary of the first, is the lack of available data about the internal cultural variation of archaeological regions, in this case Central America (Lange et. al. 1992:277). Because Processual archaeology views small-scale societies as simple and less appealing foci for study, less research effort is devoted to such areas. Consequently, less data are recovered that could construct views of socio-political variation in the area. Even when data are collected, they are so meager that it is hard to view them outside the dominant Processual framework, which defines the area as peripheral and looks for external explanations for meaning and interpretation.

A handful of scholars who have devoted themselves to Central American archaeology have long recognized the limitations of the dominant approaches to the region (Lange et. al 1992; 1972). But breaking away from these theoretical limitations has proven very difficult since the available data are presented within the

very same framework from which they wish to depart. Without acceptable alternative frameworks in which to place the data, researchers struggle to find ways of presenting new data in meaningful ways without falling back into the convenience of the pre-existing theory. Although research has continued in Nicaragua even throughout the years of the revolution, new data were handicapped by theoretical limitations that serve to reinforce the notion that this area is simply not as important as regions to the north and south.

One of the largest systematic studies of Pacific Nicaragua's indigenous cultures demonstrates the obstacles faced when trying to overcome Processual roadblocks. In 1992, Lange, et al. published the results of their 1983 survey of 26 sites in "Greater Nicoya Archaeological Subarea".⁵ The authors themselves acknowledged the limitations of the then-current understanding of archaeology in the region (Lange 1992: xvii), but nonetheless found it hard to break free of the entrenched views constructed under Processual thought. The study used the new data to evaluate the classification of the area as Mesoamerican, part of the Intermediate Area, or "...best characterized as either an independent entity, or part of some other regional concept, such as 'Greater Nicoya'." (Lange, et. al. 1992:29). Although ultimately the scholars concluded that the third option was the most appropriate for the area, the debate was structured around terminology that could not be ignored since it has been accepted for so long.

⁵ The "Greater Nicoya Archaeological Subarea" was an area defined by Norweb in 1964. It encompasses Pacific Nicaragua and northwest Costa Rica. It is another example of the proliferation of terms used to define poorly understood areas. Unfortunately, once labeled, it is very difficult to escape these identities.

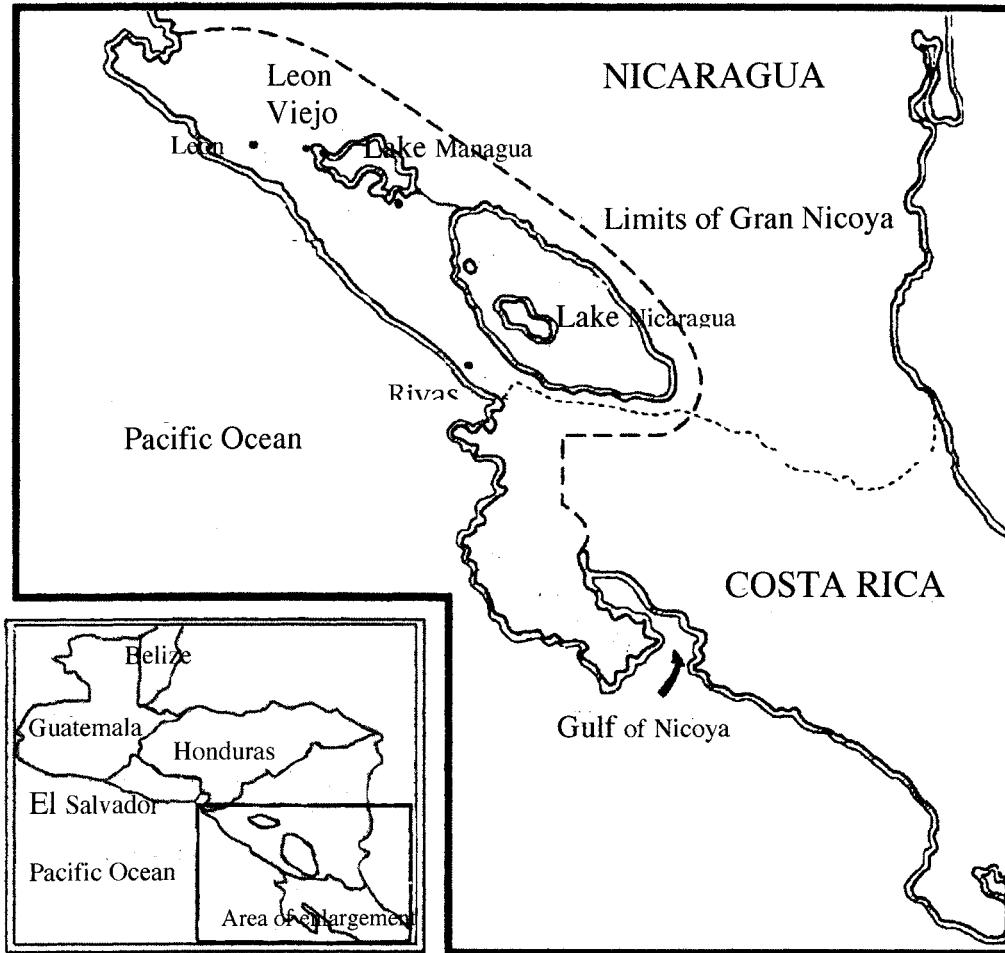


Figure 1: Pacific Nicaragua showing the limits of Gran Nicoya

The inadequate treatment of Central America as an archaeological region, therefore, is due in large part to the theoretical focus on modeling complex societies within Processual archaeology. While archaeologists who study non-complex societies (whether tribes, bands, etc.) use much of Processual archaeology's field methodology, they have remained peripheral to the theoretical developments of the paradigm.⁶ Recently some interest has emerged in raising the level of theoretical discussion about modeling non-complex societies to the sophisticated level that Processual archaeology has developed for complex societies. But fundamentally, the focus on complex societies by Processual archaeology was a choice made within an evolutionary paradigm that gave greater import to complexity - ranking it higher and as more developed than other social forms charted on a linear evolutionary path. Such a supposition will remain a barrier to all attempts at evaluating non-complex societies within Processual models. Healy (1980:33) suggests early explorers may have paid less attention to Central America due to the lack of monumental architecture or the difficult climate. These early biases have become entrenched in the current theoretical framework used to view this area, and such biases are hardly the basis for good science that Processual archaeology claims to conduct (Lange 1993:279).

Recently there have been strides to move beyond the Processual and evolutionary theoretical frameworks of Central American research. Scholars of Central American archaeology have made overt attempts to escape from the limitations of Processual models of social structure and regional relationships.

⁶ Processual archaeology is widely used by archaeologists studying hunter-gatherers and theoretical models have developed under that focus. These, however, remain segregated from the study of more complex societies.

Graham has argued that, within art history at least, the term Mesoamerica and all the assumptions that go along with it since the creation of the term by Kirchoff's have "...exercised enormous influence over the practice of pre-Columbian art history" which "...at times has been virtually collapsed into the so called high-cultures." (Graham 1993:8-9). The recognition that the limitations are embedded within the language we use is an important step toward creating new terms and concepts for viewing the regions. Lange, who for decades has championed a centrist view of Central American archaeology, while not isolating the region from its neighbors, recently wrote that, "A new Central American paradigm is emerging, both as the basis for interpretation of prehistoric cultural development and in its multifaceted aspects (settlement patterns, subsistence, trade and exchange, emergence of local and regional polities, etc.)." (Lange 1993:313).⁷ Lange goes on to challenge specific aspects of Mesoamerican models such as acculturation, and site and trait unit intrusion, to demonstrate that the data do not fit the present models of social structure used to evaluate pre-Columbian cultures of the Americas (1993:317). The challenge becomes, he admits, to find alternative frameworks within which to work, evaluate data and present results (Lange 1993:317).

The treatment of Central America's past in American archaeology also reflects how modern Central America is viewed in the United States. Americans know a great deal more about Mexico and even Peru than about El Salvador or Nicaragua. If it were not for the decades of war and American involvement in many

⁷ I disagree only with Lange's use of the word paradigm that I reserve for broader theoretical frameworks. I would have preferred to use the word model, or term low-level paradigm. Viewing Central America as an independent unit of analysis is a significant break from mainstream research but in and of itself not a paradigmatic shift following a Kuhnian use of the term (Kuhn 1970).

Central American conflicts, the region might be even more invisible to Americans. Undoubtedly the decades of revolutions and political instability have made Central America less appealing to visit. But even today most discussion in the news is negative - usually political or environmental disaster - leaving the average person with little reason to be intrigued by these countries, past or present. The number of college students who expressed interest in working with me in Nicaragua only to tell me later their parents would not allow them to go because of the war (now over for a decade) speaks volumes to barriers present in American society that have undoubtedly inhibited intellectual pursuits in the region.

The recent explicit recognition of the limits imposed upon Central America's ancient past, and the attempts to put the data into newly constructed independent models, complement the recognition in other branches of archaeology that there is a need to pay more attention to the non-complex societies that filled ancient landscapes throughout the world. But these topics are not yet mainstream in archaeological literature. There remains, therefore, a need to justify or legitimate research, a need not faced by mainstream Processual researchers. Why do non-complex societies deserve the same amount of attention and research as complex civilizations? Why is Central America, an area with almost no monumental architecture and no early writing systems, and an area that is not home to the origin of agriculture or other important developments, worthy of the same amount of time or money as the Aztec, Inca, Olmec or Maya? Questions such as these lurk in the background and demand to be addressed in projects such as this one.

Behind these overt questions lies a subtler one that Processual archaeology does not ask. What keys to our existence do these pre-Columbian, small-scale

societies hold? Understanding the rise and fall of great civilizations in the past seems inherently important since we live in similar conditions of complexity today. The importance of what Processual archaeology would consider less-evolved societies, therefore, is not obvious. This bias needs to be overcome in order for archaeology of non-complex societies to flourish. It is within this complex intellectual context that my work began, and from which I departed as my work progressed.

Intellectual Tradition, part 2: Contact Historical Archaeology

Contact archaeology is the most obvious intellectual context for research at Leon Viejo. Contact archaeology generally falls under the umbrella of Historical archaeology, which in America has functioned largely apart from mainstream anthropological archaeology (Fitzhugh 1985:4). Although there is a significant use of Processual models in contact studies, there has not been a two-way exchange of theoretical ideas. Contact archaeology borrows a wide variety of theoretical models to explore issues during the contact period. The range includes economic (e.g. Turnbaugh 1993; Fowler 1991), historical descriptive (e.g. Pinto 1991; Helms 1991), acculturation (e.g. Gasco 1991), political (e.g. Carmack 1991), or succinctly “materialistic and empirical” and “historical ethnographies” (Deagan 1995:2). Attempts to sort out the variety of approaches result in describing general trends, such as Leone and Potter’s identification of three broad theoretical approaches used in contact studies: functionalism, structural and symbolic approaches, and middle range theory (1988:2-18). But the variation persists with little theoretical coherence emerging.⁸

⁸ The lack of theoretical coherence is savored by some and disparaged by others. Some scholars see the multitude of approaches as appropriate given the complexity of the time and the variety of native

Amidst this multitude of approaches, there is an informal division, both in terms of subject and theory, between studies that focus on Europeans versus those that focus on natives. For example, there are studies about indigenous adaptation to conquest and trade and exchange with the Europeans (e.g. Fowler 1991; Rogers 1990; and Kaplan 1985), or about the establishment of Spanish towns and conquest of native populations (e.g. Ewen and Williams 1991; South 1988; Mauncy 1987; and Deagan 1986). While some studies consider the impact of one group on the other - indigenous people on Spanish life or vice versa (e.g. Smith 1995; Gasco 1993; and Deagan 1985) -- these still have one group as the main subject of the study. In terms of the theoretical division, studies of Europeans at contact generally tend more towards historical and ethnographic approaches, while studies of native societies at contact use more borrowed anthropological models and acculturation in addition to ethnographic sources. Although the availability and relevance of written documents addressing questions of Spanish experiences in the New World is a contributing factor to this theoretical divide, it is not a full explanation.

The equal treatment of two communities (indigenous and European) actually in contact with each other is not common in the literature, perhaps because there are not many sites that offer this opportunity. But the fact remains that Spanish and native sites are treated very differently in the literature (Wilson 1993:21). Rarely are the two groups looked at simultaneously under the same interpretive framework. Therefore, there remains in contact studies an informal but real separation between

and Spanish experiences (e.g. Jones and Pendergast 1991:166). Others see it as a sign of immaturity in the discipline that will be overcome as more data are collected (e.g. Gasco 1993). Still others propose broad overarching frameworks that could serve to unify all contact studies (e.g. Ramenofsky 1991; Leonard 1993).

those who study Europeans and those who study indigenous groups. These two sub-fields excavate different sites, treat data differently, and obviously offer different interpretations of contact. This creates a challenge for understanding contact *between* the two groups, since the Spanish and native experiences are treated so differently. The result is the lingering impression that contact is understood from only one of two mutually exclusive perspectives (European or indigenous). Ironically, this limits what is precisely the focus of contact studies --*contact* between two vastly different and unequal societies, which we are trying to understand as a third-party looking back in time.⁹

The critical question of perspective is at the core of all contact studies regardless of theoretical or subject choice. It is most evident, and most widely discussed, in the use of historical documents. Studies that focus on the colonizer make wide use of available documents, both those specific to the site and time in question and those that provide general social, political, and economic context for the data. Documents frequently are used as a means of interpreting data - implying a direct relationship between the material and written artifacts (Leone and Potter 1988:12). Studies of indigenous groups also use historical documents to provide insight into native life (e.g. Pendergast 1991; and Newson 1987). Information comes in the form of direct descriptions of a society (such as Oviedo or Duran) and official documents that concern such information as tribute lists and head counts.

It is now commonplace to acknowledge that Spanish documentation of colonial events is neither comprehensive nor neutral (Galloway 1991:453). Primary

⁹ One exception where the interaction is the focus of the study is Charlton and Fournier's (1993) attempt to model native-Spanish interaction in rural versus urban settings.

sources espouse a particular perspective on events that cannot claim to account for all points of view, especially in instances of conquest and conflict. Official Spanish documents such as taxation and slave lists may reflect what the conquering Spaniards wanted to share with the crown rather than accurate accounts of activities (Newson 1987:154). When such documents are used to recreate economic conditions, the potential for distortion looms large. Even within the corpus of Spanish documents, there are varying opinions and agendas that can leave the impression of discrepancies in the historical record. And it is evident that conflict existed between what the Spaniards were told to do and what they did in practice, since colonists did not try to hide their disdain for laws sent by the crown (Newson 1987:106, 165, 249).

Equally complicated are the so-called ethnographic Spanish documents. These descriptions were written by people functioning within a different cultural mind-set, and for different readers, than scholars today (Galloway 1991:453). Even those Europeans who claimed to be sympathetic to native populations functioned under the basic premise that all natives needed to be saved through conversion to Christianity. Additionally, descriptions of native societies by the Spanish at the moment of first contact are observations made at a peculiar point in time, when native societies were reacting to new circumstances.¹⁰ It is especially problematic, therefore, to use these descriptions in interpreting *pre-Columbian* social organization, as is tempting to do (Ramenofsky 1991:446). Even when scholars acknowledge the obstacles to integrating archaeological and written documents, descriptions of native life in those

¹⁰ For example, Newson (1987:57) suggests that the term ‘cacique’ (leader) was used in reference to almost any native showing authority in relationships with the Spaniards. If we rely on such Spanish characterizations to provide insight into the native social hierarchy during, and especially before, contact, we are likely to fall victim to a distorted view due to the unique circumstances of the time (Leone and Potter 1988:6).

historical 'ethnographies' are accepted as fact (Dunell 1991:567). Ultimately, use of European documents results in a view of native life framed by the earliest accounts by conquering Europeans, and the observations that they felt were worth making and that have survived for us to read (Leone and Potter 1988:14).

Scholars acknowledge the need to be careful not to interpret past events only through the colonizer's vantage point (MacLeod 1991:376). Recently, contact studies have tried to consider more explicitly the 'native perspective' rather than viewing indigenous communities through Spanish eyes, and thus as passive recipients of Spanish domination (Rogers 1993:74). Such attempts stress the active role natives played in shaping the contact experience (Wilson and Rogers 1993:3-4; Bramforth 1995: 50) and the variety of responses that native communities made to new social and economic situations (Rogers 1990). Scholars have tried to move away from contact issues as defined by Spanish documents to consider instead what the central issues were for native societies (MacLeod 1991:377). Fundamentally, however, scholarly literature remains immature when it comes to addressing the complexities of presenting native-European interaction and perspectives at contact (Ramenofsky 1991:431; Fitzhugh 1985:9).

Some studies that attempt to view the native experience at contact overtly use historical documents, while others rely more heavily on the archaeological materials. But a general over reliance on written sources as a means to understand native society persists (Wilson and Rogers 1993: 8). There is an almost irresistible urge to depend on documents to give meaning to material objects, as if a contemporary written word

has unique insight into the functional or symbolic significance of an object.¹¹ Even when archaeological materials are the focus, our general knowledge of the period from Spanish documents infiltrates our interpretations. Galloway (1991: 454) suggests that the images created by Spanish documents are so pervasive in our own minds that it is difficult for us to recognize fully the extent of the challenge. Certainly the persistence of certain terms such as ‘Indians’, ‘discovery’, and ‘conquering’ suggest continuity in thought from the sixteenth-century European characterization of events through to today.¹²

Regardless of the use of written documents, the implication remains that by considering the active role natives played in shaping contact events, we can get away from the biased perspective of the Spanish to form more objective or even-handed views of the past. There remains a reluctance to acknowledge that our interpretation of events, whether we claim it to be from the perspective of the colonizer or colonized, is just that -- our interpretation. We can decide we are going to interpret events from the perspective of the indigenous group or the Europeans, but ultimately either interpretation is filtered through our own interpretive framework that cannot claim to mimic that of either group (indeed, assuming that there is a single perspective of either group is problematic). Along with permitting indigenous societies active roles in contact events, and evaluating carefully the biases or perspectives of the European documents we may use, we also must consider the

¹¹ Even when scholars acknowledge the problem, they seem to revert to the position “...that ethnographic documents can help elucidate what archaeological evidence reflects...” (Wilson and Rogers 1993:225), once again giving primacy to the written word.

¹² There is a general consensus that we have yet to find an appropriate way to integrate productively archaeological and documentary data (Leone and Potter 1988:8; Wilson 1993:7; Ramenofsky 1991:432).

position from which we interpret the period, without assuming that we are any more passive or neutral than the groups under evaluation.

Leon Viejo is one of a handful of sites where we have available written documents of the Spaniards, an archaeological area that includes both indigenous and Spanish settlements, and an early contact time frame.¹³ At Leon Viejo, then, it is possible to focus on actual contact between Spaniards and natives, and adaptation to new circumstances. But in order to understand interrelationships, we need a theoretical context that can treat both groups equally. The difficulty of integrating indigenous and European elements of a study under one theoretical umbrella, along with the appropriate use of historical documents, creates a challenge for anyone venturing into contact studies.

Intellectual Tradition part 3: Nicaraguan Archaeology in Context

As important to me as the theoretical issues already presented, are the socio-economic, political, and archaeological conditions in Nicaragua. The influence of these factors on my work is in part born of necessity and in part my choice. Necessity relates to the limitations and opportunities presented to me due to circumstances in Nicaraguan politics and archaeology. For example, it was the particular situation of Nicaraguan archaeology in 1995 that allowed me to work at Leon Viejo as a graduate student.¹⁴ Choice relates to the fact that Nicaragua is the primary context within

¹³ Santa Elena is perhaps the best-excavated site that is analogous to Leon Viejo, with an early time frame, relatively little post-abandonment disturbance, and of native-Spanish interaction (South 1988:41-2).

¹⁴ In other Latin American countries, Mexico for example, I would have been pleading and hoping for extended periods of time for a remote site with no guarantee of receiving permission. In Nicaragua I received an invitation to work at Leon Viejo that all but assured me permission from the necessary government offices. Even within the past five years, the situation, opportunities and politics have

which I am working, and where my work will be most relevant in the years to come. I therefore feel it is important to design work that can be relevant and meaningful within these contexts as well as my scholarly discipline.

In 1995 when I began my research, Nicaragua had its first democratically elected government. The government bureaucracy was in its infancy - small, loosely formed, and poorly defined in many areas such as culture and history. While the majority of government efforts focused on critical issues of daily importance - utilities, health, education, and political stability - those who worked on culture and patrimony were given a fair amount of autonomy. There was freedom but no financing. The priorities were basic but daunting: formalizing the role and duties of the Office of Cultural Patrimony, protecting national heritage, improving the National Museum (which had its collection and building largely destroyed in the 1972 earthquake, and significant looting thereafter), and supporting archaeological research where possible.

Since 1995 there have been two more democratic elections, and increased importance has been given to the role of the Minister of Culture, including by re-opening the National Palace as the new home to the National Museum and the offices of the Minister of Culture, Office of Cultural Patrimony, National Archives, and National Museum. This centralization in the renovated National Palace symbolizes a new momentum and importance given to history, culture, and national identity. It also results in more institutionalization of the bureaucracy, with all the ensuing advantages and disadvantages. This new context has posed increased challenge to me in my work, largely because of developments aimed at increased accountability,

changed tremendously. I was simply in the right place at the right time.

prioritization of resources, and acknowledgment of the current limitations of the National Museum. The impact on me has been both positive and negative. But for the nation, the recognition of and commitment to the importance of Nicaragua's national heritage is positive. In the long run, these developments may further promote the role of archaeology in contributing to a greater sense of national identity, from which the government would benefit tremendously.

At the heart of Nicaraguan archaeology is a small staff of Nicaraguan archaeologists at the National Museum who have had to ride the waves of change. The archaeologists of the National Museum are the core group responsible for all research in Nicaragua. Archaeological research in Nicaragua has been hampered tremendously by the 1972 earthquake, the ensuing revolution, and the crumbling of the national educational and economic systems. Until recently archaeology was not taught in the major Nicaraguan universities, which means all archaeologists trained in the profession were trained abroad. Although the amount of research has increased since the end of the Revolution, there is little theoretical discussion and less sense of overall goals or priorities. Research is piecemeal and resembles exploration more than research -- as American archaeology would define it (with theoretical goals, clearly defined methodology, etc.). The focus remains on the intrigue of burials, whole vessels, and religious objects, and not as much on social structure or daily life. These interests are reflected in the types of analysis and publications produced -- classification, rather than addressing interpretive questions developed within broader intellectual frameworks, is the end point of most analysis.

Although much of the current research undertaken by Nicaraguan archaeologists relates to indigenous sites, there is a great fascination with anything

Spanish colonial. I find that people (ranging from government officials to rural farmers) feel little affinity for the indigenous past of the country while feeling a great respect for the Spaniards. The indigenous past of Nicaragua does not have the symbolic meaning and importance that one sees in Mexico, for example. As the first Spanish capital of Nicaragua, therefore, Leon Viejo is perhaps the most important site in the country in terms of both preservation and symbolic meaning (as the birthplace of modern Nicaragua). Although its preservation makes it valuable as an archaeological site, the high regard it is given in Nicaragua, as the place where the Spaniards began the process of civilizing the indigenous people is what makes the site an important symbol to so many Nicaraguans.

Ironically, despite the generally accepted importance of this site, Nicaraguan archaeologists are not eager to work at Leon Viejo. The reasons have mostly to do with the climate, which they seem to find substantially less tolerable than that of other areas in Nicaragua. The result is that there has been more oversight than new research at Leon Viejo. There is a slowly developing master plan for treating, preserving, and conducting research at Leon Viejo, but funding is short and director turnover is frequent. The work that is done focuses on the Spanish component of the area rather than on the surrounding indigenous communities that long pre-dates the Spanish arrival. In an effort to protect and conserve Leon Viejo, the Office of Cultural Patrimony applied to UNESCO to declare it a World Heritage Site. The first application was declined, but in 2001 UNESCO accepted the resubmission.

Despite, or perhaps because of, the interest in the site, government officials, National Museum archaeologists, and people living around the site have met my research at Leon Viejo with resistance and suspicion. The combination of a foreigner

(and beyond that, being a female foreigner) working at a site of such national importance, a research agenda different from that of the Nicaraguan archaeologists, a project of a longer duration than most Nicaraguan projects, and a larger amount of funding than is available nationally created anxieties and an urgent desire to see results without interest in the context of my work.¹⁵

Anxieties continued even after my fieldwork was complete, as my data analysis was more time-consuming and involved than Nicaraguan archaeologists are accustomed. Even if I had wanted to do the standard Nicaraguan classification of decorated ceramics, it became clear to me and the museum archaeologists that the process would be far more complicated than at other sites since the ceramics recovered did not fit neatly into the present classification system, which was developed using ceramics from the southern Pacific region. In addition, I was asking different questions of the materials than most Nicaraguan projects address. There was a disbelief that I was interested in all the materials I bothered to screen, recover, and bring to the National Museum for analysis. The constant struggle to find space to store and analyze the materials I brought in from the field was compounded by the suggestions made that not all of it was worth keeping.

The end result was, that, with the exception of the participation of one very interested student (who was recently appointed the new sub-director of the National Museum), my work was not the joint project that Nicaraguan officials or I envisioned initially. For me, the lack of an integrated project hampered my ability to

¹⁵ During three seasons of excavation the head of archaeology came out to visit my excavations once. As we approached the site he pointed to what he thought was a construction site because of the quantity of dirt he saw and asked me what was being built there. When I told him that was my excavation site, he was speechless. He had no idea, and I believe also a great deal of suspicion, about my field research. After that visit he never expressed any doubts to me again.

contextualize my work, especially indigenous remains, since the Nicaraguan archaeologists are superbly knowledgeable in material remains of the Pacific region. And unfortunately, I believe that the lack of cooperation has not fostered the sense of exchange of knowledge and ideas that should come from all cooperative ventures. The potential for such cooperative ventures exists, but the process of fostering them takes longer than the duration of a single project. One of the long-term goals of my work at Leon Viejo will be to find common ground for cooperative ventures, since I believe it is in the best interest of scholarly research and national archaeology for foreigners and nationals to work together. The struggles that I encountered are not unique to archaeologists but were exacerbated by circumstances of the developing Nicaraguan government at the time of my research.

The Project in Broad Context

When I was offered the opportunity to work at Leon Viejo I knew nothing about the site - not its location, condition of preservation, chronological placement, archaeological or political importance, or its potential. All I realized was that the opportunity was special. The challenge became to design a project appropriate for my research at a site I knew nothing about. Besides my most general interest in indigenous cultures of the Americas, I did not know what about Leon Viejo would be suitable and interesting to me for a project. Clearly the colonial component of the site was of primary interest to the Nicaraguan government, but even in general terms I knew less about contact period archaeology than pre-Columbian cultures of the Americas. In many ways, therefore, I came upon this project in reverse from how projects are typically chosen. It was not my intellectual interests that led me to the

site - it was the site that provided me a whole new arena of intellectual, geographic, and temporal exploration.

When my research began, my primary interest in archaeology of the Americas was in understanding the variation in pre-Columbian social organization of indigenous societies. I anticipated that, at the very least, Central America would add a new perspective for me to explore. My interest had strong foundations in my previous excavation experience in Mexico and was well grounded in mainstream theoretical discussions. As I turned my attention to Nicaragua, however, I became intrigued by the challenge of studying non-state-level societies (or small-scale societies, as I choose to call the wide variety of societies that encompasses non-state, or non-complex, societies), which receive far less attention than complex societies in archaeological research in the Americas and elsewhere. Pacific Nicaragua offers a superb opportunity to evaluate both the internal structure of small-scale societies and the relationships among them across a relatively large geographic area and through time.

My decision to work at Leon Viejo, however, demanded attention is paid to the contact period, including the Spanish component. The interests of the Nicaraguan government, as well as environmental and stratigraphic factors that make the surface of the region a poor indicator of what is below (but clearly with colonial remains at the upper levels), made designing a contact period project more practical. For whatever time period I chose, however, a conventional field methodology of surface survey, mapping, sampling, etc. would be untenable because of questions of land ownership, the rapid accumulation of volcanic and alluvial depositions over the site, and my desire for a relatively short-term project.

Despite the overall accessibility of the colonial site at Leon Viejo, a contact period project was not without its limitations. It would be very difficult for me to excavate Spanish architecture or work within the current limits of the protected site of Leon Viejo (which does not encompass the full town of Leon Viejo as built by the Spaniards). In addition, when I began my project, the whereabouts of the material culture recovered from past excavations in the protected ruins of Leon Viejo was not known. Therefore, I would not be able to contextualize my work from already uncovered parts of Leon Viejo.¹⁶ Finally, the research priority of the Office of Cultural Patrimony at the time I began my project was to gather information to bolster the UNESCO application. Issues such as the physical limits of the town of Leon Viejo and its organization and layout were important to the government; they were not sufficient for my research interests, but were necessary to address.

The challenge became to create a project that was suited to my own evolving intellectual interests, was viewed as valuable and acceptable within my own intellectual tradition, met the needs of the Nicaraguan government, and allowed for the limitations (environmental and political) of the site. Ultimately, since relatively little systematic research had been done at Leon Viejo, I was able to work on a number of different approaches simultaneously that would allow me to meet my goals, if only through a certain amount of trial and error. Like many archaeological projects, the end result does not resemble the projections aspired to in grant applications, but it nonetheless has accomplished my goals.

¹⁶ Since then, as discussed in chapter 3, Kira Blaisdell-Sloan has located and re-analyzed some of the materials from previous excavations. The lack of context for much of the material, however, still limits my ability to incorporate them here.

CHAPTER 2:
CHOICES AND CONSEQUENCES:
METHOD AND THEORY OF LEON VIEJO RESEARCH

As with most archaeological work, my project at Leon Viejo had an element of ethnography. My earliest field experiences at Leon Viejo consisted of speaking with landowners in the adjacent town about their properties. The purpose of these conversations was twofold. First, I wanted to learn from their experiences working their lands as a preliminary means of evaluating the potential for excavations. Second, I wanted to establish communication with landowners whose land I might be interested in using during the project. These practical and strategic aims quickly took a backseat to a fascinating ethnographic experience.

When I asked landowners about materials found while working their fields, they would pull out their own private collections of artifacts. Usually these amounted to no more than a dozen small objects, which were whole or nearly so. I learned early on that despite the fact that I had asked about their own land, I could not assume the artifacts they showed me were from their property. When I asked which of the artifacts came from their land, the response was usually the same, 'Oh no, not these. These come from the drainage canal and the lake, that is where you should look.' The large drainage canal and lake provide the materials of interest to residents since whole

objects sometimes wash up, whereas their own land produces small fragments of pottery that they do not bother to keep.

Although such artifacts, whose original contexts are hopelessly lost, were of minimal interest to me, the conversations I had about them were intriguing. Everyone wanted to tell me with great authority why, in particular, impressive stone statues washed up from the lake. There was general agreement that statues in the lake had to do with the events surrounding the conversion of the natives to Christianity by the Spaniards. But that is where consensus ended. The particular reason given for the statues in the lake took one of three distinct forms: they were thrown in by the Spaniards to discourage their continued worship by native people, they were thrown in by native people because after conversion to Christianity the idols were no longer sacred, or they were thrown in by the natives to protect them from being destroyed by the Spaniards. All of these explanations are possible and not mutually exclusive. My interest was not in evaluating the accuracy of the explanations, but rather in what they revealed about the varying perspectives on the events in question.

I assumed there was a slow accumulation of statues in the lake during pre-Columbian times, due to rituals conducted on a small volcanic island off shore and along the lake's edge. When I thought about the one consistent element in the explanations I heard -- that the idols were put into the lake at the time of conquest -- I wondered at first why no explanations incorporated pre-Columbian activity. I realized that for many people, rural or urban, educated or not, the history of

Nicaragua begins with the conquest. Pre-Columbian life is absent in many people's view of the past -- and many characterize the natives as uncivilized heathens who were finally made right by the Spaniards. Therefore, explanations about the past, especially in the area around the first Spanish capital, are directly related to the arrival of the Spaniards.

But the divergence in explanations of the idols in the lake provides insight into the varying perspectives on contact. In the version in which the Spaniards are responsible for throwing the idols in the lake, there is respect at least for the authority of the conquering power if not the religious beliefs that came with them. The natives, in this instance, were clearly dominated by the Spaniards and, for better or worse, forced to comply. In the version in which the natives willingly disposed of their idols once they accepted Christianity, a passive acceptance and dominance of the Spaniards' religion is suggested, accompanied by implicit approval. Finally, if the idols were thrown in the lake to protect native people's beliefs, this could be an instance of resistance to Spanish dominance and conversion. In this last version the natives are given autonomy and choice, and also some respect.

I am not suggesting that the people I spoke with realized the underlying meanings I ascribe to the differing versions. But the three explanations illustrate how even simple tales can take on significant symbolic meaning, whether intended or not, to an outside observer. For me these three versions encapsulate the divergent views about conquest, the issues that we as scholars of conquest must address, and the

differing views that exist within a single community, past or present, about any event - conquest, revolution, war, etc. For me as an archaeologist, this living instance of subtle, yet significant differences in meaning ascribed to a single event reminds me of the importance of understanding context and the richness of meaning found when we are willing to consider more than one version of events. It was with this humbling experience in mind from early in my work at Leon Viejo that I began to formulate the methodological and theoretical backbones of my research.

Project Aims

In most general terms, my research at Leon Viejo was designed to look at the relationships between the Spaniards of Leon Viejo and the native populations of the surrounding area. Leon Viejo has three assets as a Spanish colonial site that combine to create a rare opportunity to investigate contact. First, we know from historical documents that Leon Viejo was established in 1524 and abandoned in 1610.¹ Therefore, it is one of only a few sites from the early contact period that offers a very short time span, at least in archaeological time, within which to investigate contact.

The abandonment also means that no further Spanish building occurred which would

¹ Here is an illustration of how historical documents are employed in critical roles even if not used directly in interpretation. There is an unavoidable reliance on these documents when working within the contact period that makes them relevant, regardless of how they are used with respect to the materials recovered from excavation. In this situation, relying on them for dates seems uncontroversial, but in fact there is ambiguity in the circumstances surrounding the dates. The founding of Leon Viejo varies in the literature from 1522 to 1524. The 1610 abandonment of the site, and what exactly is meant by abandonment, is even less clear. Did everyone relocate to the new Leon? Or is abandonment defined by when the leaders left? Regardless, it was no doubt a process that has been given a specific date but took a period of time that we may or may not see archaeologically.

have destroyed or hidden evidence of the earliest settlement.² Second, Leon Viejo was settled in close proximity to native communities that were allowed to remain, at least during the earliest years of contact. This provides the opportunity to study native and Spanish communities side by side. Finally, the geological processes that made Leon Viejo undesirable for future habitation also provided a rapid protection of the abandoned city, thus creating one of the best-preserved early colonial sites in the Americas.

The combination of these three factors makes Leon Viejo an extraordinary site from which we can learn about the earliest relationships between natives and Spaniards during contact. The aim of excavations became to uncover a cross-section of roughly contemporaneous Spanish and native households in order to understand daily life within each community. These excavations would provide materials to interpret the adaptation of each community to their new circumstances, and the nature of the relationships between them.³

Conducting detailed excavations of households is usually done after seasons of mapping, surveying, and sampling. But in this instance, household archaeology

² Such rebuilding is what happened at most other early colonial towns in the Americas (such as Mexico City and Lima). The Caribbean islands and Florida do have early colonial sites that were not rebuilt - such as Puerto Real and St. Augustine. But Leon Viejo, the only early colonial site on the Pacific coast, is unique in terms of the preservation of architecture.

³ I use the term 'adaptation' to mean change, which can be beneficial or detrimental to the continued success of the individual or community. As Edgerton argues adaptation is often presumed to mean positive, functional, but in fact can encompass a much broader range of choices and activities, some of which may be harmful, if not deadly, to individuals and societies (1992:14-15).

provided the best compromise between competing and sometimes conflicting interests. The excavations would provide the Government of Nicaragua with much-wanted data about the actual town limits of Leon Viejo and the status it held in the colonial world. These excavations simultaneously would provide me with the data I wanted for my dissertation within the limits imposed on me by the Government, local politics of the area, and geologic activity. These limits ultimately played a pivotal role in the design of my research at Leon Viejo. They are discussed here since they set early and significant parameters for my field research.

Limitations and Obstacles to Research at Leon Viejo

ENVIRONMENTAL CHALLENGES

The most visible and uncompromising limitation to any work at Leon Viejo is environmental, in particular the volcanic activity that constantly changes the nature of the site. Leon Viejo sits in a small valley beneath the imposing Volcano Momotombo that has impacted all human activity in the area for millennia. With the lake on one side, the volcano on another, and low-lying hills on the other two, the area chosen by the Spaniards for Leon Viejo is a receptacle for rapid accumulation of sand, volcanic debris, and flood waters. The challenges of working at this site are second only to those of actually living in this area in pre-Columbian, colonial, or modern times.

Although the entire area that encompasses Leon Viejo and the surrounding indigenous communities is susceptible to these natural forces, the Spanish site is

uniquely vulnerable. It is probably not an oversight that we have found no evidence of native habitation immediately underneath the Spanish town. Indigenous people undoubtedly realized long before the Spanish arrived that the area chosen by the Spaniards is the pit at the bottom of a well. Even during dormant periods, Volcano Momotombo sheds substantial sand and light debris off its sides, and these blow in and settle throughout the site. And the area of Leon Viejo is the last stop along a winding path of floodwaters from as far away as the new Leon (30 miles to the northwest). Even modern drainage canals have not relieved the flooding in the area when severe rains, such as those that came with Hurricane Mitch, inundate the area.

The result of these activities is a constantly changing, highly variable, and obscured landscape. There are basically two different forces at work: the constant movement and accumulation of volcanic debris, and the periodic devastation of flooding.⁴ In 1984 rains left over a meter of mud in some areas of the site, completely re-covering some excavated buildings while burying other mounds even more deeply. I have not been back to see the impact of the floods brought by Hurricane Mitch in 1998, but I understand the damage is substantial. The drainage canal south of the site has been insufficient to alleviate damage from the periodic floods. And in terms of archaeology, the canal further complicates the landscape by

⁴ It is important to note one other environmental factor that impacts the site - mostly subsurface. There is frequent seismic activity commonly found in areas surrounding volcanoes. Most recently, in 1999, the town of Puerto Momotombo was evacuated because the seismic activity escalated to a dangerous level. This can alter stratigraphic continuity over time and weaken architectural remains, buried or not.

washing up substantial amounts of material culture from sources unknown and moving them across the site.⁵

The volcanics blowing over the site for the past four centuries have helped to preserve the architectural remains of Leon Viejo. The site is covered in anywhere from 50 to 150 centimeters of volcanic sands. But the depths of these depositions vary within the microenvironment of the site. The net result of the flood accumulation and volcanics is a surface with visible mounds in some areas, but no artifactual remains that are useful in survey. Other low-lying areas have substantial architectural remains beneath that are in no way indicated on the surface.⁶ There is also a great deal of surface 'noise' - a combination of these natural forces with other, human activity discussed below. It is very difficult to rely on the surface for indications of what will be found beneath.

Only a couple of miles south of Leon Viejo, where I located excavations of indigenous remains, the surface condition is very different. There is relatively little volcanic accumulation, and what there is has traveled a greater distance and is therefore finer and combined with other materials. Here, there is significantly more dunning activity from the lake and alluvial accumulation from the low mountains to

⁵ Although the canal provides large exposures for evaluation, the rapid and sometimes violent movement of materials, enhanced by the blowing volcanics, offers substantial secondary deposits with no archaeological context remaining (Lange et. al. 1992:260).

⁶ I intentionally tested two areas (one at the indigenous site and one at the Spanish site) with no surface indicators of archaeological remains beneath (no surface artifacts, no mounds, no visible signs of architectural remains). Through a series of trenches, both areas yielded not only artifacts but also substantial architectural remains.

the east. The area is prone to flooding from the lake itself, as opposed to overflow from of drainage canals emptying into it. There are some visible mounds that can be identified as likely candidates for ancient habitation sites, and there are other areas with significant surface scatters of artifacts but without any visible mounds. The processes are different than those at Leon Viejo, but the end result is the same - a highly variable and obscured surface that cannot be relied upon for accurate information of what lies beneath.

Typical approaches to a large site area, which include mapping, field walking, and collecting surface samples of materials, are not appropriate methods for this site.⁷ The rapid growth of seasonal vegetation, high tree lines dividing fields, and seasonal crop planting, add to the complexity of the surface. Even once appropriate areas for excavation are selected, the accumulation of mud, sands, and volcanics must be removed before arriving at the desired cultural layers. The potential for exceptional preservation is certainly enough motivation to move the necessary earth. But appropriate archaeological field methods for such an area, however, are as varied as the landscape itself.

LAND ACCESS

Compounding the problem of the obscured landscape is the difficulty gaining access to large continuous areas of land for mapping, survey, sampling, or excavation. In the post-Sandinista era land ownership is one of the Nicaraguan Government's

⁷ This is true for much of Nicaragua's archaeological sites (Lange et. al 1992:260-1).

most persistent challenges. During the revolution the Sandinistas gave away much of the land it had confiscated, but new titles were not issued. Landowners without titles remain in a precarious legal position. Although there have been no challenges in this area to land ownership, the fears are justified, especially since the land represents their sole means of livelihood. Understandably there is a great deal of suspicion and hesitation when strangers want to make use of their land. In order to start what I hoped would be long-term relationships with residents of Puerto Momotombo, I decided that pressuring to gain access to land was not in my best interest. Consequently, much of the land that would have been useful to examine remained beyond reach.⁸

The pattern of land ownership presented a problem even when I gained permission from owners. Prior to the fall of Somoza, large landowners in the area saw imminent danger to their livelihood. Some decided to leave, while others decided to sell or gift their land. In many instances these lands were sold as small plots, creating a patchwork of owners. The best example of this is the most cooperative landowner I worked with, Don Tomas, who owns land adjacent to the protected ruins. He received a plot of land from his employer prior to the Revolution. This same employer, over time, gave away many plots to various employees, many of

⁸ One final note regarding the question of land ownership: Despite the fact that the national government has protected and laid claim to a large part of Leon Viejo for decades now, it was only in 1999 that the government was officially granted ownership of that land. Given the long, complicated process through which the government granted itself ownership, the fears of many neighboring landowners regarding their legal claim to lands they occupy seem reasonable.

whom did not want the land. Don Tomas bought many of these plots as they came up for sale. Consequently, his holdings are scattered across a wide, non-contiguous area. Although I had free access to all his land, it did not extend uninterrupted from the protected ruins.

Finally, there was difficulty in obtaining permission to use land from absentee landowners and from cooperatives. Some landowners who left during the Revolution managed to keep their land or reclaim it but have not moved back to it. Large areas of protected land have absentee owners whose place of residence is not known by local residents. Tracking them down will be possible over time with government assistance. Other land that was confiscated by the Sandinistas was divided up into cooperatives of multiple, semi-independent landowners. In these instances, some individuals did not feel they had the authority (or wanted to exercise their authority) to grant me permission to work on their part of the cooperative without the consent of the entire group. This process ultimately would involve addressing the governing body of the cooperative in Managua. Entering into this level of politics, especially without the formal consent of the Office of Cultural Patrimony, did not seem practical or wise given the tensions between the cooperatives and the government.

MODERN TOWN OF PUERTO MOMOTOMBO

The center of Puerto Momotombo abuts two sides of the protected ruins of Leon Viejo. Dense habitation and land use make investigation of Spanish remains below modern habitation very difficult. Early aerial photos provide an opportunity to

see the area before the town's density increased, but the previously discussed surface problems make accurate assessment from these photos difficult. Additionally, the presumed reuse of bricks from Spanish buildings has decreased the chance seeing primary remains from the colonial town.

Despite the lack of systematic archaeological work in Puerto Momotombo, we know with some certainty that Leon Viejo lies underneath, for two reasons. First, landowners find artifacts with some regularity. Although most of them appear indigenous (which is consistent with artifact assemblages from Leon Viejo excavations discussed later), some are of Spanish origin. Second, the location of the cathedral and central square of Leon Viejo provide further evidence that the town would have continued to the north into what is now Puerto Momotombo. The main cathedral is at the northern edge of the protected ruins, but would have been near to the center of Leon Viejo during its occupation. Therefore, we can assume that the town continued to the north and east for approximately the same distance as we can see it continue to the south and west. At some point, systematic sampling throughout Puerto Momotombo will be necessary to establish the full extent of Leon Viejo. But given the methodological problems, current insecurities with respect to land ownership, I deferred such a project.

The environmental, political, and social challenges faced while working at Leon Viejo are by no means unique. Perhaps the combination of factors creates an unusually difficult situation that mandates a special awareness of current political and

economic issues if one hopes to succeed in the short and long term. Due to the complexity and significance of the site, Leon Viejo warrants long term, systematic archaeological investigation to address a full range of questions about contact between Spaniards and natives living side by side in an early colonial context.⁹ But in order for me to develop a project that would yield meaningful results in a limited time frame, provide meaningful information to the Office of Cultural Patrimony, and work within the limitations of the site, I chose a rather unconventional place to begin my research at Leon Viejo.

Project Design: Choices and Consequences

FIELD METHODS

From the outset, my research was designed with three primary agendas: my own need for a short term project to yield appropriate materials for my dissertation; the interests of the National Government; and my desire to contribute to long-term systematic research program in Leon Viejo. Working simultaneously on all three agendas required flexibility in project design, and the design was altered as time, opportunity, and money permitted. The field methods chosen were designed to meet the three agendas simultaneously wherever possible.

⁹ I should note here that archaeologists from the National Museum have conducted some systematic surface and excavation work in and around Leon Viejo. The presentation of their research, along with the condition of the artifacts, made working from their fieldwork quite difficult. These projects are discussed in more detail in the following chapters.

The interest of the National Government always has been the investigation and preservation of the Spanish town of Leon Viejo, and in particular the architectural remains. The conservation of uncovered buildings is the ongoing priority of the government. There is constant work within the protected ruins to support walls, shield remains, and make the site attractive for visitors. It became clear that complementing, but not interfering with, these government projects would be the best way to situate my research. In particular, contributing to our understanding of the site beyond the arbitrary limits of the protected area would be of interest to the Office of Cultural Patrimony.

The first part of my research agenda became to test a variety of field methods to see which would yield meaningful results. Testing methods was part of my short-term interest in finding the best places to excavate for my dissertation and my long-term interest in developing larger scale projects in the area. The methods tested included field walking, surface collections, mapping, trenching, vertical test pits, and ethnographic work among area residents. As previously discussed, access to land and the obfuscation of the surface due to environmental causes made surface work frustrating and very time-consuming. There was some benefit derived from a superficial familiarity with the landscape, but it became clear that in order to select areas for excavation, intrusive means of testing would be necessary. Test pits, both one by two and one by one meters, were used in various places, along with trenching, in order to determine sub-surface features. Trenching became critical to identifying

subsurface features in areas with no visible mounding. Both these methods proved relatively efficient, especially when compared to the drawbacks of surface work.¹⁰

The second stage of the project was to work south from the limits of the protected ruins to identify the actual limits of Leon Viejo, and then areas of indigenous habitation contemporaneous with, but beyond, the Spanish town. Using the most appropriate combination of least intrusive methods, I intended on following evidence of Spanish architecture as far south as possible. Once the end of the Spanish town had been identified, I would begin to look for indigenous remains from the contact period. The plan was to find indigenous sites as close as possible to the Spanish town, since such sites would probably have evidence of interaction with Leon Viejo.

Ultimately, this approach had to be modified since clear limits to Leon Viejo could not be identified due to a number of factors, including access to land and the disruption to the landscape caused by the drainage canal. Relying primarily on information from elders in the town (who had been in the area long before the Revolution), I shifted the search for an indigenous community two kilometers to the south, where I was well beyond the limits of Leon Viejo (even beyond dispersed farmsteads outside the concentrated town center).¹¹ The disadvantage of working

¹⁰ South argues in his work on Santa Elena, "...it is imperative that each excavation be designed with some aspect of method testing and refinement in mind so that methods and techniques can become increasingly predictive." (1988:39). At Leon Viejo this process is essential due to the condition of the site and the complications of the landscape.

¹¹ A small anecdote about understanding context is appropriate here. Much of the information about

this far away from Leon Viejo was not knowing if I would locate contact period indigenous sites and, if I did, not knowing the type of relationships between them and Leon Viejo. Since initially there were no mounds visible in the area, one by one meter test pits were used to sample the area in order to look for areas of artifact concentrations.

The final and most time-consuming part of the project was the excavation to collect samples from both Spanish and indigenous households to provide material culture for an analysis of interaction, adaptation, and contact. It was relatively easy to confidently identify Spanish households for excavation, and therefore excavations began with those. I had planned on excavating multiple samples of Spanish and indigenous households to provide a representative sample across each community. Based upon the quantity of material culture described from previous excavations, I assumed multiple houses would be necessary for a meaningful data set. In addition, I assumed I would need to excavate a number of indigenous sites to have evidence from both contact and pre-contact periods, evidence necessary to evaluate changes that occurred during contact. Horizontal excavations were the primary means of collecting data for the household samples for this part of the project.

indigenous sites came from Doña Emita. Doña Emita, an almost completely blind 90-something-year-old lady, insisted on taking us out to the land her family had owned many years ago. She began to tell me of an archaeologist who, before the war, had identified an indigenous community in the area. I had not known of any such research prior to the Revolution, and when I asked Doña Emita approximately when before the war, she told me "I think about 1915, when I was just a little girl." She had been speaking of World War I, whereas I had assumed she meant the Sandinista Revolution.

However, due to a combination of luck and limitations, horizontal excavations were limited to one Spanish and one indigenous house mound. In each case the quantity of material culture was far greater than expected based on extant materials from earlier excavations. And in the case of the indigenous house mound, there was evidence of continuous habitation perhaps beginning in pre-colonial times and into contact times, which would provide the comparative data necessary for evaluating the impact of contact within one household.

STRENGTHS AND WEAKNESSES

As with all choices, there are advantages and drawbacks to the choices made for excavation at Leon Viejo. Overall site context was sacrificed in favor of well-preserved, carefully excavated context of a single dwelling. The type of information that can be extracted from small-scale excavations is obviously different from that of a broad survey. Limiting the excavations to two mounds would not have been possible were it not for the excellent contexts preserved in each. Although the excavations are discussed in detail in the following chapters, the advantages and limitations of the excavations are discussed here since they have direct bearing on the theoretical approach chosen for the presentation of the data.

The Spanish house mound excavated provides an example of daily life and work in Leon Viejo. The mound is primarily a private structure rather than a public building. However, it had a workshop attached that permits a confident assignment of the resident's profession as a blacksmith. Defining the profession allows some

discussion of the status of this house and its residents in relation to the town as a whole. In addition, the excavated house is along the main north-south road off the central plaza, which presumably ran the entire length of the town. Unlike other unexcavated mounds to the east and west where streets are not known, this house can be considered in the context of the other major public and private structures excavated near the center of town.

Excavations of the house mound and attached workshop area provide distinctions between indoor and outdoor space even without extensive architecture revealed. The roof fall sealed off an interior room with substantial material remains within. Two outdoor spaces, one residential and the other part of the workshop, are defined in units without roofing materials and artifact assemblages very different from the interior room. So within the limits of a single household, even without architecture, assessments can be made about use of space, daily activities, status, etc.

The major drawback of my excavations at Leon Viejo is that it is the only careful excavation of a house mound in which context was treated as more important than architecture. In the excavations of other buildings within the protected ruins, artifact provenience and delineating use of space was not as important as uncovering the entire structure. Therefore, the house I excavated can be contextualized in relation to the entire town only in a general and limited manner. There are no truly comparable data sets. In order to build a view of the town as a whole- its internal

variety and its overall position compared to other early colonial towns - further contextual excavations will be necessary.¹²

The indigenous house mound excavated offers a similar set of advantages and limitations. The indigenous house mound provides less specific information about use of space than the Spanish house excavated - in large part due to the types of materials used for building, which leave less archaeological evidence. But distinctions between living areas and refuse areas were evident. The types of artifacts recovered provide samples of daily life activities through time. The mound has evidence of continuous habitation over a long period of time. The presence of Spanish objects mixed with an array of indigenous artifacts in the upper levels of excavations securely establishes the habitation as colonial indigenous. The levels below offer the opportunity to evaluate how life changed whether it is at or during contact with the arrival of the Spaniards. It is difficult to assess exactly which level of excavations represents the actual first period of contact, since earliest contact may not be manifested in the material culture. But at least the continuous habitation offers the opportunity to evaluate contact in a better context than if I had relied on separate mounds whose relationships could only be speculated.

¹² The work recently completed by Kira Blaisdell-Sloan improves the situation. She undertook the daunting task of locating and reanalyzing much of the material recovered from previous excavations. But even when provenience information could be recovered, the information was general - referring only to structures rather than rooms or indoors versus outdoors. They can be used in general comparisons of houses and public versus private buildings. Despite the value of saving these materials, they do not provide analogous contextual information for comparisons.

The major limitation of this excavation is in its ability to offer information about the broader indigenous community. Trenches and test pits dug in the areas around the excavation confirm that this mound was part of a larger settlement, but what type, how large, and the duration of the occupation cannot be determined from this single excavation. Since the surface is not a good indicator of settlement patterns, the excavation cannot be contextualized within the community even in general terms. The current understanding of pre-contact native social structure and community in Pacific Nicaragua is too limited to allow us to generalize much from the specifics of one excavation. Thus we cannot infer much about the community as a whole based upon a single excavation.

Despite the limited ability to generalize from the excavations of these two households, or to place them in well-established broader contexts, they provide good household contexts from which we can slowly and cautiously build our understanding of contact life for Spaniards and indigenous communities. Focus is on the details rather than the broader patterns, but these detailed excavations ultimately will contribute to the construction of broader views. For the moment, however, the challenge is to use an appropriate theoretical framework that permits the meaningful use of the available data while acknowledging its inherent limits.

The Parameters of a Theoretical Approach

The requirements I had for a theoretical approach made standard approaches from both Processual and Historical archaeologies unsuitable. But the thought of moving outside mainstream theoretical models made me cautious as I considered how readers might react. Primarily, however, I looked for a theoretical approach that would meet four basic criteria.

The first requirement was that the theory meets the needs of the database - in this instance material from household excavations. I needed a framework that would allow me to maximize the use of specific, but limited, contexts of excavations. Given that the ability to generalize from this database would be minimal, there was no point in using a theoretical approach that would position the data within larger models of societal organization. Rigid models of society would stifle the potential of the data available to me at this point or force me to extrapolate far beyond the reasonable contexts of excavations. The theory had to promote contextual analysis, which is central to understanding household excavations and relationships between the Spaniards and natives living at Leon Viejo.

Second, since I had data from a Spanish and an indigenous house, I wanted a theoretical approach appropriate for both. The informal division in contact studies between scholars who focus on Europeans and those who focus on natives, and the different theories employed for each cultural focus, creates the appearance of a theoretical divide. There is no reason why the same theory could not be applied to

both contexts. The situation is similar for the theoretical separation between studies of pre-contact and those of colonial period native societies. This division is even more puzzling since understanding native life during the contact requires knowledge of pre-contact society. And yet relatively few scholars cross over from pre-contact into colonial times. Consequently theoretical development continues without much intersection. But I believe the theoretical approach must function equally well for studies of pre-contact and contact period native society. This allows continuity in understanding for future work on native communities around Leon Viejo regardless of time period. Ultimately, evaluating data from Spanish and native household contexts from the colonial period, as well as pre-contact native remains, requires a theoretical approach grounded in material objects - regardless of time period or cultural affiliation.

Third, the theory needed to acknowledge the issue of perspective and subjectivity, both for the subjects and the researcher. I am committed to this position for two reasons. First, I believe that the treatment of the issue of perspective in contact studies is complex but generally insufficient. Since decisions were made and meanings derived based on the circumstances of the time, it is important to consider the various relevant perspectives from the contact period. In particular, we need to be aware of the difficulties of relying on Spanish documents for the interpretation of artifacts and events. And we should acknowledge that, whether we are referring to

excavated artifacts or written documents, we are providing our interpretation of those materials - regardless of the cultural affiliation of the producer.¹³

Consequently, I felt that any theory I used needed to acknowledge the issue of perspective. The modern perspectives through which interpretation of the past are filtered are as important as the past perspectives we are trying to recapture. The necessity for such self-reflection was clear in discussions with Nicaraguan archaeologists who held the Spaniards in high regard as the civilizers of indigenous peoples. There was little consideration of the Spanish actions that I would consider atrocious (revealing my own bias). It was clear that our diverging viewpoints on the Spanish impact on native life could shade interpretations of events and materials in subtle but important ways such as the choice of words to describe events.

Contextualizing the results I present, therefore, includes acknowledging the position I take on relevant circumstances surrounding the events of contact at Leon Viejo.

Finally, it was important to me that any theoretical approach I chose would result in a meaningful presentation of data for at least my two major audiences --

¹³ It is at this point that a decision is made regarding the role of written sources. If the presence of written documents significantly alters our understanding of a period such as contact, then perhaps a different theoretical approach is warranted for colonial and pre-contact times since the influence of these documents is so great. As an archaeologist I need to ask myself whether documents, compared to other material objects, are a superior means of understanding past societies. If I give primacy to written sources for determining meaning, then perhaps more historically oriented models are appropriate for the colonial period and yet unfeasible for pre-contact. If, however, as I am inclined to believe, material objects other than written documents offer equally valuable potential during any period - historically documented or not - then we should be able to employ the same theoretical approach from pre-contact into colonial times. I subscribe to Leone and Potter's suggestion that each line of evidence is independent and one does not necessarily assist in understanding the other (1988:13).

Nicaraguan archaeologists and American scholars. The interests and demands of these two groups are not the same. Interpretations had to either find middle ground or be presented separately. The latter approach was not likely, nor was it appealing since it would segregate data in an arbitrary way. The former was feasible, however, if theoretical models were carefully chosen and explicated. The data presentation needed to be accessible to both audiences, or at least not exclusionary of one or the other. Ultimately, regardless of the reader's affiliations, if I used explicitly articulated methodological and theoretical approaches it would allow the reader to understand the basis from which interpretations were made.¹⁴

Evaluating the Options

The two logical places for me to look for my theoretical base were the two contexts within which my experience and this research are situated. The broad range of theoretical models used in Processual archaeology and contact studies offers a wealth of options. The nature of my database immediately eliminated some of the broadest models, but there are many contact and Processual studies that use small data sets. But as I considered my options I could not find an appropriate theoretical home within either Processual or contact archaeologies.

¹⁴ Rogers writes, "There is no simple way to insure a close fit between 'reality' and the results of analysis, since the disjuncture is often a byproduct of our simplistic understanding of human action and thought. One way, however, to minimize the huge potential for misrepresentation of the 'facts' is by presenting, in some detail, the theoretical and methodological strategies being used. This does not in itself bring reality closer, but it does allow others to evaluate the analysis based on their own conceptions of valid relationships." (Rogers 1990:100).

Contact studies offer a multitude of approaches, from particular to broad, that provide potential theoretical foundations for this project. But the majority of constructs used are models for society rather than frameworks within which to evaluate data. These models, whether economic, political, Marxist or capitalist, are inappropriate for the level of interpretation the available data would permit. However, even if I had sufficient data, economic and political models do not offer the opportunity for studying the relationships at contact at the level of households and daily activities.

Acculturation is perhaps the most widely used, data-oriented concept in contact archaeology.¹⁵ It offers great liberties in constructing views of contact relationships and allows for a focus on the meaning of objects in a variety of social models. Acculturation is a concept applied to data rather than a framework within which to evaluate data. Therefore, it does not offer much as a theoretical construct to guide a discipline. And although its potential is the same for all contact studies, whether the focus be Spanish or native, acculturation is explicitly a contact concept,

¹⁵ The concept of acculturation has swung in and out of fashion over the past five decades. Research using the concept of acculturation persists, as a means to examine processes of change at the time of contact (Rogers and Wilson 1993:17). Although the concept was originally introduced to characterize changes in native society (Broom et al. 1954), there is nothing that prevents the use of the term in reference to European societies. Whether or not the term is viewed as ethnocentric or typological, as critics assert (Rogers 1993:75), it is not a construct that can form the basis a theoretical approach for a discipline.

and therefore not viable for studying the internal social organization of pre-contact native society.¹⁶

Despite the variation within contact studies, I could not find an approach that suited the basic criteria set forth. Most approaches would have provided accessible results to interested readers. But the divisions in contact archaeology between European and indigenous, as well as the schism between contact and pre-contact studies of indigenous societies, make the conventions of contact studies (no matter how broad and diverse the field) too limiting. The one great asset of contact studies, however, is its diversity. The loosely constructed paradigm under which it functions allows for many alternative approaches to work simultaneously, even new ones.¹⁷

Processual archaeology has been used widely as a means to conceptualize pre-Columbian cultures of the Americas. Despite the successes of Processual Archaeology in evaluating complex pre-Columbian societies, it has fundamental flaws in the context of contact and, as already discussed, small-scale societies, even if we escape from certain entrenched biases. Primarily, Processual archaeology is

¹⁶ That is not to say that acculturation cannot be used in evaluating pre-Columbian societies (Lange 1993:304-5). But it is exclusively a concept that looks at how two societies interact, not at how one society is organized internally.

¹⁷ Ultimately the lack of a unified theoretical approach in contact archaeology may be inherent to the discipline since it incorporates such a broad range of pre-Columbian societies, European conquerors, and forms of interaction. Of the few generalizations we can make about contact, we can say with confidence that it is characterized by extreme social stresses, rapid social change, and great variation - perhaps described as systems in disorder. If this is the case then there is a real separation between Contact and Processual archaeology, since the latter strives to achieve ordered systems. But when historical theory is not the basis for interpretation in Contact studies, the models employed come out of Processual theory which creates an underlying problem for much of contact theory.

inappropriate because of the way it constructs views of social systems. Processual archaeology is designed to evaluate a single social system through the creation of closed models of society. There is the presumption that a society can be organized and understood by breaking down the system's elements and then fitting them back together again. That is not to say that every Processual archaeologist works explicitly with Systems Theory. But even those Processual studies that focus, for example, on household excavations have as an ultimate goal the reconstruction of a single social system within a closed model.

But contact studies are fundamentally about the convergence of two systems that, by necessity, are adjusting to each other. The focus could be a single new system that emerges as a result of contact. But such a transformation overlooks the period of transition that characterizes early contact and focuses instead on the end result. This raises another problem within Processual archaeology -- how change is evaluated.¹⁸ Typically, Processual models take two static points in time, representing of two different periods of social order. The purpose is to identify the changes over time and then explain why the changes have occurred. In contact studies, the focus is a dynamic period of change. Although one can compare pre-Columbian and contact period native sites, understanding the process of contact itself requires moving away from static, closed views of society. It is not possible to

¹⁸ Ramenofsky argues that contact studies suffer from the same problem that Processual archaeology. By taking a static view our ability to understand the varied and rapidly changing events surrounding contact is limited (1991:446).

capture a unified, static view of a system in disorder - which, I suggest, is a more reasonable way to characterize contact.¹⁹

The other problem with the borrowed use of Processual archaeology is its underlying concept of evolution. The same bias that treats small-scale societies as less developed prior to contact permeates much of contact studies, which presumes, based on technological advantages, that the Europeans were the dominant force in all contact relations. Consequently there is the tendency to deny native societies both power and choice in interactions with the Europeans. Even when native societies are given a voice, there is an underlying presumption that they make adaptive choices - i.e. ones that will benefit their survival. The questions are aimed at understanding how indigenous peoples survived the new circumstances. But as Edgerton (1992) demonstrates, even when societies are not faced with extreme stress, choices are not always adaptive in an evolutionary sense. The same problem exists in the evaluation of European adaptation to life in the Americas -- plenty of choices may have been

¹⁹ Viewing societies as disordered systems has appeal and application far beyond the contact period for me. The presumption of order in all social systems also stifles the understanding of small scale societies, such as those that inhabited the landscape around Leon Viejo prior to contact. Barth suggests that the "... infelicitous habits of language and conception almost invariably affirm the orderly closure that allows a holistic assumption to be applied at any level where this might seem convenient" which results in "...nation state as the implicit model for all human society." (1992: 18). Barth argues that, regardless of time period, society is characterized by an absence of closure that requires re-conceptualizing our cultural construction of reality, which continuously tries to create closed systems despite the fact "...human social behavior is intended and interpreted in terms of particular cultural understanding and is not transparent, objective, and uncontested." (1992:21). The advantages of the concept of 'disordered systems' becomes apparent when we consider the obstacles to understanding small-scale societies within Processual models which require a breakdown of institutions to build a complete view of a society.

made that hindered settlers' success, but these cannot be understood as long as the evolutionary bias lingers under the surface of all interpretive theory.

Finally, both Processual and Contact archaeologies too often adopt the notion of the third party objective observer. The problem of perspective in contact studies, discussed in Chapter One, make the notion of an objective observer untenable. Fundamentally, if we are trying to understand how native and Spanish groups dealt with contact, we must admit that their perceptions of the situation were important in shaping the decisions they made. Although we cannot claim to get inside the minds of other people (past or present), we also cannot deny that their perspectives were real in so far as they shaped their actions. In trying to interpret the meanings of objects found in contact contexts, we are always asking, "What did these objects mean to the people who possessed them?" since clearly an obsidian blade or metal horseshoe could have substantially different meaning depending on the context in which it was found (Hodder 1992:191). The very nature of the interpretation we undertake thus negates the possibility of objectivity. We should not stand behind a false belief in objective interpretation when clearly we are in search of past perspectives of meaning.

The underlying tenets of Processual archaeology that are problematic in the context of contact studies -- evolution, adaptation, objective observation and a single ordered view of past societies -- are important to articulate since rejecting them marks a clear departure from Processual theory. This requires explanation, because as I

discussed in Chapter One, Processual archaeology is the mainstream approach to archaeology in America today, and one either functions within the mainstream or diverges from it. For better or worse, the tenets of Processual archaeology are accepted as the theoretical norm today. The choice to depart from it should not be taken lightly. But in this instance, Processual archaeology not only falls short of the requirements of a useful theoretical construct, it impedes the development of such a theory.

Disordered Systems Theory

If it is inappropriate to force the use of closed models of social organization on contact events, the challenge remains how to approach disordered systems in a coherent manner that yields meaningful results. The solution lies in adjusting not just the approach, but also the view of what constitutes meaningful interpretation. The neat packages provided by Processual systems theory for the reification of past societies is not part of theories of disordered societies. The deductive approaches of Processual archaeology are replaced by exploratory procedures to understand social formation in particular situations (Barth 1992:25). Society is viewed from the bottom up, rather than the top down. This is a non-linear approach to interpretation in which any one context can lead down a number of coexisting, but not necessarily congruent,

interpretive paths.²⁰ And ultimately, there is no expectation of a single, all-inclusive top-down view of social organization.

The type of interpretation promoted by a bottom-up approach seeks to unravel social activity in context. In order to accept the value of the results, we must first alter our presumptions regarding our cultural construction of reality in order to accept that "...human social behavior is intended and interpreted in terms of particular cultural understanding and is not transparent, objective, and uncontested" (Barth 1992:21). In this framework there is no single uniform interpretation of society to be achieved; rather real meaning is found within the variation and contexts of social action. Such interpretation does not result in the type of generally made in closed systems theory of 'ordered' societies. The goal is not to identify uniformity but to explore the variation and reasons for that variation. Disordered systems theory finds meaningful results in the richness of the variation rather than abstractions made from, or despite, the variety seen within a society.²¹

²⁰Maurice Bloch uses his ethnographic work on the Zafimaniry as an example of how to present one's data in such a way as to acknowledge that "...most knowledge, especially knowledge involved in everyday practice, does not take a linear, logic-sentential form, but rather is organized into highly complex and integrated networks or mental models most of which are connected to each other in a great variety of ways." (1992:130). Although neither ethnographers nor archaeologists can study these processes directly, Bloch suggests that once we acknowledge that this is how people think and function, we ought to at least attempt to present those actions in their contexts (Ibid.).

²¹ Barth argues that "A continued use, on the other hand, of the received templates of society as a bounded and ordered entity and of local communities as exemplary parts of such an entity will only continue to mystify our data and trivialize our results." (1992:32). Barth is referring to the tendency in ethnography to gloss over variation in search of generalized truths about society. His point is relevant as well for archaeology, where anomalous data is ignored or explained away as incorrect or irrelevant, rather than accepted as part of the data from which we interpret society.

Within archaeology, Hodder has promoted Contextual archaeology as an approach (or, as some might say, multiple approaches) to data interpretation, giving primacy to context, variation, and the fluidity of social construction. As in much of Post-Processual archaeology, Hodder has spent more time demonstrating the validity of the broad Post-Processual theoretical approach than its actual practice.²² But he has delineated central aspects for the implementation of Interpretive/Contextual archaeology. A theoretical approach began to take shape for my research at Leon Viejo from Hodder's delineation of three major aspects of Interpretive Archaeology.

First, Interpretive Archaeology primarily involves 'thick description', as conceptualized by Geertz (1973). The goal is to understand the meanings of objects by putting them "...more and more fully into various contexts" (Hodder 1992:15) as opposed to using them solely as a basis for reconstructing socio-economic patterns (Wilson and Rogers 1993:8). Interpretive archaeology assumes that an object has more than a single meaning in the society in which it was made and used. An object can have contrasting meanings, many of which were not envisioned when it was made, depending on the contexts in which it is situated (Hodder 1992:13). Through the examination of objects in contexts, 'fields of connected activities' can be identified (Barth 1992:25) and webs of social interaction can be constructed (Hodder 1986:129-130). In this type of analysis, artifact categories as they are generally constructed by archaeologists (by the material used for the production of the object) are not the only

²²Hodder admits this himself (1992:184).

or primary context used for understanding the significance of each object in society. Artifact categories should be as loosely bounded and construed as the social models we expect to achieve.

Despite the fact that the thick description used in Interpretive Archaeology promotes searching for multiple contexts and meanings, there are limits to the scope of interpretation. The production and use of objects is bounded by practical and material considerations that can be identified. There is an inherent and inescapable link between the symbolic and ecologic, or material, world in which the symbolic meanings are constructed (Hodder 1992:19, 99, 191; Barth 1992:20). These are real constraints that create boundaries within which symbolic meanings can be understood (Hodder 1992: 175). It is through an understanding of these limitations that proposed interpretations can be evaluated to see which ones best fits the contexts and constraints (Hodder 1992:171, 191-2).

Hodder suggests the term 'guarded objectivity' to describe how we should approach the interpretation of data. According to Hodder the interpretation of objects can be considered 'objective' in that "...they concern real material patterning existing independent of our constructions" but only guardedly objective "...because they are construed within a subjective framework of meaning..." in the present (1992:171). The goal of 'guarded objectivity' is to create a theoretical framework within which multiple interpretations can exist without falling victim to the relativist position of 'anything goes.' I find 'guarded objectivity' problematic since some will view it as an

indication that a single real pattern exists independent of human observation. It successfully synthesizes, however, the Post-processual position that there can be co-existing, competing, even contradicting, interpretations which can be evaluated in light of real data, without the slip into complete relativism.

Along with the concept of 'guarded objectivity', Hodder makes an important clarification about the relationship between data and theory. It is a common Post-processual position that theory, data, and interpretation are inextricably linked. But Hodder himself points out that Post-processual archaeology has not developed the significantly different field methods that should logically follow if there were an absolute, dependent relationship between theory and data collection (1992:171). Scholars involved in Post-processual interpretation have continued to use methods for data collection designed within Processual archaeology. This suggests that there is a "...partial autonomy between higher-level theory and data acquisition" (Hodder 1992:172) which allows the same methods to be used within multiple theoretical frameworks. There are some differences, I believe, in Post-processual methods (discussed below). But these are choices, not mandates. Ultimately the point is that, "although data are collected within a theoretical framework, as long as that framework is understood, the data can be reused within other frameworks." (Hodder 1992:172).

The separation between data and theory is an essential element of Interpretive analysis since it acknowledges what is inherent to the theoretical construct - there can

be multiple interpretations of a single data set. Those interpretations can fall under a single theoretical umbrella or multiple ones. Articulating the relationship between data and theory as intertwined, but not determinative, clarifies that "...interpretation does not simply form data into its own image." (Hodder 1992:173). Just as with 'guarded objectivity', the relative independence proposed here provides a means to evaluate the potential of various interpretations, regardless of the theoretical position employed. It is necessary, however, to articulate the theoretical position employed in order to fully evaluate the interpretation.

The final element of Interpretive archaeology, as outlined by Hodder, is a self-reflexivity that is already in much anthropological writing (Geertz 1980; Marcus and Fischer 1986). Just as Malinowski's diary is considered valuable insight into his observations about the Trobriand Islanders, Hodder argues that the context of archaeologists' perspectives is relevant to how we produce knowledge about the past (1992:188). This is important primarily for two reasons. First, it is through such reflective consideration that we can articulate fully the positions from which we are writing. This is part of providing necessary perspective for readers of interpretive results. The corollary to this is that by articulating our theoretical positions, we can make archaeological knowledge accessible to broader audiences. Archaeological research is used cross-culturally as a means of claiming identity, ethnic affiliation, and a history (Hodder 1992:186). This is a very real issue for any work in Nicaragua today. But like ethnographic writings, our results sometimes seem irrelevant or

inaccessible to groups most interested in the results (Hodder 1992:186;Bloch 1992). More often than not, archaeological interpretation is presented without a narrator, and claims validity through scientific methods. Hodder proposes using the first person in archaeological interpretation as a means of reminding the reader that there is a narrator who presents *interpretation* rather than established fact (Hodder 1992:193). By doing so we become responsible for the interpretations and make them open for a variety of audiences to evaluate.

Ultimately, Hodder presents Interpretive archaeology as a means to "...overcome the opposition and contradiction between the past and the present, whereby the past is (objectively) separate from but yet is constructed in the (subjective) present." (Hodder 1992:170). Guarded objectivity allows us to use hermeneutics to understand the past at least partially in its own terms through an awareness and articulation of our own position in the present (Hodder 1992:193). Although our understanding of the past occurs only in the present, the relationship between the data and the interpreter is a two-way street. I give the past meaning through interpretation, but the data change my position in the present. If I present my theoretical position, and acknowledge that the interpretations are my own, then readers can critically evaluate and use my results. The net result is the creation of better discourse within archaeology and broader accessibility of the knowledge we produce.

I do not advocate Interpretive Archaeology as the sole theoretical approach for research. I believe that many Post-processual archaeologists have done themselves a disservice by advocating that this should be the only theoretical approach. Indeed, such a position is counter to principles of Post-processual thought and assumes a monolithic Post-processual approach. In particular, in that multiple interpretations are embraced in Interpretive Archaeology, it is ludicrous to eliminate other interpretations made under an alternative theoretical framework. The main frustration of employing Post-processual archaeology is that it remains on the fringe of mainstream archaeological research. As such, many people will reject it outright on a theoretical basis without considering the value of the results. But the best way to change the mainstream view of the fringe is to responsibly use the theory, thereby demonstrating its value to those willing to entertain the possibility.

Interpretive Archaeology in Context

Interpretive Archaeology provides a framework that meets the four criteria I sought in a theoretical approach. It makes the results accessible to the major audiences I am addressing through an explication of theoretical position and its relationship to the data. Even if readers disagree, they are given the tools necessary to reuse the data for alternative interpretations. It facilitates meaningful interpretation of small-scale excavation contexts without unreasonable expectations placed upon the available data. Because it is materially based and focuses on context, it can be used

equally well for European and indigenous contact sites, as well as for pre-contact sites. It provides a viable alternative to understanding both the dynamics of contact and the complexities of small-scale societies prior to and during the contact period.

Interpretive archaeology is a powerful tool for examining relationships of societies in the disorder characteristic of contact, as well as small-scale forms of social organization. The Interpretive approach does not aim to reconstruct a single top-down view of society. The essence of the theory is the search for meaning from multiple perspectives through the examination of data in contexts. The resulting vantage points provide glimpses into a past society from many angles that may not be consistent with each other. This flexibility permits for an evaluation of material objects from contact sites that embraces, rather than glosses over, the tensions, conflicts, and choices characteristic of the time.

INTERPRETIVE ARCHAEOLOGY OF CENTRAL AMERICA

Even those most skeptical of an interpretive approach might acknowledge its utility in a context such as Central America, specifically Nicaragua. As Lange et. al. have acknowledged (1992:277-8), it has been difficult to escape the mind-set and theoretical models that place Central America at the fringe of indigenous societies, because even when we acquire new data, they are evaluated in light of existing theories. A major obstacle to developing alternative, centrist views of Central America, therefore, is the paucity of data that permit the creation of new models.

Before broader theoretical models can emerge for areas such as Nicaragua, more data are needed. But the data must remain independent of existing models that will marginalize them before they are ever interpreted. And for a time, no new models for social organization and interaction will develop since there is insufficient data for their creation. During this interim period, therefore, an approach that finds meaning in the data without forcing them into large-scale models for social organization is appropriate. Data accumulation cannot take place absent any theoretical position, but it can be done without forcing more from the process than is reasonable to expect.

Interpretive archaeology offers the opportunity to gather data, interpret meanings in contexts, and thereby add to the database for future larger-scale views of the region. The context within which data are analyzed can remain local, thus avoiding the tendency to evaluate them in light of Meso- or South American views of Nicaragua. Interpretive archaeology offers the opportunity to find meaning in the kind of small-scale excavations that are characteristic of archaeology in Nicaragua, as at Leon Viejo. Most importantly, Interpretive archaeology does not need to force the data into broader contexts that they cannot yet address in order to validate research. As a baseline approach to archaeology in Nicaragua today, Interpretive archaeology has great benefits while avoiding the major pitfalls.

INTERPRETIVE ARCHAEOLOGY AND CONTACT STUDIES

Interpretive archaeology is well suited to the issues of contact as well. A bottom-up approach is needed to evaluate the broad range of social interactions during contact and the enormous changes to the social order of both Europeans and natives. By explicitly departing from underlying Processual concepts such as evolution, adaptation, and objective observation, interpretation can focus on how people coped with the new contexts of their lives. It is in these events that we can hope to gain glimpses of a tumultuous period of world history.

In particular, Interpretive archaeology makes it easier to confront the problem of perspective persistent in contact studies. Within Interpretive archaeology it is not considered a weakness to articulate that, whether I am trying to interpret European or indigenous contexts, I am doing so as a third party. I can attempt to understand material objects in the various contexts, but I cannot claim, or presume, to present the native or Spanish perspective any more than I can claim to be an objective observer. Interpretive archaeology creates movement between the past subject and the present so that I can try to reconstruct past contexts while acknowledging the role of the present in my vantage point. This fluidity is precisely what is needed for contextual analysis of materials from contact sites where natives and Spaniards were interacting on a daily basis.

Interpretive archaeology clarifies the position of written documents as well. Written documents are treated as equal rather than superior to material objects found

in excavations.²³ Written documents are subject to interpretation just as material objects. Texts become independent of the author once they are complete. But we still try to place them back into the contexts within which they were created, just as we do with material objects. Even if documents provide useful information regarding the data, interpretations do not need to be limited to, or in agreement with, the written word. The potential for over reliance on documents as a means of interpretation is curbed, since interpretation can extend beyond their scope. And the decision not to use available documents is not a weakness, but simply a choice made by the researcher about the contexts within which to place the data.

Interpretive archaeology can incorporate many concepts currently used in contact studies. Acculturation, various approaches to trade and exchange, social interaction, and adaptation are all viable topics to pursue in Interpretive archaeology. The greatest benefit to contact studies that I perceive offered by Interpretive archaeology is the insistence that one's theory be explicitly presented rather than presumed. This will force a more substantive discussion on the use of paradigmatic theories in the discipline, which is both necessary and beneficial.

DATA AND INTERPRETIVE ARCHAEOLOGY

First and foremost, Interpretive archaeology's approach to data is explicitly inductive rather than deductive. The Processual approach to data, set forth by

²³ As an aside, Hodder proposes that material objects be viewed as texts rather than language as he previously proposed (Hodder 1986:125) which allows equal treatment of both categories of evidence of the past.

Binford, is supposed to be deductive - a set of questions is created and the data are used to test its validity. The questions are specific, and usually directed with an expectation of a specific outcome. Early Processual work was satisfied to test the process. Disproved hypotheses were acceptable because they still demonstrated that the method worked. As Processual archaeology moved beyond the formulaic implementation of the hypo-deductive approach, the capacity to admit defeat diminished. In grant proposals, questions are presented along with a discussion of the data that are expected to be found and how they will answer the questions. In final reports and publications, the questions are outlined and the data described in light of those questions.²⁴

The use of an inductive approach in Interpretive archaeology allows the researcher to let the data guide the issues that are addressed. Data are not used to test hypotheses, but rather to raise questions that can be addressed by them. Research starts with a set of general interests or topics for investigation, but without the expectation of certain answers being validated or disproved.²⁵ This is a less

²⁴ The real challenge arises when the expected data are not found, or they do not answer the questions in the expected manner. Questions are then reformulated retroactively, data are forced into answering questions they cannot really address, or, most unlikely, the researcher admits defeat. Most often I believe questions are subtly reformulated throughout the process of excavation and analysis. This is reasonable since excavations yield unexpected results all the time. But ultimately this is not the deductive approach neither designed in science nor claimed by Processual archaeology. I suggest that much more archaeological research is inductive than scholars want to admit.

²⁵ One of the greatest problems I see with current Processual research is that disproving a hypothesis is viewed as a failure and therefore people are reluctant to admit that the data demonstrate the opposite of the hypothesized expectation. The process of testing hypotheses must allow for their failure, or the process is corrupted.

formulaic approach to data analysis since the agenda is not set in advance. It is a crucial feature of Interpretive archaeology since it allows for the contexts discovered during excavation and analysis to guide the direction of interpretation. Leone and Potter propose a descriptive grid - a framework of expectations that do not predict results, but rather allow us to consider deviations from expectations and then re-frame new questions to use in re-evaluating data (1988:14).

Another significant difference in Interpretive Archaeology's approach to data analysis deals with context. The importance of contexts makes standard types of analysis (which developed in Processual Archaeology) problematic. Standard analysis of artifacts gives primacy to the material from which they are made. This is a material constraint that provides a reasonable category for analysis. There are two problems, however. First, there is the tendency to consider artifacts rather than objects. Ceramics are more often analyzed as sherds than as part of the vessels from which they came. These sherd categories are entirely our own creation and do not necessarily incorporate any attempt to view the objects as they were in the past. We divide diagnostics from non-diagnostics, rims from bodies, and plain from decorated sherds, ignoring the fact that these all were once part of single vessels which may have had plain and decorated parts, rims and bodies, and what we consider diagnostic features along with undistinguished parts of the vessel. When the focus is on artifact

rather than object, and sherd rather than assemblage, much is learned about the physical properties but at the cost of understanding symbolic systems.²⁶

Second, although material based categories help us to understand the data, there is little reintegration of the objects once they are analyzed by production material (Rogers 1993:83). Assemblages of artifacts found within a single excavation context, or with similar symbolic characteristics, or that were all used in a particular activity, are less often considered than the categories of ceramic, lithic, obsidian, etc.²⁷ Without reintegrating the artifacts back into any of the multitude of contexts, there can be little hope of understanding meaning within a society (Rogers 1990:100-1; South 1988:33). Interpretive archaeology focuses on the multitude of contexts within which artifacts can be placed. Analytical methods, therefore, need to permit the placement of the data in various contexts without necessitating new analysis (Leone and Potter 1988:18). Methods are designed to focus less on quantities and more on qualities that emerge as relevant across the entire data set. Ultimately the

²⁶ Symbolic communication has gained ground in Processual archaeology, but fundamental problems remain when we claim to understand symbols based on sherds, rather than vessels. Symbolic communication is a complex web of symbols and meanings that should be looked at from the broadest possible contexts rather than the tiniest remnants of design (Hodder 1986:131).

²⁷ A simple example of this point is that final reports and projects from excavations are usually divided by artifact type rather than activity. The ceramics, rather than cooking activities, are the basis for a report. Unfortunately the next step of integration is infrequently taken.

goal within Interpretive archaeology is to make strides in qualitative analysis equal to the strides in quantitative analysis made in Processual archaeology.²⁸

Finally, Interpretive archaeology should be honest about the impact that choices have on the final presentation of data. When Processual archaeology claims to prove a hypothesis through the use of data, the impression is that the resulting conclusion is the correct and only one. But archaeologists make choices about how to use data. Those choices have a direct impact on the outcome of the analysis. Choices are made about what data are relevant and how they should be analyzed. Data that are deemed not relevant are left out of the presentation. Anomalies, inconsistencies, and contradictions are dismissed as the data that prove the hypothesis are set forth (Leone and Potter 1988:12). But the data that are left out may provide an alternative, or contradicting view. As long as Processual archaeology is intent on validating hypotheses, these anomalies and inconsistencies will be overlooked. Interpretive archaeology can examine a broader range of data simultaneously since the focus is not on validation but on meaning. Ultimately, Interpretive archaeology can admit that the view presented is partial without devaluing the results.

²⁸ Rogers' (1990) analysis of the Arikas' contact with Europeans provides a good example of the potential for qualitative analysis when done thoughtfully. He delineates five processes through which the presence of European goods in Arika society can be analyzed (maintenance, addition, replacement, rejection, and transformation). These concepts allow for examination of European goods in a multitude of contexts and for their evaluation of their impact on Arika society. The only problem I have with Rogers' study is his reliance on historical documents to create the contexts through which artifacts are evaluated. As discussed earlier, I do not believe that documents alone should provide context for understanding material culture.

The approach to data analysis and presentation that is part of Interpretive archaeology is, I believe, a more honest approach to archaeology. Processual archaeology tries to sanitize a process that is messy and complex. The result is the false impression that archaeologists know things in absolute terms, when in fact partial views more accurately characterize our knowledge. This Interpretive approach to data analysis and interpretation makes results accessible to wider audiences and more open to re-interpretation. The data remain at the heart of the interpretation, which limits the scope of reasonable interpretation. But there is no illusion of concrete knowledge that has been validated but actually rest on a bed of quicksand.

PART II: A JOURNEY THROUGH SPANISH TIME

CHAPTER THREE:

FUNDAMENTALS OF LEON VIEJO FROM START TO PRESENT

The Capitals Of Nicaragua: From Last To First

Leon Viejo is only 45 miles northwest of Managua, but the hour and a half journey takes a far longer trip through time. The trip begins on the New Leon Highway, which connects Managua to the current city of Leon, founded by the Spaniards when they abandoned Leon Viejo in 1610. There is little to recommend this road to travelers besides an impressive view of the looming Volcano Momotombo in the distance and views of Lake Managua along the roadside. The road itself is in far worse condition than the Old Leon Highway, and there are only a few small towns between Managua and Leon. The highway's most crucial function is as a transportation route for truckers and laborers between Managua and Leon.

The Leon Highway is part of Pacific Nicaragua's road system, which connects major towns and cities, in particular Leon, Granada, Managua, and Masaya. Leon and Granada were founded by early Spanish conquerors of Pacific Nicaragua, while Managua and Masaya were already native towns at the time of contact. Since the revolution, when the extensive railway system was destroyed, this road system has become the major means of moving people and goods across Pacific Nicaragua.

During struggles for independence in the 19th century Granada and Leon traded the title of capital back and forth until it became clear that stability would require a compromise. Managua, located between the fighting cities, became the solution and in 1852 was given the title of capital of the nation that was formed formally in 1858. Ironically, Managua is the closest city to the original capital, Leon Viejo, and shares many of the same problems that led to the abandonment of Leon Viejo in 1610.

Natural disasters are a pivotal part of both ancient Leon Viejo and modern Managua. Managua has not had street names since 1972. The 1972 Christmas Eve earthquake destroyed so much of the city's infrastructure that street names became obsolete. Even after years of reconstruction, the city is marked by the devastation that instantly killed more than 10,000 people. The skeletal remains of the original Managua cathedral vividly remind visitors of the earthquake's violent force. From the Managua cathedral, on a clear day, there is a view of Volcano Momotombo, which rises above the ruins of Leon Viejo. For thousands of years Volcano Momotombo has brought the same kind of danger and destruction to the area where the Spaniards built Leon Viejo as the 1972 earthquake brought to the current capital.

La Paz Centro is the largest town along the highway from Managua to Leon Viejo and serves as a truck and rest stop for travelers. At La Paz Centro there is a concentration of stands selling quesillo, a Nicaraguan fresh cheese eaten in tortillas. La Paz and a few neighboring towns are famous for their quesillo, affirming the

tradition of cattle herding in the area. La Paz Centro, like the cattle, is a legacy of the Spaniards. It is a colonial period town created to bring together small remnant populations of indigenous people in a more productive and controllable center. This 'center of peace' marked a turning point for Nicaragua's indigenous populations, removing them from their native towns to a center where distinct cultural and linguistic peoples were grouped into a single Spanish-organized community.

Along with dairy products, brick and ceramic production remain major industries of La Paz Centro, just as they were during colonial times. The ceramics of La Paz Centro still are produced in the basic Spanish shapes and forms of the 17th century. Walking through a ceramic stand at La Paz can be a journey back to the Spanish households of early contact.

The turn for Leon Viejo off the Leon highway is at La Paz Centro, but is poorly marked and easily missed. Along this dirt road there is mostly open land, some plots used for agriculture, some covered in volcanic tuffa, but most abandoned since the revolution. As unremarkable as this road is, there are a few landmarks of times past along the way. Atop a small hill there is an isolated house, built mostly of corrugated metal, which looks ready to fall over with the first strong wind. In front of the house, a bulky Soviet truck is parked that looks older and weaker than the house itself. It must run, because it is not always parked there, but I never witnessed it on the road. The truck dates back to the Sandinista Revolution, when Nicaragua was armed in its revolution by the Soviet military. Trucks such as this one have endured

long past the revolution's end, reminding a passerby of the conflict that recently overran this seemingly peaceful farmland.

Another landmark is a large, walled, two-story Spanish style house with remnants of a whitewash that, when fresh, would have been blinding in the sun. Once this was the house of a wealthy landowner who controlled hundreds of acres in this area. Today the house looks more like a candidate for an archaeological excavation than a place of residence. But a local family lives in the remnants of this once glorious residence. The deteriorating walls around the residence contain the cattle that live side by side with the family. This house is from an era past – a time of large farms owned by the country's elite. The elite farming system emerged in the seventeenth century as Spaniards realized they could not become wealthy from mining and had exhausted the sale of natives in the slave trade. This process of ruralization began even before Leon Viejo was abandoned, but rapidly accelerated when the capital shifted locations.

Until the Sandinista revolution, wealthy landowners controlled large amounts of land, as they have since the Spaniards began the process with encomiendas in the sixteenth century. The fertile land provided all the basic crops for the country, including corn, beans, squash, and cotton. Many people living around the ruins of Leon Viejo reminisce about a time when these lands were cultivated and no one went hungry. Today, however, only a fraction of these lands is cultivated, much of it with crops for export, and affordable food is a major concern for people living in area.

Closer to Leon Viejo, at the base of a small hill pass, there are two houses that look as though they could have stood when the Spaniards first arrived. They are built of rows of small posts forming walls, tied together with dried grasses, without any evidence of European influence in construction. Despite the perishable natural materials, these two huts are in far better condition than the two houses already mentioned, probably because they are frequently rebuilt. Although such houses never survive like brick buildings, this style far predates the arrival of the Spaniards and endures as a legacy of indigenous populations of the area.

Puerto Momotombo is the town at the end of the dirt road, and is adjacent to and on top of the ruins of Leon Viejo. Despite the unnamed dirt roads, the town is navigable because it is built on a grid, just as early Spanish towns were planned (which is not the case with Managua). The signs leading visitors to Leon Viejo are more often down than up due to the rapid erosion of metal from the saline lake, coarse sands, and strong rains. Local people offer directions in typical Nicaraguan form: "Two blocks to the lake and two blocks up."

Navigating in Nicaragua requires a special kind of compass. Nicaraguans use where the sun rises and sets, and landmarks such as lakes, mountains and special buildings to give directions. It is almost as easy to miss the ruins as the turn at La Paz Centro. A barbed wire fence, like those used to demarcate any field, is interrupted with a small gate and kiosk that welcomes visitors to the first capital of modern

Nicaragua. If there ever was any glory to this Spanish town it is hard to imagine and long since gone.

The Process Of Project Design

My initial interest in Leon Viejo was sparked when the then Minister of Culture, Mario Molina, said to me on our first meeting that it would be wonderful to have someone interested in working there. In other words, I did not pick the site because of predetermined intellectual interests that I hoped to answer through excavations at Leon Viejo. Rather, when I was offered the chance to work at the site, I found questions of intellectual interest to me that I could address through excavations there. The first task became to understand the 16th century history of the site and the complex modern archaeological history. Once I had familiarized myself with the basic historical record and struggled to reconstruct what I could from the excavation records, I was prepared to form my own research questions. While it was easy to find many areas of interest for a research project based upon the historical background of the 80-year occupation of Leon Viejo, it was far more difficult to reconcile myself to the limitations imposed by previous work done at the site. Since the direction of my work was influenced heavily by these factors, information on the habitation and excavation histories of Leon Viejo is needed first.

The Foundations Of Leon Viejo

Although many buildings have been excavated in Leon Viejo, most of what is known about the town today is based on historical documents rather than archaeology. The interpretation of buildings and material objects, along with the reconstruction of activities and events, has been historically based and accepted as fact. The site of Leon Viejo, in many ways, has been viewed as no more than a material manifestation of what is accessible in the written record. However, the historical documents, mostly legal and economic, provide as many questions as answers about the history of this town.¹ Archaeology has the potential to contribute a great deal to our understanding of Leon Viejo, and of early contact, if we move beyond the scope of the primary written sources.²

The generally accepted historical background to Leon Viejo's founding is from a synthesis of information on the early colonial explorations of Central America, and specifically the claim to Nicaragua. Spanish conquerors explored Central America once the major indigenous centers of the Inca and Aztec had been dominated. In some respects, Central America's marginalization began at this point in history. The conquistadors who had successfully established themselves in Mexico

¹ Most of the known documents are in a set of 17 volumes known as the *Coleccion Somoza* (collected by Saez 1954-57). These volumes of Spanish tax records, court proceeding, and other legal documents form the basis for any historically based study of Leon Viejo. The volume remains in 16th century Spanish and it is therefore not easily accessible as a resource at this point.

² Leone and Potter argue for treating the written and archaeological sources as independent of each other, with neither one being 'correct' and therefore neither one is superior to the other. The suggestion is for a dialectical, not dependent, relationship between the two (1988:12-13).

or Peru left Central America for those who had still dreams of greater wealth and power. Central America, and specifically Pacific Nicaragua, was the battleground for Spanish explorers in search of material gain and power that they had not been able to accumulate elsewhere.

Gil González Dávila and Andres de Cereceda were the first to explore Pacific Nicaragua, by land and water, in 1522. In 1524, Francisco Hernández de Córdoba founded both Leon and Granada with backing from Pedrarias Davila, then Governor of Panama. By 1526, Francisco de Cordoba tried to claim independent control of Pacific Nicaragua. Perdrarias reacted swiftly, killing Cordoba and then taking control of Nicaragua himself. Pedrarias' cruelty and propensity for violence as the only means of conflict resolution make him stand out among early conquerors, none of whom we would consider pacifists. During the first years of Spanish presence in Pacific Nicaragua, the violence among the Spaniards probably equaled or surpassed that which they inflicted on the natives, whom they expeditiously exploited (Jones and Pendergast 1991:72; Carmack 1991:392).

Reasons for the location of Leon Viejo are not entirely clear, but Nicaragua itself was explored in the hopes of accumulating mineral wealth - especially gold.³ Despite the fact that mineral exploration was a major goal, none of the mining areas were suitable for a Spanish capital. Mining areas were in the mountainous northern

³ Helms suggests that broadly the goal of the Spanish conquistadores in Central America was to extract portable wealth without the intent of long term settlement (1991:412).

and eastern parts of the country, far less accessible than the Pacific lowlands. Leon Viejo's location met the general criteria used for establishing early Spanish colonial towns: It was close to a large native community to provide a supply of labor, near waterways to facilitate export and import of goods, and had some natural protective barriers such as the lake and low lying hills, providing a defense against both natives and competing Spaniards (Newson 1987:14,93; Jones and Pendergast 1991:167; Thomas 1988:105-6). The main competitor for the title of capital was Granada, which offered most of the same advantages, and probably a better physical location in terms of environmental conditions and access to trade routes. Yet in 1527, Leon was officially made capital of the province of Nicaragua, apparently because it was closer to areas of conflict (among the Spaniards and between them and the native people) than Granada - an ominous reason at best (Newson 1987:93).

The vast majority of known documents specifically about Leon Viejo are legal and economic in nature. Court cases, tribute lists and taxation records provide useful information pertaining to native labor, native slave trading, relations with the Crown, and relations among the residents of Leon Viejo. They provide information about the politics and finances of the capital, but little insight into people's daily lives. Based on these documents, it is easy to paint an unflattering picture of life at Leon Viejo.⁴ However, the potential for distortion is great since those who lived within the law are

⁴ A great many of the court cases reveal the rivalries among the Spaniards at Leon Viejo – accusations of theft and infidelity were common cases before the judges (Stanislowski 1983: 75-124; Werner 1996: personal communication).

unrepresented in the records of court battles (Stanislowski 1983:69). Another problem with the documents is the evidence that the numbers in tax records likely were manipulated to suit better the interest of individuals dealing with new laws and regulations from the crown (Galloway 1991: 454; Stanislowski 1983:49).⁵ Finally, among the extant documents pertaining to Leon Viejo, certain basic information that would be useful, such as a town map, is absent. Reconstruction of the town using historical documents has relied on indirect information, such as how far someone lived from the cathedral or how many blocks from the main road (Arguello 1969:7-10). This has led to what I consider a highly speculative assignment of names and functions to excavated buildings. These identifications are not only labeled at the site but also are used in all published documents and provided without any commentary as to the source of the identifications.

Despite the lack of a town plan among the documents, it seems clear that Leon Viejo was built on a standard Spanish grid system (Newson 1987:93). Although the Crown did not lie out the grid system as law until 1573, it was used in other early Spanish towns prior to the formal ordinance (Williams 1995:116). Combining knowledge about other early Spanish towns, and later Crown mandates, with excavated parts of Leon Viejo, a fairly standardized grid system becomes apparent.

⁵ Detailed discussions of the economic and legal activities of early colonial Nicaragua, and specifically Leon Viejo when available, are already presented in the literature relying on the historical documents (See Newson 1987, Stanislowski 1983, Arguello 1969). The structure of encomiendas, the extensive slave trade, and the rapid depopulation of natives are among the most relevant factors in constructing contexts for evaluating archaeological material. I have not detailed these events here since more than adequate coverage is already available in the literature.

The basic layout has helped the excavation process, in particular when looking for major public buildings (religious and secular), roads, and even homes of prominent people.⁶ Much of the town's square and major north-south avenue is uncovered and form the basis from which the town's plan has been reconstructed.

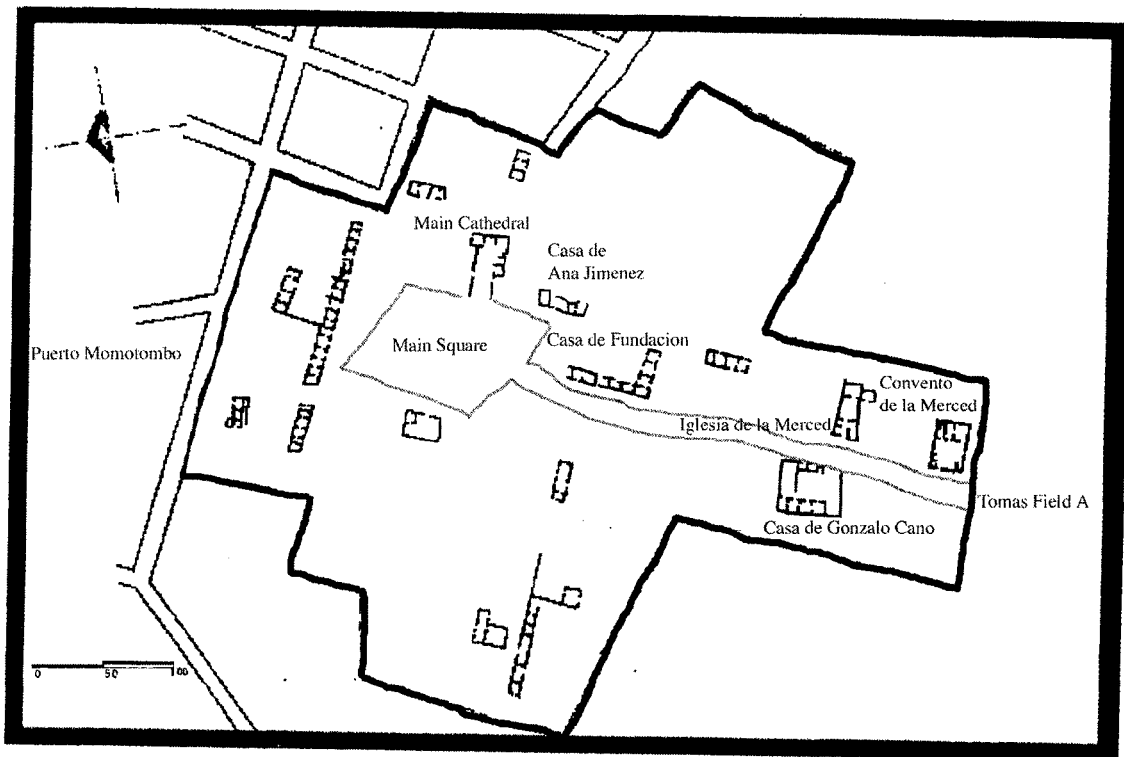


Figure 2: Ruins of Leon Viejo, showing exposed structures as of 1990.

⁶ Given the current conditions of Leon Viejo, including back dirt from previous excavations piled on adjacent mounds and significant reburial of previously excavated buildings by floods in 1982 (Hurricane Alleta) and 1998 (Hurricane Mitch), archaeologists wishing to work within the protected ruins need all the assistance possible in determining where to logically look for remains. Examining the layout of other early towns can be one fruitful avenue in this pursuit.

The size of the town, both in terms of land and population, is much harder to assess. Newson (1987:93) estimates that under Pedrarias, Leon Viejo was at its peak of popularity, with 200 vecinos. Vecino counts are generally thought to include only land holding residents, so it is difficult to estimate the entire population from such a number.⁷ In terms of geographic area, the full extent of the town goes beyond the land the Government of Nicaragua has within its protection, but the actual limits are extremely hard to define.⁸ It is very hard, therefore, to use population estimates or size estimates of the town in conjunction with one another to come up with a reasonable view of Leon Viejo's full existence during its eighty years as capital.

Leon Viejo was abandoned as capital in 1610, when Spanish officials founded a new Leon 40 miles north of the original site. Arguello suggests that a violent earthquake in 1610 was the immediate cause of the city's relocation (Arguello 1969:166). Newson suggests this was part of an early 16th century Spanish trend of relocating towns (Newson 1987:93). Leon Viejo faced many of the disadvantages cited as reasons for relocations, most especially an undesirable physical environment

⁷ Stanislawski points out that not all Spaniards held land in the sixteenth century and that this was a major source of conflict among early conquistadores (Stanislawski 1983:115). Newson documents that as early as the 1530's, the populations of both Granada and Leon were declining as Spaniards disillusioned with the prospects in Nicaragua left for Peru (Newson 1987: 94). Healy (1980:19) estimates that by the end of the sixteenth century only 500 Spanish colonists were living in all of Nicaragua. Even if there was a population boom earlier in the century, by the time Leon Viejo was abandoned by the Spanish, it seems likely that their numbers were quite small.

⁸ The Government currently has under its protection an area 500 x 400 meters at the widest and longest points. This includes the main square and areas to the south and west, both along the main north-south boulevard and off the main road to the west.

(in particular the persistent volcanic and earthquake activity associated with Volcano Momotombo and poor water supply).⁹ The assumption has been that 1610 marks not only the shift of the capital's location but also the complete abandonment of the original town. This is not an unreasonable assumption, if earthquakes destroyed Leon Viejo. But no geomorphological or archaeological evidence has been uncovered to demonstrate the cause of the town's abandonment, in large part because no one has looked for it yet.

It is possible, however, that some Spaniards, especially those who held land in the vicinity or did not have government posts, remained at Leon Viejo after 1610. Documents from the new Leon demonstrate a significant depopulation of the capital at the new location as evidenced by many vecinos not building houses in the new location (Newson 1987:130). As capital, the town's major source of income and employment was the administrative role it played, which may have made the move less desirable for those not participating in those activities (Newson 1987:127).¹⁰ Furthermore, as Leon Viejo lost its status as capital it would have become an area of land grants for Spanish estates, and the timing of Leon Viejo's abandonment as

⁹ Arguello states that the closest rivers were more than 3 km away and that wells were hard to maintain (1969:8).

¹⁰ By 1539 Granada appears to have become the dominant port for trade with Panama and Cartagena, making it a wealthier city than Leon for most of the sixteenth century (Stanislawski 1983:135). Newson argues that Leon Viejo had always been economically inferior to Granada, but maintained the administrative functions of capital even after 1610 when the population decreased with the move to the new location (1987:128). If the population of new Leon was smaller than that of Leon Viejo we should at least consider the possibility that some people remained.

capital coincided with the trend towards more rural living for many Spanish landholders. By the early 17th century, urban populations were moving out to rural estates as agriculture and animal husbandry were being developed commercially since they offered a better potential for wealth than mining (Newson 1987:130-131).

Whatever the discomforts of the physical environment, the area around Leon Viejo had fertile land appropriate for agriculture and animal herding, as evidenced by the large 20th century farms some of which remain today.

Documents provide little information about what became of Leon Viejo in the period after 1610. Arguello cites correspondence of a visitor to the old site in 1613, who describes the ruins of the Bishop's house and the transport of building materials from the old city to the new location (Arguello 1969: 173 quoting from Vásquez).¹¹ Such reuse of building materials is plausible given the poor economy and shortage of laborers and materials at the time. Such reuse also has significant implications for archaeology in the area since large quantities of building material could have been removed as the old town was left in ruins. From 1610 through the entire colonial period and beyond, the role of the town and the area surrounding Leon Viejo is poorly understood. It has received little consideration since the documents provide a terminal date for the life of the town of 1610.

¹¹ If a visitor witnessed the removal of old building materials in 1613, then we should consider that the abandonment of Leon Viejo was a slow process in real time, even if not in archaeological time.

The Re-Discovery Of Leon Viejo

At some point in the colonial or post-colonial period, the town of Leon Viejo was completely abandoned. For a period of time Leon Viejo sat buried with no recognition of the ruins beneath. Doctor Carlos Tunnerman, a prominent Nicaraguan author and historian, is credited with the discovery of the ruins in 1967. After perhaps 300 years of neglect, Leon Viejo emerged as a major archaeological site in the modern country of Nicaragua. It is possible that today, as an archaeological ruin, Leon Viejo has as much, if not more, importance than it did as a sixteenth century fledgling capital.

The archaeological history of Leon Viejo, therefore, begins with Carlos Tunnerman's discovery in the late 1960's. In the past four decades there has been sporadic work at the site, overwhelmingly focused on Spanish architecture. Tunnerman's excavations in 1967 and 1969-70, under the auspices of the Universidad Nacional Autonoma de Nicaragua, were aimed at exposing architecture in order to confirm the existence and identity of Leon Viejo. The excavations, described briefly in Arguello's *Historia de Leon Viejo* (1969:138-141), uncovered the main cathedral and parts of at least a dozen surrounding buildings. These excavations were not systematic by modern standards and there was little collection of artifacts. However, the excavations, in conjunction with documents describing its general location, conclusively demonstrated the presence of an early Spanish site identified as Leon Viejo through the discovery of the cathedral and central plaza.

There were four projects at the site in the 1980's. The first, a small-scale project by Oscar Ortega, excavated a single house. This would have offered a sample from a single household unit, comparable to the house I excavated. Unfortunately, the artifacts from this excavation appear to have been lost, along with records of the project (Blaisdell-Sloan 1999:34). In 1983, a Cuban archaeologist, Lourdes Domínguez, conducted what can be considered the first systematic excavations at Leon Viejo (Blaisdell-Sloan 1999:34). The locations of the twelve units, excavated within five different structures, are recorded, as are the systematic excavation methods that were used. Unfortunately, Domínguez never completed the analysis of the data collected, and some data were subsequently removed for further analysis, never to be returned to the storage facility.¹² Over time the collection sat in various bodegas, losing provenience information and gathering dust.

In 1985 Navarro led a large-scale surface survey of the area in and around Leon Viejo. Indigenous and Spanish finds were registered, and some artifacts were collected. Surface maps were made demarcating areas of both Spanish and indigenous artifact concentrations. Unfortunately, the scale of the maps is too large to allow us to return to specific sites (which by now have probably shifted anyway). The survey work, however, begins to establish the full extent of Leon Viejo beyond the protected ruins as well as general patterns of surrounding indigenous settlements.

¹² As is typical with missing artifacts, the porcelains and other rare ceramics were removed and remain missing.

These surveys were not followed up with subsurface testing, so the findings are considered preliminary.

A Dominican archaeologist, Elipidio Ortega, conducted the final excavation of the 1980s to recover samples of material culture for analysis (Ortega et. al. 1988: introduction). This explicit goal resulted in screening and careful collection of material culture. The excavations, which included 13 units across the site, provide the best-preserved collection of contextual material culture from within the protected ruins. The excavations focused on buildings that had been identified and excavated previously, some of which had been re-buried in the 1982 floods. This project also conducted surveys of areas beyond the limits of the protected ruins in order to establish the continuation of Leon Viejo beyond the area the Government held in its protection.

By 1995, when I began my doctoral research, there had been no significant excavations for almost a decade. The Government had turned its focus to the preservation of the excavated buildings and the establishment of Leon Viejo as a tourist site for nationals and foreigners. Conservation has been an uphill battle because of the environmental conditions of the area. Some of the excavated buildings inundated in 1982 were uncovered again, while others were left buried until sufficient funds could be secured to preserve the architecture properly. Another major setback was suffered in 1998 when Hurricane Mitch's rainfall severely damaged, and covered, some open structures throughout the site. The limited government funds available for

Leon Viejo have focused almost exclusively on conservation and increased accessibility for tourism.

Three factors stand out in examining the excavation history of Leon Viejo. First, most of the work has been initiated by foreigners. After Nicaragua's well-known historian, Carlos Tunnerman, identified the site, and his colleague, Arguello, pronounced it the birthplace of modern Nicaragua (Arguello 1969: introduction), foreigners have played a greater role in the site's exploration than Nicaraguans.¹³ This is in part due to the limited educational and financial opportunities afforded Nicaraguan scholars. But even when opportunities arise, I found Nicaraguan archaeologists largely complacent about the possibility of working at Leon Viejo.¹⁴ The lack of interest persists despite the wide acknowledgment of the site's importance.

Second, Leon Viejo is an active site whose formation is complex and still changing. The stratigraphic sequence can vary significantly from one point to the next due to the nature of the volcanics. Seasonal rains, periodic floods, and earthquake activity create as many challenges today as they did for the Spaniards who

¹³ The excavations of the 1980s were done under the Sandinista Government, whose connections with Cuba probably facilitated the Domínguez project and perhaps E. Ortega's. Whether the Sandinista Government encouraged, or simply permitted, these projects, it seems that there was an attempt at recovering a part of Nicaragua's national history during the communist regime.

¹⁴ My project was to have been collaborative with an archaeologist from the National Museum. Three weeks into my first season the archaeologist assigned to work with me claimed illness and declined to participate further in the project. His illness coincided with disagreements over compensation for his work from which he never seemed to recover.

decided to leave the area. Leon Viejo probably has suffered as much destruction since its rediscovery in 1967 as it did in the years around 1610. Much of what was originally uncovered has been lost indefinitely, such as burials that apparently surrounded the main cathedral and which were visible until the 1982 floods. The mud, over a meter deep in some areas, damaged the cathedral. Looting followed, and when re-excavations of the cathedral were complete, the burials were lost. Along with the constant pounding Mother Nature delivers to the site, looting remains a threat to both building materials and artifacts alike, now that the site is more widely recognized.

Finally, the excavation history in combination with environmental factors has created a very complicated archaeological site. Some areas once excavated are now buried, while others have been re-excavated. Varying levels of flood deposits and volcanics create a complex landscape. The most unfortunate complication -- because it was avoidable -- is that the back dirt from all previous excavations has been re-deposited in unknown parts of the site. This has compromised the stratigraphy significantly, especially since some excavations did not screen for material artifacts. The net result of these complications is a loss of context that can never be recovered. Future work within the ruins will need to address these challenges in order to minimize further confusion and maximize the use of recovered materials.

In 1999, Blaisdell-Sloan made a significant contribution towards halting the loss of information from previous excavations. Blaisdell-Sloan recovered the

materials from previous excavations that were disintegrating in storage. She classified all artifacts with proveniences and assessed the loss of materials due to poor conditions, removal from storage without return, or disappearance. Combining the excavation reports from the previous projects, when they existed, with the artifacts that had proveniences, Blasidell-Sloan has offered the best contextual analysis that these excavations and artifacts could afford. This work sets the stage for future work within the ruins as well as providing an invaluable database for those of us interested in Leon Viejo.

The basic irony of Leon Viejo persists, however, into the new millennium. Despite the fact that the Government of Nicaragua and the people of the country would identify Leon Viejo as one of the most, if not the most important site in the country, it is the focus of research of foreigners more than nationals. In 2000, the Government of Nicaragua took steps towards the preservation of the site with its second request to UNESCO to declare Leon Viejo a World Heritage Site. This application was approved in the following year. This puts the site under the guardianship of UNESCO, meaning that all future work will be conducted only with UNESCO's permission and under its authority. World Heritage protection offers benefits such as funds for the protection and conservation of a site. While this request to UNESCO clearly demonstrates the Government's recognition of the importance of Leon Viejo, UNESCO protection furthers the control and participation by foreigners at the site that Nicaragua claims as its own birthplace.

Project Fundamentals: Excavation Goals And Methods

Based upon what I had learned from available historical documents from and about Leon Viejo and an acceptance of the condition of the current site, I developed intellectual questions and a variety of methods aimed at addressing my interests. I realized at the outset that there was a significant limitation to any work I could do at Leon Viejo. My interests, as well as my resources (both in time and money), meant that I could not do work that the site very much needed – no conservation, salvage or large-scale surveying. While my interests did not interfere with any future work in these areas, my research scope would not do much to address these issues. As a compromise, whenever possible, I introduced methods that would maximize preservation for the future as well as assist in developing approaches to future work at the site.

The goals of my excavations at Leon Viejo were twofold. First, to understand more about daily life at Leon Viejo, I wanted to recover artifacts in context from domestic buildings. This required identifying houses, never before excavated, for small scale, detailed excavations. Beyond enhancing our understanding of Leon Viejo itself, the hope was to provide data that would be comparable to excavations of domestic structures at other early colonial sites in order to integrate Leon Viejo into the broader larger picture of early Spanish colonial towns in the Americas.

Second, to better understand the overall town, I wanted to establish the architectural limits of Leon Viejo beyond the protected ruins. Despite the difficulty of identifying the extent of Leon Viejo in all directions, establishing the existence of further ruins wherever possible was important for two reasons. First, if we are to interpret excavations of single structures within Leon Viejo, we need a better view of the entire town's space and variation. Second, demonstrating the presence of significant additional ruins was paramount for the Office of Cultural Patrimony to pursue UNESCO World Heritage protection. The first application had been rejected, UNESCO said, largely because the area of protected ruins was small enough to raise questions about the extent of the whole site. These dual aims were best met by conducting exploration and excavations outside the limits of the protected ruins. Although the complexity of the excavation history for the protected ruins needs to be evaluated, such an endeavor is another project altogether.

Beyond the fences of the government-held land, archaeological research had been limited to survey work.¹⁵ The surveyed areas provided a general starting point for horizontal excavations that could be located in lands undisturbed by previous projects. The adjacent land south of the protected ruins offered the best opportunities for investigation. Some of the land had visible mounds flanking the continuation of

¹⁵ Unfortunately the survey work, which was part of the 1987 project directed by Elpidio Ortega, was written up in only the most general terms. Maps representing the surveyed areas and the results used such a large scale that the sites could not be re-located specifically. Although there is value to these surveys, they were not systematic enough to provide a specific starting point for any type of systematic sampling of the area.

the main north-south road, which departed from the central plaza of Leon Viejo and presumably transected the entire town. The hope was that by following evidence of buildings along the main road, we would be able to reach the limits of the town. Permission to work on this land was granted easily by a landowner who seemed unconcerned with the potential complications of land ownership endemic in the area.

Field Methods

A variety of methods were used simultaneously in order to acquire data and test the productivity of different approaches in the field. Interviews of landowners, surface survey, and mapping were the starting points for delineating how far the ruins continued beyond the Government fences. Vertical test pits began the process of subsurface examination to establish the stratigraphic sequence for further excavations. Trenches were used to test areas close to the ruins that had no surface indicators of buried ruins. Finally, horizontal excavations were conducted to recover samples of material culture from well-defined contexts.

Speaking with landowners was interesting, but ultimately not very productive. Few landowners had owned their lands for very long, and land use was primarily limited to the surface. Since there is a developed water supply for the area, few of them had dug wells. In addition, when they showed me their collection of artifacts, most landowners did not distinguish between those artifacts they found on their land and those found elsewhere in the area. The only artifacts that landowners consistently

provenienced were the statues and other small objects they pulled from the lake. Ultimately, the advice was always that I should go to the lake to look for ‘the good stuff’.

Mapping and survey yielded only slightly more productive results. The combination of surface ‘noise’ -- such as plow mounds, moved piles of debris (possibly ancient and modern), drainage canals, and field lines – and especially the accumulation of mud and volcanics hindered attempts to identify patterns in the landscape. Clearly visible mounds, such as the one chosen for excavation, could be mapped. And while it is important to record these, I did not believe that they were a full representation of the remains of Spanish occupation. Dr. Charles Frederick, a geomorphologist, spent two weeks at Leon Viejo developing a preliminary overview of the landscape. His conclusion was that it was one of the most complex sites he has seen, and that surface work alone could not give an accurate view of subsurface features (1997:personal communication). Surface mapping and survey would not be sufficient methods to form an overall understanding, or even a general view, of the area’s archaeology.

There was some land, close to the protected ruins, which I thought should have remains of Leon Viejo, but which showed at most only a light artifact scatter (which could have been deposited from flooding) and low, irregular mounds not typical of Spanish occupation. In fact, many areas showed no surface evidence of previous occupation at all. In order to establish whether these areas were devoid of

ruins or simply had them well buried, I chose to shovel-dig narrow trenches (50centimeters wide). In a field labeled Tomas Field B, within just a few meters of the protected ruins, we dug three trenches each 50 centimeters wide. These trenches were shovel-dug, marking areas of potential features and artifacts. These trenches proved to be an efficient means of testing for subsurface features. Within a matter of hours they revealed in situ Spanish brick architecture in a field that had no surface indicators of buried remains.

Two test pits, each two meters square, were dug in Tomas Field A. The first pit, labeled 2000, was located on the down slope of a roughly rectangular mound identified as a Spanish structure. The second test pit, unit 1000, was located off mound, in a low part of the same field 12 meters east of the first. This location was chosen to discover if any structures lay beneath and if not, what kind of remains might be found in non-structure areas. Both these units were close to where I assumed the major north-south road, beginning at the main square, would continue. In other words, the locations of both these test pits could be contextualized within the town even though there were no prior excavations in this field. It was my assumption at the start that houses and remains along the major north-south road would be part of active town life at Leon Viejo.

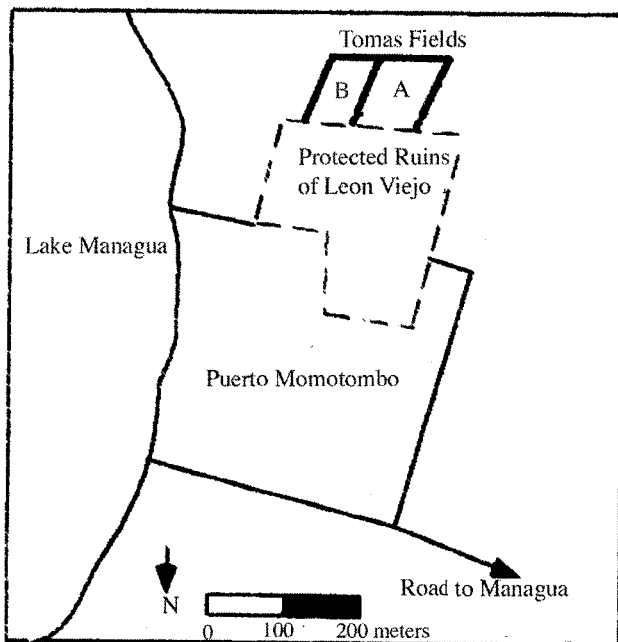


Figure 3: Schematic map of Leon Viejo with location Of Tomas' fields A and B

Both test pits were dug with the same set of methods. The levels were artificial, ten centimeters in depth, unless a natural level was detectable before the completion of the full depth. If a natural level continued for more than ten centimeters, it was also broken up into artificial levels of ten centimeters or less. Shovel scraping was the standard form of digging, unless features required trowel excavation. All dirt was screened through one-quarter inch mesh. Back dirt was piled around the test pits to refill the pits later. All artifacts were bagged by unit level and artifact type, double tagged, and tied for transport to our makeshift laboratory in the field. Botanical samples were taken at the start of every level in the same part of the unit and whenever features were identified. Field journals were kept and every

level was described in the field. Photographs were taken when there was something remarkable to record and periodically throughout the excavations to provide a general visual record. American students, and employees hired locally, participated with me in the excavating and screening. The students and I were responsible for the field notes.

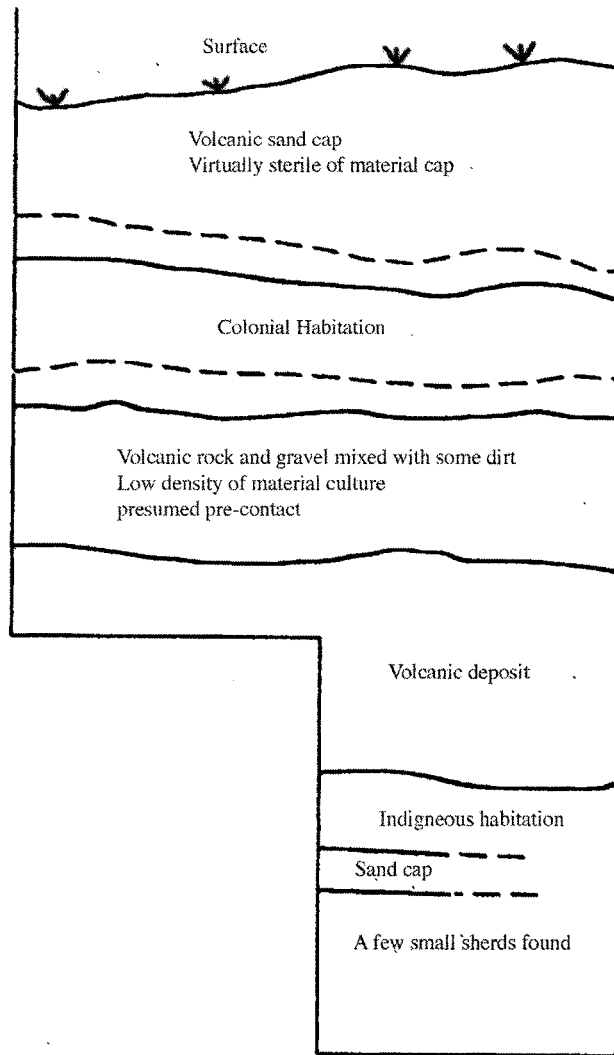


Figure 4: Profile from test pit 2000 in field Tomas A.

The test pits continued beneath the Spanish remains until a sterile or virtually sterile level had been dug. In both pits, once the density of artifacts substantially decreased, we decreased the size of the units. In both pits a solid volcanic level was reached which was both sterile and extremely compact. Excavations in pit 1000 ended at that level. In pit 2000, excavations continued in a one by one meter section into the volcanic level, to see both its depth and whether there were cultural remains in or beneath it. This was done with a long pick, only about ten centimeters a day. The chunks of fine, compact, volcanic sand were not screened but broken apart. These were sterile of cultural and any visible organic materials. Finally, at 330 centimeters below surface we ended excavations, having removed 125 centimeters of volcanic deposit, underneath which we discovered a new cultural level as evidenced by two sherds from the first 10 centimeters.

Horizontal excavations were located near test pit 2000 for three main reasons. First, this mound provided the opportunity to collect data from within the context of a Spanish household. The test pit revealed indications of architecture that, although not brick, were probably interior mud walls of the Spanish house. While test pit 1000 provided a good sample of Spanish materials, there was no indication of architecture. The location of unit 1000 combined with the fact that there was no visible surface mound suggested the unit was from an open area alongside the north-south road that had accumulated debris. Second, since there are not complete excavation records

from earlier projects, it was important that there was no indication of disturbance or prior excavation in the area around unit 2000. Finally, there was an intriguing puzzle regarding this mound, which would require excavations to try and solve.

The puzzle was at the south edge of the mound in which test pit 2000 was located. Off the side of the mound, there was a subtle, yet clearly visible round mound. If the round mound represented a contemporaneous feature with the Spanish structure, its form and function were a mystery. Early colonial towns do not generally have round mounds – right angles are the cornerstone of Spanish mounds with the possible exception of indigenous structures alongside the Spanish houses. While contemporaneous indigenous houses may have been round, they were not usually found alongside Spanish structures. Even the possibility that there was an indigenous hut side by side with a Spanish structure piqued enough curiosity in me to investigate further. The other possibility, which seemed even less likely, is that it was a round Spanish structure and was equally intriguing. The first task was to establish whether the round mound was associated temporally with the rectangular mound. The second task was to identify its structure and function. Therefore, horizontal excavations began two meters south of test pit 1000, along the down slope of the round mound, and then continued the next season into the center of the rectangular Spanish mound.

The field methods used for the horizontal excavations were basically the same as for the vertical test pits. A grid of two by two meter units was marked out, and

every other unit was opened. In the house mound we began with two units, labeled 3000 and 3100. The unexcavated units were to be opened only if we felt it necessary to understand the context of the excavations. Otherwise they would be left for future investigation. In these horizontal excavations, the top cap of volcanic sands was not screened since the test pits demonstrated they were virtually sterile of any material culture (there were occasional sherds of less than two centimeters, highly eroded). Screening commenced as soon as the volcanic dirt was mixed with the sandy loam characteristic of cultural remains. Otherwise, levels were dug in the same manner as in the test pits. Digging was by shovel or trowel, depending on the content of the level. In situ architectural remains were left intact. Botanical samples were taken from most levels, but instead of column sampling, they were taken from areas with the best chance of recovery as well as samples of every feature. Field notes, drawings, and photographs were taken in the same manner as for the test pits. The horizontal excavations removed the entire deposit of colonial ruins and continued until the top of the volcanic cap, identified in the test pits. Excavations ended when we reached the volcanic deposit identified in unit 2000, or when time necessitated we stop.

Stratigraphy And Chronology

Descriptions from excavation reports within the protected ruins provided a general expectation of the stratigraphic sequence we would find. But the variability

in the landscape warranted establishing a baseline closer to where we wanted to excavate. Thus we began with the two test pits. These test pits and subsequent horizontal excavations showed the same basic sequence. The sequence is generally as follows: The top layer is a deposit of wind blown volcanics mixed with sand, rocks, and mud. This is a modern deposit and in constant movement. This level varies greatly in depth depending on its location in relation to mounds. The change is abrupt to a brown sandy loam in which cultural deposits begin, including post-colonial fill, some in situ colonial remains, and probably some pre-colonial indigenous remains. The sandy loam ends abruptly at a compact, solid mass of volcanics, probably indicative of a large explosion of Volcano Momotombo. This deposit is over a meter in depth, under which we return to cultural layers that were found but not investigated in this project.

The remains of colonial habitation form a level of approximately 50 centimeters. In some instances we have a clear indication of the habitation level, such as the roof fall in unit 3000. In other pits the differentiation between post-occupation and in situ remains is harder to differentiate. Relating the units to one another, as well as evaluating artifacts, helped to create some distinctions. In the colonial habitation levels floors were not clearly visible, but a few probable living surfaces were identified.

Beneath the colonial habitation, artifacts continue, suggesting indigenous use of the area, but not necessarily occupation. This is consistent with the interpretation

of documents suggesting that the Spaniards founded Leon Viejo near to, but not on top of, an indigenous settlement (Newson 1987:48). The distinction between the colonial habitation and pre-contact levels is not obvious in terms of a change in dirt. It ultimately was made based upon the change in material culture. Positive evidence of Spanish occupation, such as presence of metal, porcelain, and glass, disappears at about two meters below surface. Since we did not find any certain floors, such as the brick ones found in a nearby house, we could not rely on them as a distinguishing marker.

The best place to start defining chronological divisions of the mound is with an obvious colonial period material such as metal. In the areas dug on the Spanish house mound, metal does not appear beneath levels 3017 and 3110, or two meters below the surface. These levels are the starting points for considering where pre-contact remains may begin. Other obvious colonial period markers are porcelain, majolica, and the distinctive wheel spun ceramics, in particular olive jars. Porcelain was not found beneath level 3016, while in level 3015 there was an impressive array of both majolica and porcelain sherds. Earthenware, such as the olive jars, was not found beneath level 3016.

Old World Material	Unit 3000	Unit 3100
Metal	66	9
Porcelain & majolica	33	0
Glass	9	0
Olive jar	46	0

Figure 5: Total Number of Old World artifacts found in units 3000 and 3100.

Certain ceramic styles possibly affiliated with the colonial period disappear beneath a certain level. In particular, Managua black-on-red and Managua Polychrome are not seen below levels 3015 and 3111. Although samples from this excavation are not sufficient to draw conclusions, archaeologists working in Pacific Nicaragua are beginning to define this decorative type as a colonial form. Decorative sherds as a category drop off beneath level 3112, suggesting a change in habitation activities. Since we see no evidence of indigenous habitation directly beneath the Spanish house, we would not expect to see the same quantity or types of ceramics. Therefore, subtle decreases in types, as well as a decrease in absolute numbers, do suggest a stratigraphic change around two meters below surface. The drop-off in the quantity of sherds is notable between levels 3016 and 3018 and from levels 3112 and 3113. Clearly at these depths there is a change in the use of this land, interpreted here as the difference between the Spanish occupation of the land and the pre-contact use.¹⁶

The quantity of lithic and obsidian materials lends another perspective to the chronology of the house mound units. If we were to look at just the absolute quantities of these materials, there would be no clear separation between colonial and pre-colonial levels. The quantity of lithic and obsidian materials remains high for another three levels beneath those that are presumed part of the colonial habitation

¹⁶ While there is some mention in documents of the earliest Spanish occupation using wood structures which were later rebuilt in brick (Arguello 1969:8), we were unable to see any such transition in the area of these excavations. It is questionable whether we could expect to see such a short-term occupation at all in the archaeological record, although it is plausible what we see under the Spanish house is this initial short-term occupation.

based upon ceramic remains -- through level 3019 and 3115. This continuity, despite the rapid drop-off in ceramics and the disappearance of all obvious Spanish markers, begs for an explanation. If these materials alone were considered diagnostic, we would interpret a continuation of Spanish habitation through level 3019.

Unit-level	Tools	Flakes	Debitage	Total Number
3013	1	0		2
3014		1		1
3015	2	6		8
3016	3	17	2	22
3017	8	10	2	20
3018	4	7		11
3019	2	12	2	16
3020	2	3	1	6
3108	2	1		3
3109	2	4		6
3110	2			2
3111	22	24	3	49
3112	14	18		32
3113	5	12		17
3114	7	17	1	25
3115	3	14	2	19

Figure 6: Obsidian remains by levels from units 3000 and 3100.

An explanation for the continuity could be that these lower levels are from the first stage of Spanish habitation, which was later rebuilt. We may be seeing remains of objects that were used either within the house and/or during the building process. The quantity of ceramics is small because the habitation period was brief before the rebuilding. There are no Spanish diagnostics because the valuable materials (such as porcelains and glass) were saved and put into the new houses. While this is possible, it does not seem that there is enough positive evidence to fully support this

interpretation, especially since obsidian and lithic are native materials with uses that predate the arrival of the Europeans.

Unit-Level	Flakes	Tools	Unworked & Debitage	Total
3014	2	0	0	2
3015	3	3	0	6
3016	1	1	0	2
3017	8	0	4	12
3018	4	0	0	4
3019	9	2	2	13
3020	2	0		2
3109	3	0	0	3
3110	2	1	0	3
3111	2	4	0	6
3112	8	8	3	19
3113	4	3	0	7
3114	7	1	1	9
3115	11	0	0	11

Figure 7: Lithic remains by levels from units 3000 and 3100

A more detailed look at these data suggests that the transition from colonial to pre-contact is perhaps visible in the forms and quantities of lithic material. Despite the difference in absolute numbers between the two household units in the colonial levels (due, I believe, to the different functions of the areas, which will be discussed later), the percentages of lithic flakes and tools in both units changes from clearly identified colonial levels to levels considered pre-contact based on ceramic finds. The percentage of flakes increases from level 3016 to level 3017 while the percentage of tools takes a notable drop in the same division. Again, these patterns are discernable based upon educated guesses as to how to divide the levels into cultural or temporal sets. But the differences in percentages are great enough that even if the

levels are off by a few centimeters, the generalizations are still applicable. Finally, in levels 3016 through 3020 and 3108 through 3115 the quantities and percentages are almost identical, suggesting that the differences between the two units visible in the colonial layers are no longer present.

Interestingly, obsidian does not help separate the chronological sequence as clearly. There is a slight increase in the percentage of tools and decrease in the percentage of flakes from the proposed pre-contact to colonial period levels. This is the opposite pattern from the lithic remains. While there is no reason for these two materials to follow the same pattern, the differences in obsidian quantities are not as great as with the lithic. In this instance a change of a few centimeters could make these differences disappear. For understanding temporal variation in the access and use of obsidian, the more important comparisons may be between the types and amount of obsidian found at the indigenous site compared to the colonial site, since there we will be looking at pre-contact habitation rather than fill underneath the colonial structure. The relative quantities of obsidian and lithic tools and flakes also is worth considering as an indicator of changes in resource procurement, perhaps trade patterns, and ultimately household habits.

The stratigraphic and chronological sequences established within Tomas Field A are consistent with descriptions from excavations in the protected ruins. There is a great variability of the depths of the different caps, in particular the top volcanic cap, which is expected. The greatest difference in the sequencing between the protected

ruins and our excavations was our attempt to make finer distinctions between fill and in situ remains, as well as to identify contexts such as floors, even of mud when possible, permitting for more detailed analysis and interpretation. These distinctions allow us to make more use of the data by identifying contexts within which to form interpretations.

Foundations For Interpretations

An understanding of the available history of Leon Viejo, the history of excavation, and the testing of methods for productive field work combined to provide the basis for my decisions about where to dig in the Spanish ruins. While my approach to interpretation of the data may vary from a project using theories in Processual archaeology, the field methods have not diverged significantly. However, the process of deciding where and how to dig was not so much a deductive process since I was not trying to test specific hypotheses. My methodology, instead, was flexible and adapted to the situation in the field as well as the different levels of interests that I chose to address. Ultimately the data collected here could be used in interpretations based in any theoretical position, and the manner in which they were collected supports future work.

CHAPTER FOUR:
INTERPRETATIONS OF A SPANISH HOUSEMOUND

Golden Rules

In any excavation one of the few certainties is that unforeseen challenges will interfere with even the most flexible plans. In our excavation the first major challenge came in the form of problems with our field vehicle. After it overheated rather suddenly in the field, my foreman found the only person in Puerto Momotombo who might be able to help. The town lacks a gas station and has only one place to put air in tires. The mechanic, who learned his trade while in the Sandinista army, told me that I had to ‘rectificar la culata.’ The dictionary I had did not provide the proper automotive translation for ‘culata’ (translated as buttocks) but I let them fix it anyway in hopes I was not being taken for a ride.

Shortly thereafter it was reported to me by local people in Puerto Momotombo that threats had been made to cause harm to my field project and me. Whether these threats were fictitious or real was impossible to determine, and ultimately irrelevant since the intent to scare me was the same either way. The US embassy insisted that I continue with some form of protection and offered me the services of an escort/bodyguard working at the embassy. Despite my fervent desire not to alienate myself further from the community where I was working, the arguments for this assistance was persuasive, and Mario joined the project. While no further threats

were voiced to me, Mario proved to be an invaluable mechanic and ethnographer. His talents as bodyguard were never put to the test.

When we finally figured out that the alternator was at the root of our truck problems, we were forced to return to Managua by bus one weekend to get the part and provisions. Public transportation in Nicaragua is a unique challenge. The train system that once traversed much of Pacific Nicaragua was, by all accounts, a fabulous way to travel. But it was abandoned during the Sandinista period, and even the tracks have been torn up for other purposes. Buses are now the mode of travel. Most buses that run in and around Managua are old American school buses that somehow found their way to Central America. Most have not been repainted, and there are few, if any, clues as to the routes the buses take. Getting from Leon Viejo to Managua by bus is certainly a routine trip, but I was glad to have Mario's company for this first journey.

The first leg of the trip was from Leon Viejo to La Paz Centro, where we waited for the city bus in front of a pharmacy. It was clear that it was not normal to see foreigners at this bus stop. As I sat waiting with the other American student with me that weekend, Mario wandered into the pharmacy for bus information. When a man approached me and struck up a conversation, I did not notice that Mario had returned and was hanging back to listen. It was not until we boarded the bus that Mario revealed he had heard the entire conversation.

The man was curious about finding two American women at this bus stop. I explained to him that we had come from Leon Viejo, and luckily, before I said more, he was eager to talk. He asked me if I had heard about the Americans digging for, and stealing, Spanish gold from Leon Viejo. Clearly it had not occurred to him that we could be those Americans, and rather than enlighten him I asked him what he had heard. His diatribe was fairly typical of those that I had heard during years working in Mexico – his absolute certainty that there was gold to be found, and his anger that foreigners would come in and steal precious metals that rightly belonged to his nation.

As we got on the bus, I was struck by the ironies of his comments. He was as convinced as the first Spanish settlers that there was great wealth in precious metals to be found in Nicaragua. The Spaniards thought it would come from the native lands, and this man believed it would be found in the Spanish ruins. It did not take long for the Spaniards to realize they would not get much wealth in the form of precious metals (they turned instead to the slave trade as a means of profit), but I suspect I could never convince the man at the bus stop. The notion that Americans were spiriting away Nicaraguan treasures entertained me, since local looting and the reluctance of Nicaraguan archaeologists to work at Leon Viejo are far greater detriments to the site's preservation than the presence of Americans.

But what struck me the most was that in my mind I *had* found very precious metal during our excavations of the Spanish house mound, although certainly not

gold. As luck would have it, we dug right into the house of the local blacksmith of Leon Viejo, and we had the slag, furnace remains, and a nice collection of metal objects to show for it. While these items would be junk to the man I spoke with, in my mind I had hit archaeological gold.

The Architecture Of The Blacksmith's House

Each of the three excavated areas within the Spanish house contained remains of different types of architecture and activities. First, the round mound adjacent to the actual house mound was defined as the remains of a furnace used for the smelting of metal, and possibly for glass making. Second, near to the center of the house mound itself, unit 3000 has remains of an interior room, as evidenced by the enormous quantity of roof shingles found 160 centimeters below surface (level 3105). Finally, two meters south of unit 3000 was unit 3100, which apparently was part of an open courtyard area within the house walls. In addition to the differences in architectural remains, the material artifacts found within the habitation levels reflect different household and professional activities.

We did not uncover any in situ brick architecture during this excavation, but we did not excavate near the perimeter of the building where we most likely would have found brick walls. This was an intentional choice since uncovering brick architecture would have created two major difficulties – conservation and looting. Since this area was not part of the protected ruins, and I was not funded for

conservation, any brick architecture I uncovered would have to be reburied. The greatest danger in reburial is that once local people, who cross this field daily, know about brick architecture their curiosity is piqued and the likelihood of looting increases. Therefore, since I could neither conserve nor protect any brick architecture, uncovering it did not seem worthwhile. The approximate limits of the building were determined based upon visual examination and measurements of the mound. None of the interior walls I excavated were of brick, as they are in other houses at Leon Viejo.

In terms of architecture, despite the fact that we excavated only a small portion of the house, we were able to make solid interpretations of the excavated areas. These interpretations were based upon the finds in the excavations as well as the houses previously excavated within the protected ruins. Despite the lack of contextual data from previously excavated houses, the excavated architecture provides examples of the variety of spaces within a house, and the general design used at Leon Viejo.

Architecture And Space In The Blacksmith's House

In unit 3000 we identified an interior room of the house. Level 3014 (150 centimeters below surface) had 127 pieces of tejas, or roof shingles. Level 3015 (160 centimeters below surface) had 872 pieces of tejas, varying in size -- in fact, this level had almost no dirt in it. The three levels above this roof fall had a small quantity of

sherds and other material culture. During excavation, I was at first worried that we had sunk a hole in a most unfruitful location. While evidence of architecture including typical Spanish building material (pumice and other rocks mixed with dirt), was present from level 3009, the material culture remains were low. By level 3014, I realized we had been in post-habitation fill, with wall fall and an intact piece of wall that remained above a sudden and complete roof collapse.

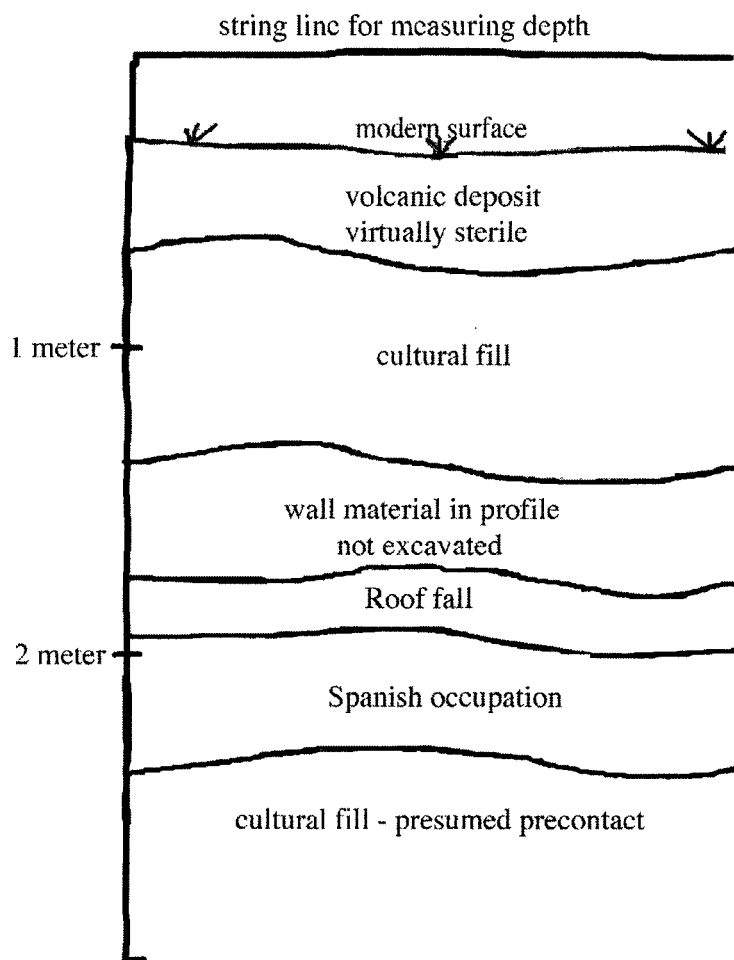


Figure 8: Stratigraphic profile of unit 3000
Tomas field A, Leon Viejo

The post-occupation fill that accumulated over the roof fall is a bit difficult to put in context. Most likely the materials found above the roof fall are from other parts of the house that fell in over time. But mixed with these are artifacts that probably came out of fallen construction material, which made use of local dirt that had artifacts already in it. Above the roof fall there is no strong indication of habitation. While a concentration of small mammal bones at 120 centimeters below surface (level 3010.1) suggests some activity, there is no evidence of any structures.

Underneath the roof fall there is approximately twenty centimeters (up to and probably including level 3017) that is clearly associated with the Spanish house, but unfortunately no concrete evidence of a floor. The first possibility this raises is that there was no interior brick floor in this part of the house, like the one seen in a nearby house in the ruins. It is unlikely that whatever floor existed was removed before the roof collapse, and given that the collapse was found in situ, post-destruction removal seems implausible. So, if there had been a brick floor, we would have found it. Brick floors are not present in the majority of excavated houses at Leon Viejo, so the absence of one in this house puts it in good company with a number of other prominent residences of the time.

The roof collapse and subsequent weathering probably degraded the dirt floor enough that what was left for us to discover was not clearly identifiable. In addition, given that this house had an occupation of up to 80 years, layers of floor may have accumulated over the generations. While the changes in dirt of levels 3016 and 3017

suggest the presence of floors, we do not have the advantage of a complete floor that would clearly distinguish Spanish occupation of this area from pre-contact use.¹ The volcanic gravel found at about 180 centimeters below surface could be interpreted as a preparation level for house construction. But in a test pit dug nearby, this same gravel was found and in the field interpreted as a natural level.

While there was no definite floor, we did identify a wall along the north side of this excavation unit. Between 90 centimeters and 100 centimeters below surface, the first evidence of an interior house wall appeared. The construction material was easily identifiable because its high quantity of pumice, other small stones, and sherds mixed together with dirt to form an impressively compact and durable wall. Although a few scattered bricks were found during excavation, there is no evidence that this wall was faced with bricks as seen in other structures at Leon Viejo. In the unit, this wall varied in thickness from eight to 15 centimeters thick, but clearly it continued into the profile and thus was thicker than we measured. Wall depths seen in excavated houses ranges in width, in part depending on whether it is brick faced or not, starting at 20 centimeters. The wall was left unexcavated, and by level 3018 (190 centimeters below surface) the profile on the north side of the unit had less pumice and rock, suggesting the wall did not go down to this depth.

In summary, unit 3000 offered clear evidence of an interior room sealed underneath a substantial roof fall. The roof fall sealed off between 20 to 30

¹ The dirt changed very slowly from a medium brown sandy loam to a darker and finer sandy loam.

centimeters of Spanish colonial remains that can be clearly associated with the Spanish occupation of the house prior to its destruction. While no floor was identifiable with certainty, certain architectural features, such as the wall and changes in dirt, suggest the approximate habitation layers of the house. Underneath the Spanish habitation we have approximately 30 centimeters before the significant volcanic cap begins, at 210 centimeters below surface. In these 30 centimeters we have no definite Spanish material culture, but we do have indigenous material culture without evidence of habitation. On top of the roof fall is 50 to 80 centimeters of post habitation fill with no evidence of habitation, but significant material culture that is associated with the house and discussed later in this chapter.

Two meters to the north, unit 3100 was located high up on the same house mound, well within the central part of the structure. However, excavations of this unit did not uncover any roof fall. The absence of roof material suggests this space was an open room within the main walls of the house. In the houses at Leon Viejo, and in many Spanish houses of the period, open courtyards typically were located within the main walls of the house, surrounded by roofed rooms. The courtyards served a range of functions, including cooking and animal shelter. I believe the excavated area in 3100 is an example of such courtyard space. The greatest challenge of this type of space is distinguishing between post-occupation fill and any in situ remains, since the unit has no roof fall to seal off one cultural level from the next.

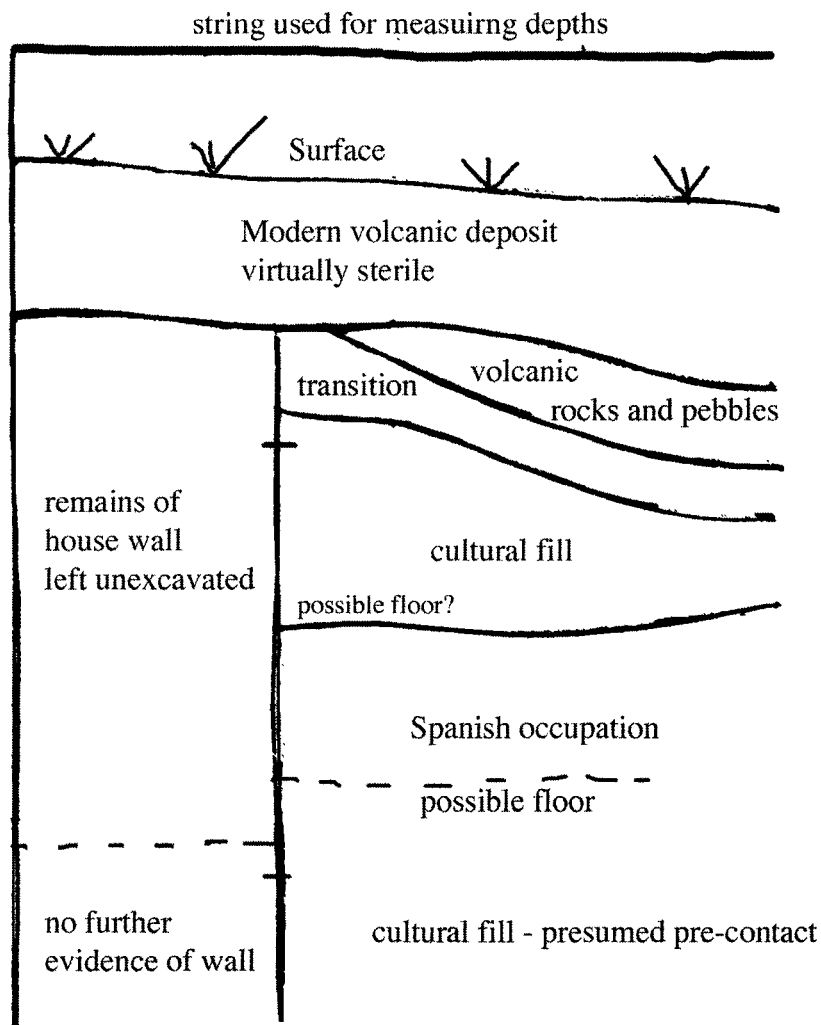


Figure 9: Stratigraphic profile of unit 3100
Tomas field A, Leon Viejo

Unit 3100 contained evidence of architecture, specifically a wall along the southern part of the unit. At approximately one meter below the surface, concentrations of pumice provided the first suggestion of a wall. The scattered pattern of this pumice across the unit was interpreted as wall fall since no definite

form was visible. By level 3107 (130 centimeters below surface), another concentrated scatter of pumice across the unit was interpreted as wall fall. This may be a depth at which the remaining wall, after prolonged exposure to the elements, began to decay. The intact wall identifiable along the south profile of the unit was left unexcavated. It may well connect to the wall found along the north profile of unit 3000.

At 137 centimeters below the surface, a hard natural level was discernable that could be the remains of a floor. However, if it is a floor, it is not likely to be associated with the primary habitation of the house since the roof fall of unit 3000 started at a depth of 150 centimeters below surface. Alternatively, it could have been the top of a destruction sequence that subsequently was left exposed to the elements and hardened over time. The pumice found on top of this hard level would then be wall fall that came down POST-abandonment.

At 145 centimeters below the surface there was a scattering of postholes across the level, which was a distinctive light brown compact sandy loam surface. This was the best candidate for a floor seen in the excavation of this structure. If this was post abandonment of the Spanish house, then it could be a temporary or short-term structure built by indigenous people. But based upon the stratigraphic depths and sequences, this is probably a floor associated with the primary use of the Spanish house. The stake holes could represent some attempt to create shelter for activities

conducted in the open courtyard of the house (such a cooking area or shelter for servants or animals).

Beneath this floor, evidence of Spanish occupation continues, creating some doubt as to the exact period of the floor with stake holes. At 150 centimeters below the surface the brown sandy loam changed to a hard, compact black surface, suggesting another floor. I interpreted the continuation of Spanish remains in this unit beneath 145 centimeters as the accumulation of living surfaces over the approximately 80-year lifespan of this house. Especially in open rooms where the natural elements would have a continuous effect, the accumulation of sand, mud, volcanics and other debris would create layers over time. The floor at 145 centimeters of depth may represent a specific rebuilding of a floor surface after a heavy rain or small volcanic burst from Momotombo that left a deposit of mud, which was then reworked into a new floor surface. Alternatively, it could be that we could only see two breaks in the sequence of slowly accumulating floors in this area.

Spanish occupation associated with the house continues to a depth of 160 centimeters below the surface. By 175 centimeters below the surface there is no longer any evidence of the wall along the south profile of the unit and there is no further diagnostic Spanish material culture. At 230 centimeters below the surface we reached the top of the volcanic deposit that marked the end of cultural remains for an extended depth, and excavations ceased.

In summary, this unit is clearly within the exterior walls of the house, but is an open area that was probably part of a large unroofed courtyard in the center of the house. The evidence of architecture is wall fall and eventually more concentrated evidence of actual wall along the south side of the excavation unit. There are three possible floors, but only two of these seem likely candidates for use during the occupation of the house prior to the destruction that can be documented in unit 3000 at 140 centimeters below the surface. While no seal, such as the roof fall, exists in this instance, the combination of architectural features of floors and walls, combined with the stratigraphic sequence of the nearby unit 3000, helps establish with some certainty the levels that can be analyzed as primary deposits from the life of the house.

At the southern limits of the house mound, there was a round mound visible at the surface, associated with the house at least in terms of proximity. This area was chosen for excavation because of the peculiar shape of the mound amidst the right angles typical of Spanish houses. Without excavation there would have been no way to determine whether this round mound was contemporaneous with the Spanish house, and if so, the nature of the structure. Specifically, because of my interest in the relationship between the local people and the Spaniards, I considered the possibility that we were looking at a native house mound adjoining a Spanish house. This possibility warranted investigation.

Ultimately, nine units, each two meters square, were opened in this area. The three initial units did not give us enough information for interpretation, so we continued to open units until we exposed enough to form an opinion about the area. Evidence of the colonial period began very close to the surface. In fact, in some units the cap of volcanic sand typical of this area was almost entirely absent. While the shape and location of the mound may account in part for the lack of accumulation, especially towards the top, it also seems likely that this area had been built up, perhaps on a platform, raising the floor level higher than in the house. While artifacts did suggest this mound was contemporaneous with the adjacent house, there was no evidence to suggest it was a native structure of any kind.

What we found was an odd array of walls made of the same materials used for the Spanish house walls – pumice, dirt, small artifacts, and small rocks. These walls suggested a circular formation, but they were too fragmentary to immediately accept such an unusual interpretation. It was only when we began to pull slag out from the dirt around the walls that we concluded this was a furnace used for the production of metal objects and possibly glass. The interpretation of this as a furnace and thus the house as that of the blacksmith was based primarily on the shape of this structure and the slag we found around the walls. This evidence provided us the unique opportunity to identify the function of this household in Leon Viejo based solely on the archaeological evidence, instead of relying on the vague historical documents that were used to identify houses within the protected ruins.

A furnace should have a large number of bricks forming the top of the structure, but only a couple of bricks were found in the excavations of this mound. Clearly the bricks forming the top of this furnace were removed at some point. Since there was no roof fall on top, these bricks would have been accessible, and they may have been specialized, and thus more desirable to transport to a new location where the furnace could be rebuilt. In 1613 father Vasquez observed that materials were taken from Leon Viejo to the town's new site for reuse (Arguello 1969:173). It is a reasonable hypothesis that the furnace bricks were among the materials transported to the new Leon. The skills of a blacksmith were considered necessary for early Spanish colonies (McEwan 1995:219).² It is reasonable to conclude, therefore, that this blacksmith made the move to new Leon despite the fact that many other residents did not. Alternatively, these bricks may have been left at the surface and removed at some later point for reuse by others.

The varying depths and shapes of the walls found suggested a couple of possible furnace formations. First, it is possible that we had found part of the round furnace itself as well as a retaining wall. Wall fragments 1 through 5 all suggested a circular formation, perhaps with a tunnel area in the middle. These walls were relatively shallow, ranging in depth from 10 to 20 centimeters. They were so close to the surface and so shallow that the erosion sometimes made it easier to identify the

² Interestingly, at Puerto Real documents specify that the blacksmith was not counted as a vecino (Hodges and Lyon 1995:86), which suggests he may not have been a landowner or at least not a significant one.

wall in the unit profile than during the actual digging. Walls 6 and 7, and maybe 8, were straight and at the perimeters of the circular formation. They were also the deepest of the walls, 70 centimeters below surface when we had to stop excavations. These perhaps were the foundation or retaining walls on top of which sat the furnace.

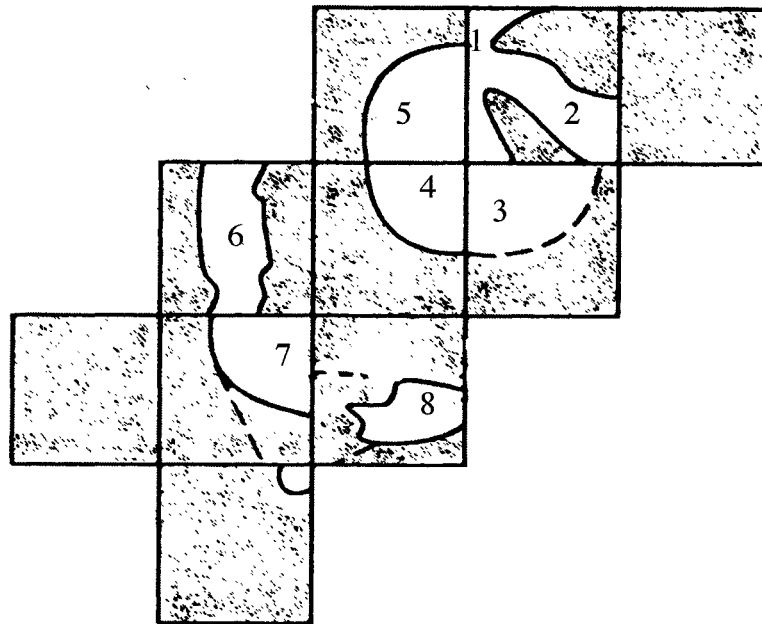


Figure 10: Remains of the furnace adjacent to the blacksmith's house

Another possibility was that we were looking at two different stages of furnace construction. Over the 80 years that Leon Viejo was inhabited, this furnace may have been rebuilt. The apparently unconnected but related walls may be evidence of such modification over time. During the lifespan of this capital, there

were undoubtedly harsh weather conditions that may have necessitated repairs or rebuilding. It may also be that the blacksmith rebuilt furnace, larger or smaller, for his workshop, in response to the needs of the residents of Leon Viejo.

Finally, it is also possible that we were looking at one single furnace that was so fragmentary in its remains that we were unable to recreate its original form in its entirety. While I am most secure with the interpretation of this as a furnace with a retaining wall, the basis for my interpretation is fragmentary enough to warrant including the other possibilities that I considered in the process.

In addition to the difficulty of interpreting the form of the walls, this furnace did not have any sealed layers that could separate fill from primary deposits. The removal of bricks, whether immediately after the collapse or much later, deprived the deposits of being sealed off. Without such protection, there was a combination of wall fall, post-use fill, and debris from its use life (such as the slag), mixed together in such a way as to preclude any contextual evaluation of the materials within and around the furnace from its lifespan. Ironically, while this structure was a pivotal part of contextualizing the adjacent house into the history of Leon Viejo, it offered the weakest contextual base for evaluation of its own content and uses.

In combination, the three areas discussed here -- the interior room, the courtyard area, and the furnace -- create one of the best views of life at Leon Viejo to date. Rather than relying on vague historical documents to provide tentative assignments of who lived in each house, here we have an identity based upon the

architecture and material culture. We may not know the name of the blacksmith, as we do with politicians and religious leaders.³ But we do know that his profession was critical to early Spanish towns, and now we know where he lived at Leon Viejo. The evidence from his house not only gives us the opportunity to determine his role in the community, but through analysis of the artifacts and comparisons with other houses (in terms of form, location and content), also gives us the tools to interpret his position in Leon Viejo society.

The Artifacts Of The Blacksmith's House

The architecture uncovered in the excavations suggests three distinct kinds of space. The next step is to see if the material culture suggests different functions or roles for each area. There are three main caveats to such analysis. First, we are not dealing with three completely analogous data sets. In this analysis, the artifacts found within the habitation levels, and not the post occupation fill, are most relevant. While the artifacts from the fill likely came from the household, they are no longer in their rooms of primary use. They can be incorporated into an analysis of the house as a whole, but not in room-by-room analysis used to determine function of space.

For this reason, the artifacts found in the excavation of the furnace area are not well suited for this analysis. The remnants of the furnace were very close to the

³ Stanislawski found mention of two metal/iron workers at Leon Viejo in Spanish records – Juan de Salamanca and Antonio Rodriguez. While they both are listed as holding small encomiendas, Rodriguez apparently did not work as a blacksmith (1983:121-2).

surface, and highly eroded. With the bricks that would have formed the dome of the furnace missing, there is no way of determining which artifacts fell into the furnace area and which were left there at the time of abandonment. Luckily, however, the furnace has a relatively obvious and distinct function. Although in situ artifacts would enhance our view of the workshop, the lack thereof does not prohibit incorporating the feature into my analysis.⁴

The second caveat is that if this house was inhabited for the entire duration of the town's life, there is potentially more than one living surface within these rooms. While an 80-year time frame is luxuriously short in archaeological time, it is significant in a small-scale contextual analysis, as there may be a mixing of artifacts from one period to the next. Although there is no clear evidence to suggest different building stages that would have used the spaces differently, there are also no clear distinctions in the habitation levels that would serve to separate the 80-year time frame. The best I can do is assume that the use of space remained the same throughout the life of the house and then make general comments about the rooms for the duration of its use.

Finally, the small database is further limited by the condition of the ceramics. The sherds are small and highly worn. In general, the erosion of the finishes was extensive. In many instances I can say only that we know the sherd was decorated,

⁴ For example, the obsidian found around the remains of the furnace raises the possibility that obsidian tools were used in the smelting process. This would be a wonderful example of the blending of technologies. It might also suggest native labor involved in smelting. But since we do not have a secure context for this obsidian, these possibilities remain more speculation than interpretation.

and even Nicaraguan archaeologists with more expertise than I could not provide more detail. While the general classifications are beneficial, we are limited mostly to a presence/absence analysis of categories rather than more detailed interpretations of style and other issues that would follow if we had better preservation.⁵

The Inside View: Under The Roof At The Blacksmith's House

In unit 3000, the relevant levels for this analysis are 3014 to 3016, and possibly 3017. At level 3013, a change in the dirt was noticed, so the level was dug as a natural level. The roof fall did not reveal itself until the next level. While 3014 may have some artifacts from post-occupation fill, the roof collapse dominated this level and therefore marks the top of the in situ remains. By 3017 there is no longer any definitive evidence of Spanish occupation – no metal, no porcelain, etc. The quantity of artifacts in general suggests that perhaps the habitation level ends in this excavation level. However, I have not included 3017 in the main part of this analysis since I do not want to mix indigenous pre-contact cultural levels into the analysis.

⁵ Ceramics of pre-contact Nicaragua are classified in a type-variety system that I followed whenever enough evidence remained to define a type. Since I wanted to extrapolate more information from the ceramics than the type-variety system allows, I used additional categories based upon finishes, wall thickness and any form of elaboration that stood out. The standard divisions of 'diagnostic' versus 'non-diagnostic' and 'decorated' versus 'plain' do not suit me well. Whether a sherd is diagnostic depends on what questions we are asking, and many decorated vessels have plain parts to them. Even more fundamental is that both these systems look at the ceramics only in terms of sherds, not the vessels from which they came. Although I have sherds to analyze, I try to examine them in a way that allows maximum flexibility to view them as vessels. Rather than a strict division between 'diagnostics' and 'non-diagnostics,' I prefer to see a continuum along which the sherds can be classified.

Without any obvious indicators of Spanish occupation, this level is left out of the habitation levels in this analysis.

These habitation levels provide an impressive array of Spanish artifacts, especially given that they are found all within a small part of one room in a private residence. Nineteen fragments of porcelain, fifteen fragments of majolica, and seven pieces of glass were among the most notable Spanish remains. These represent a minimum of a dozen Old World vessels and five glass objects. The first two categories definitely are import objects, either brought by original settlers or obtained from subsequent imports and trades.⁶ While some glass may have been produced locally, the glass artifacts found more likely also were imported. Forty-six fragments from wheel-made olive jars were also found within this room. Given the large size of these vessels, used primarily for transport and storage of goods such as oil and wine, this collection of sherds may only represent one jar. But even the presence of one olive jar within a Spanish household suggests access to imports: at least the vessel, and perhaps its original content.

This room also housed an impressive collection of metal objects, ranging from raw material to ornate jewelry. Half of the 52 metal objects were nails and spikes (fragments and whole). The assemblage of nails probably represents a mixture of those used in the construction of the house (presuming wood beams were used as part

⁶ Leon Viejo did not have easy access to European goods. It was not a port of entry or not on the major trading routes. Therefore, all European items, whether they came with the original settlers, or were brought in by later traders, were hard to come by and presumably maintained some value as scarce items.

of the roof support system, as well as wood doors and other architectural features), those from items of furniture (chairs, benches, tables), and perhaps some produced in the nearby furnace for sale.⁷

Old World Artifacts	Unit 3000	Unit 3100
Porcelain	19	0
Majolica	15	0
Glass	7	0
Metal	52	1
Olive jar	46	0

Figure 11: Old World Artifacts in occupation levels of Units 3000 and 3100

Sixteen metal pieces appear to be raw material ready for working – in particular, four small pieces of sheet metal. Seven pieces were decorative – pieces of jewelry ranging from a ring to an intact pendant. Finally four pieces were categorized as functional – keys and hatches. The overwhelming majority of these pieces were of iron, but there were also a few copper items and a few with some lead content. Even absent a comparison to the other houses of Leon Viejo, the sheer number and range of objects found within this one room is immediately impressive.

In addition to the objects of European origin, this room is filled with remnants of objects that were of local origin (or at the very least not European imports). In fact the vast majority of sherds found within this room probably were produced locally, either in native styles or in styles adapted to meet the needs of the Spanish lifestyle.

⁷ Both South (1988:56) and McEwan (1995:220-21) provide good classifications of nails by size and functions. Based upon their descriptions, the finds from the blacksmith's house seem to represent a wide variety of functions.

Unfortunately, it is hard to distinguish between those traditional native styles versus new styles adapted to meet Spanish needs because of the lack of data about native plainwares of this region and the significant erosion of the small sherds.

A total of 1119 sherds from this unit belong to the category of non-Spanish imports. The overwhelming majority (1075 or 96%) are basic plain sherds that show nothing distinct in either the decoration or construction (paste, finishes, wall thickness, etc.). Within this broad category there were 90 rims in a range of forms and sizes. Of the body sherds, 728 (76%) showed a simple slip in the same color as the profile of the sherd, 248 (23%) had slight burnishing on the self-slip, and nine had a distinctly orange, almost brick-like paste in the profile. Reconstruction of this collection would be very difficult due to the small size and significant erosion of the sherds, but the number of rims allows a calculation of a base line minimum number of vessels that were stored within the room. Based upon the variations of rim forms, clay tempers, and finishes, I believe the rims found represent at least 30 to 40 vessels.⁸ Finally, many of these sherds may have been part of vessels that were

⁸ Such estimates are highly speculative in this type of assemblage, and not only because of the poor condition of the sherds. Because we do not have the necessary data to provide a view of what vessel forms we might expect to see in such an assemblage, we lack the necessary criteria to sort sherds back into vessels. For example, many Spanish style vessels have small diameter rims (closed access) for relatively large vessels. So rim diameter is a poor indicator of vessel size. Other vessels may have relatively thin upper bodies and necks, but become increasingly thick as they go down towards the bottom. So the thickness of sherd walls may not be a good marker either. Finally, different parts of a vessel may be treated with different finishes. On a closed vessel, the neck and lip may be slipped on the interior and exterior, while the body is only finished on the exterior. The best I could do was look at the variety of rim forms and establish how many could belong to the same vessel and then trust my intuition for an estimate.

minimally but significantly decorated with simple painted bands or small additions of molding, such as were typical in the pre-contact Pacific traditions.⁹

Analytical Category	Number	% of Total
Plain Sherds	1075	96%
Distinct Finishes	31	3%
	23 Black Burnished	
	2 Red Slip	
	6 Fine wares	
Decorated	13	1%
	1 Managua Polychrome	
	2 Vaillejo Polychrome	
	3 Banded bichrome	
	4 Leon Punteado	
	1 incised	
	1 molded attachment	
Total Number of Sherds	1119	

Figure 12: Unit 3000 Occupation Levels (3014-3016) Ceramic Sherds

There were a small number (31 or 3%) of sherds that had distinct finishes, setting them apart from the majority of sherds. Of these, 23 had a black burnish finish to the interior, exterior, or both. Two had a distinct red slip that, although seen in pre-Columbian times, is also a finish used in the Spanish tradition of the times. In terms of wall thickness (more than .4 centimeters) and paste (common inclusions), these two groups were not part of a fine ware assemblage. While not fine wares, these

⁹ Although most classification systems distinguish between ‘decorative’ and ‘utilitarian’ wares, I believe that there could have been considerable crossover between these scholarly categories. First, it is obvious that ‘decorative’ pieces served a function as material expressions of values. Second, just as in many households today, the most decorative items have practical functional uses in certain circumstances. And particularly in the context of native ceramics of Pacific Nicaragua, many utilitarian vessels were elaborated in simple but significant ways – further blurring the distinction between ‘decorative’ and ‘utilitarian’ vessels.

sherds could belong to elaborated vessels. Therefore, although their number is small, they were still classified separately from the most basic finishes of the majority of sherds. An additional six sherds were classified as plain fine ware based upon the quality of paste and finish (three had buff burnish and three had red burnish).

Only 13 sherds (roughly 1%) of the sherds found in these habitation levels could be classified in terms of distinct designs or finishes. Here, further classification does not necessarily mean decorated, or not functional. It simply means we had the opportunity to see more on them than on the majority of sherds in the assemblage. Of these 13 sherds, four are from various types of polychromes (one clearly is Managua Polychrome, two shows signs of Vaillejo decoration, and one is highly eroded but has scant remains of a few colors). These suggest at least two and up to four different polychrome vessels in the room. There were four sherds of the distinct form of vessel known as Leon Punteado, a type with a scored bottom, presumably used in food preparation. Three sherds were of relatively coarse paste with black horizontal bands painted on the exterior. This is a very common, simple elaboration seen on pre-Columbian vessels such as shallow bowls.¹⁰ Finally, one small sherd had an incised line and one piece had a small amount of molding applied to the exterior. Again, both of these decorative elements are common to a number of pre-Columbian types seen in Pacific Nicaragua. While only an insignificant percentage of sherds from this room

¹⁰ In my examination of the large private collection of whole vessels held by a family in Nicaragua, it became clear that even the most utilitarian, crudely made bowl may receive a few bands of color below the rim, on the interior, exterior or both. While these are decorated vessels strictly speaking they are of a very different genre than Managua or Vaillejo Polychromes.

could be classified, the variety is worthy of note since it spans a range of forms and finishes.

The overall array of ceramics found within this room is fascinating. It ranges from the finest European imports and native decorative types to the crudest indigenous utilitarian wares. While such a wide array of artifacts may be expected within an overall household assemblage, such a variety within a single room creates an interesting context for evaluation. Whether the room had a variety of functions, accounting for the variety in the material, or a single function that included this range of materials, is discussed later in the chapter.

Artifact Type	Lithic	Obsidian
Whole Tools	3	
Tool Fragments	1	5
Flakes	7	24
Debitage/Raw material	4	
Total Number of Pieces	15	31

Figure 13: Unit 3000 Occupation Levels Lithic and Obsidian Remains

In addition to the ceramics, the room had a notable amount of obsidian and lithic, two materials strongly linked to indigenous traditions. Among the 15 lithic and 31 obsidian fragments, there were three whole lithic tools, one lithic tool fragment, and five obsidian tool fragments. The remaining pieces were mostly flakes, some showing use and others appearing pristine. Two lithics looked like raw material that had not been worked. This collection of obsidian and lithics covers the range that we would see within a native household -- including intentionally designed tools,

incidental tools, and raw materials – all of which show signs of use. The evidence of use on many objects suggests they were functional tools in the household, complementing the assemblage of native utilitarian dishes found within the room. While it is possible these items were curated, common flakes seem unlikely objects for collection unless the material itself had high value.

If this room is considered a snapshot of life in the Spanish town of Leon Viejo, the view is of a life that integrates local and European traditions. The obvious markers of Spanish lifestyle are present in significant number, but local objects of daily life dilute them. While this mixture of traditions is not surprising to find within a Spanish house, it is remarkable to find it all within one room. And when compared to the adjacent courtyard space, the contrast is stark.

A View Of The Outside: The Courtyard

The excavation of unit 3100, two meters south and west of 3000, provides a very different view of life in the blacksmith's house. The relevant levels of excavation are 3109 through 3111, and maybe 3112. Level 3110 provides the last obvious marker of Spanish habitation, a metal object. But the evidence of architecture already discussed strongly suggests that Spanish habitation continues at least through level 3111. While ceramic density remains high below level 3111, by 3112 there is no longer any evidence of architecture. If Spanish occupation began beneath level 3112, it does not seem to be part of the same structural layout and is

thus excluded from this contextual analysis. In this context we are looking at three excavation levels (25 centimeters) of an open area that is clearly part of the same structure as the adjacent roofed room.

Obvious Spanish markers are much harder to come by here than in unit 3000. In fact, if I had only the artifact assemblage absent any context information, it would be tempting to interpret this as a contact period native assemblage. In the habitation levels of this space there were no fragments of porcelain, glass, majolica, or obvious wheel spun ceramics. In fact, there is just one artifact that is clearly demonstrative of the contact period: a part of an iron spike (from level 3110) perhaps a timber nail. This could have fallen from a beam at the time of destruction. The entire collection of metal from all levels of this unit includes only nine pieces, six of which were nails or spikes and three of which were unformed blobs of iron. In other words, there is no evidence of functional or decorative objects – metal or other material -- of Spanish origin in this area of the blacksmith's house.

Although lighter in density than the assemblage in unit 3000, the native ceramic assemblage is fascinating for its range of forms and styles.¹¹ Of 521 sherds recovered, the majority (415 or 79%) are basic plain sherds with no elaboration beyond a simple slip in the same color as the paste. Twenty-six of these were rims.

¹¹ It is important to consider that since the levels defined as habitation in unit 3100 were not sealed off as in unit 3000, there may have been mixing of post-occupation deposits in these levels. My assumption is that if this is the case, the artifacts that came in post-occupation were from other open areas of the house. So while we may have a contaminated sample in the strictest sense, overall it still represents activities of the open parts of the house.

An additional 21 (4%) had a brown burnish on the exterior and another 15 (3%) had a distinct reddish-orange paste. It is interesting to note here that the simplest sherds make up a smaller percentage of this assemblage than of the assemblage from the habitation levels of unit 3000.

Analytical Category	Numbers	% of Total
Plain Sherds	415	79%
Distinct Finishes	86	16%
	34 Black Burnish	
	15 Redware	
	22 Fine Black Burnish	
	15 Fine Brown Burnish	
Decorated	20	3.8%
	2 Managua Black-on-red	
	4 eroded polychromes	
	4 Castillo Esgrafiado	
	5 Leon Punteado	
	1 misc. incised	
	1 incensario fragment	
	3 molded attachments	
Total Sherds	521	

Figure 14: Unit 3100 Occupation levels (3109-3111) Ceramic Sherds

Among the sherds that could be further classified, 86 (16%) had distinct finishes that set them apart. The largest category was 34 sherds, not fine ware, with black burnish on the interior, exterior or both. There were an additional 22 sherds with black burnishing and walls under .4 centimeters in thickness, so they were defined as fine ware. Another 15 sherds were fine ware with a brown burnish finish. Finally, 15 sherds were slipped in red with varying amounts of burnishing applied to the finish.

There were 20 sherds that could be further classified in terms of specific types, whether decorative or functional. There were two rims from Managua black-on-red vessels, and another four that clearly had come from polychrome vessels (based upon remnant paint and distinct pastes) but were too eroded to classify. They were not, however part of the Managua polychrome tradition. Four rims were from Castillo Esgrafiado vessels and constituted at least two different vessels. There was an additional sherd with incised decoration too small to further classify. One fragment of an incensario was identified along with three sherds with applied molded elements (two of these were red ware, the other brown). Finally, five sherds from Leon Punteado demonstrate the presence of this functional vessel form. This is a combination of ceramic types that ranges from the most decorative (such as the polychromes) to the most functional (such as Leon Punteado), but all native in origin.

If I use the number of rims as the basis for estimating the number of vessels found in this area, my estimate would be in the mid-twenties (33 rims were found). Seven of the rims could be classified as coming from three decorative types (four Castillo Esgrafiado, two Managua Black on Red, and one highly eroded polychrome). These could represent anywhere from three to seven vessels. Based upon the total number of sherds and the density compared to the interior room, an estimate of twenty-some vessels may be high but is certainly plausible. Based upon the variety of rims and finishes between 20 to 25 vessels seem reasonable. Without further and

finer divisions of the plain sherds, better support for differing estimates is not available.

Artifact Type	Lithic	Obsidian
Whole Tools	1	1
Tool Fragments	4	25
Flakes	7	28
Debitage/Raw material		3
Total Number of Pieces	12	57

Figure 15: Unit 3100 Occupation levels Lithic and Obsidian Remains

In addition to the ceramics, there is a collection of lithic and obsidian materials in this open area of the house. There were 12 lithics recovered, five of which were tool fragments and seven of which were flakes. The obsidian collection had 57 pieces – a sizable collection given the relatively low density of ceramics. Given that the quantity of lithic is roughly equal to that in unit 3000 habitation levels, the obsidian assemblage is noteworthy. Almost half (26) of the obsidian pieces recovered were from tools (25 fragments of tools and one whole tool). The remaining 31 pieces were mostly flakes (28 flakes, one of which showed evidence of reworking) and three pieces of debitage. Clearly native tools played a big role in the activities of this area.

This outside area, like the interior room, provides a snapshot of Spanish life at Leon Viejo, albeit quite different from the first. But since this area comes from the same house as the first room discussed, we know that these are two snapshots of the same life – just from very different perspectives. This outdoor space was most likely used primarily by native labor for many of the daily necessities of the household such

as food preparation, animal care, and household upkeep. This area gives us a glimpse of the daily workings of a household at Leon Viejo, a household that based upon the contents of the interior room, we know had a degree of status and wealth.

The Contents Compared

Overall, the contents of both rooms reinforce the architectural differences found during excavation. These two separate data sets are consistent in suggesting that these two spaces had very different functions within the household. Combined, they provide a view that encompasses elements of the household from the most elegant to most basic elements. The architecture and contents of each room taken independently of other would provide a narrow view of overall activity. Ultimately, this illustrates that these two rooms together still provide only a partial view of the full variety seen within this home. But from these two areas we can construct views of different aspects of life in the blacksmith's house at Leon Viejo.

Based on just the material remains from the two areas excavated, absent the architecture, it is clear that they were quite different in terms of use of space and activities. The exterior room has a lower density of objects overall. It also has a narrower range of objects and an almost complete absence of those we would identify as clearly Spanish. This could be because activities in large courtyard spaces were more dispersed than in the relatively small interior rooms, or because during the collapse and subsequent abandonment, remains were more broadly dispersed in the

open area. If we assume that this excavated area was part of a much larger central courtyard – which is typical in these early Spanish houses – we have a small sample of some outdoor activities. The utilitarian ceramics found in the courtyard excavation could come from food service and preparation or perhaps just from a general work area for the household's labor. If we assume, and it is reasonable to do so, that native people provided the bulk of labor within Spanish houses, the courtyard area is likely where they worked (Newson 1987:100).

The presence of native labor also may be illustrated by the greater amount of obsidian found within the courtyard area compared to the interior room. Of the 58 obsidian pieces found in the relevant levels of unit 3100 (versus 31 in unit 3000), nearly half (26) were tools (versus five tools in unit 3000). Despite the fact that the overall density of artifacts is lower in the courtyard area, there is a lot more obsidian. Obsidian is a native material and a native tool. Many of the functions obsidian served for native people (cutting, scraping, and possibly decorative items), were fulfilled by metal for Spaniards. The large amount of obsidian and the absence of metal tools in this open area suggest that native work methods were dominant. Especially in the house of the blacksmith, who had access to metal tools, it is reasonable to assume that obsidian tools were used by native labor working in the house.

Interestingly, lithics do not provide an analogous data set to the obsidian in comparing these two contexts. Just about the same quantity of lithic material was found within the habitation levels of the two units (15 pieces in unit 3000 and 12 in

unit 3100), and the breakdown of tools and flakes is similar. The lack of a contextual distinction suggests that although obsidian and lithics could serve many of the same functions, their roles in this society were quite different. Perhaps this had to do with access to raw materials, the preferences of native laborers, or what the Spaniards deemed worth curating or controlling access to. But regardless of the reason, the roles of these two materials were clearly not the same within this household.

When interpreting the contents of the interior room, I can envision a number of different scenarios. Clearly this room housed valuables. Historical descriptions and later interpretations (Stanislawski 1983:46) indicate the no Spaniard at Leon Viejo had amassed so much wealth that a collection of a dozen or more imported vessels would be considered insignificant.¹² Whether this was a small or large collection compared to others at Leon Viejo is unclear due to the lack of specific contexts from excavations of other houses. But regardless of how the quantity of vessels compared to those owned by his neighbors, undoubtedly the collection had value to the blacksmith. If these were the only objects found within the room, it would be easy to interpret it as a place where he kept his valuables, perhaps to guard them or to show them to others.

But it is the combined assemblage of special imports, native polychromes, locally produced utilitarian ceramics and service dishes, along with lithics, obsidian,

¹² In *The Recovery of Meaning* Leone and Potter describe Old World artifacts in early contact settlements as “oddly impoverished, yet richly skewed European materials.” (1988: 4).

and both functional and decorative metal objects, all within this one small area, that makes the interpretations more complex. This room could be a basic storeroom where the full range of household goods was kept in a locked or at least closed room – a private part of the house.¹³ Within the room, the blacksmith may have kept objects the household used, and perhaps sold, of varying degrees of value. The variety of objects within this room, combined with the fragments of olive jar, which is considered a storage vessel, provides some support for this scenario. An interesting consideration in such a scenario is that items of wealth were not on display, but rather guarded and protected from others, perhaps from both native people and other Spaniards. In the relatively hostile social climate that seemed to characterize life at Leon Viejo (Werner 1996:personal communication), it is possible that items of value were better off guarded and out of sight than displayed. The real value of the special objects may have been less in the display value of his wealth than in the economic power they possessed when basic necessities of life, including socio-political leverage, were needed.¹⁴

At the opposite end of the spectrum of possible interpretations, this room could be viewed as a showroom – a public room - where the blacksmith demonstrated his wealth to others. The fine European and Asian imports, along with a few native

¹³ Maucy 1977:112 suggests that elite houses at St. Augustine had dedicated storage rooms.

¹⁴ I have wondered, however, whether the opposite might be true. In a town where basic subsistence needs were not taken for granted, maybe objects such as porcelain that had such status value at home, become meaningless since they cannot be used to buy what is not available.

polychromes, are items that would be appropriate for show. While the array of utilitarian wares in this room does not seem likely to impress people, display and status may have come through sheer quantity of material goods as well as from the presence of the finest wares. While European imports might have maintained their value in the world of Leon Viejo, they were placed within the new context of a new world economy that included native goods, including polychrome ceramics and stone tools.

Another way in which this room could have served a public function is as a business room where the blacksmith sold his goods.¹⁵ The utilitarian and decorative metal objects found in the room could be items for sale, or perhaps for barter. It is possible that the blacksmith received some of the objects in the room, such as porcelains and native polychromes, as exchange items for metal objects he made. But this would not be a good explanation for the large amount of utilitarian ware found in the space, unless these wares had trade value in the depressed economy of Leon Viejo.

A final option, and perhaps the most realistic one, is viewing this room as a basic, multi-function living room. The blacksmith lived daily life in this room – ate, conducted business, entertained guests, and spent time with family. In this scenario, this room is both public and private. The contents of this room reflect a variety of

¹⁵ Blaisdell-Sloan (2000:61) refers to the common practice of having storefronts within private houses in early colonial communities.

daily life activities – eating, entertaining, and perhaps practicing his profession as a blacksmith. This would account for the full variety of objects and would incorporate both the business and personal sides of life. Given the examples of fully excavated houses closer to the center of Leon Viejo, which only had three or four interior rooms, it is easy to envision such a multipurpose room. Without a better understanding of the overall architecture of the house, however, we cannot reach a conclusion as to whether this was a private or public room or a combination of the two.¹⁶

Regardless of the precise functions of the room, the combination of items raises a number of issues about life in this house. First, the combination of native and Spanish goods suggests the integration in lifestyle that had taken place at Leon Viejo. The mixture of metal, porcelain, and glass with native service and utilitarian wares demonstrates what is widely believed to have occurred in these fledgling towns in the Americas (Deagan 1983:233-4). The Spaniards maintained certain aspects of their lifestyle but had to adapt in fundamental ways to life in Pacific Nicaragua. The large amount of locally produced utilitarian ware suggests that everyday living was very much adapted to the local surroundings.

The few pieces of native polychromes, however, suggest that the integration extended beyond what was essential for daily survival. These are specialty items of

¹⁶ Deagan and Reitz suggest that many early colonial houses had multi-function areas that were used for dwelling, commercial, and even processing of goods (1995:282).

the local people and not part of the utilitarian assemblage. This raises the possibility that these native items were integrated into a value system of the Spaniards at Leon Viejo.¹⁷ Perhaps the blacksmith curated pieces of Vaillajo polychrome or Managua Black-on-red. Perhaps he acquired them as payment from other Spaniards, or from natives, for metal objects he made. Regardless of how they were acquired, in evaluating their place in the overall household assemblage, they seem more closely affiliated with the European imports than with the utilitarian wares, at least in terms of quantity. In terms of contexts, these native decorative types also were found in the exterior room, where no porcelain or glass was found. Finding these types in both contexts points out that they are not completely analogous to the Spanish luxury items, but fall somewhere in the middle of the spectrum instead.

Regardless the precise use of this interior room, there is little doubt that its role in the house was very different from that of the courtyard space. We have, therefore, the opportunity to view two different aspects of life at this house. If we combine this with the findings in workshop area used for metal production, we begin to form a good overview of the life of the blacksmith. We can see a glimpse of what he did, where he did it, where he lived, how he used areas of his house, and even who used areas of his house. Ultimately, despite the variety of possible of precise

¹⁷ This kind of assimilation of materials is most often presented in the context of natives absorbing European goods (Rogers 1990:3). In early colonial towns, and Leon Viejo is no exception, Spaniards absorbed a great deal of locally made items at least for functional purposes (South 1988:59; Deagan 1983:233-4). Deagan attributes the process of integrating native objects at the symbolic level in Spanish houses in part due to native labor and native wives (Deagan 1995:223, 452).

interpretations for these spaces, they provide us with a much more detailed view of life at Leon Viejo than was previously available using historical sources and data absent specific contexts.

Expanding The View: The Broader Household Assemblage

Moving beyond the habitation levels and the artifacts preserved within these specific well-defined contexts, we have the material culture of the upper levels. In all likelihood, the artifacts of the upper levels belong to this household, but these artifacts are not preserved within primary contexts such as where they were used or stored. The lack of specific contexts does not render these artifacts less valuable. Rather, it requires that they be treated within a different interpretive framework. These levels increase the total quantity and variety of artifacts, providing a broader household view that can add dimension to our understanding of the blacksmith's life. Incorporating these levels also creates a data set more analogous to those from previous excavations of houses at Leon Viejo – excavations that did not separate secondary deposits from primary ones, if indeed they found any of the latter. Therefore, at this level of analysis we will be able to integrate the blacksmith's house into available data on the Leon Viejo community.

This broader, household-level analysis raises two theoretical issues -- the importance of context in analysis and the potential for inconsistent interpretations. First, even though the data set is larger and more diverse when we consider the

household assemblage of the upper excavation levels, there is not the same potential for interpreting activities since we lack specific contexts. Just as the data set is broader, so are the interpretations we can offer based upon those data. Second, the use of two different types of data sets from one household may result in interpretations that are not consistent with each other, and perhaps even contradictory. I believe that inconsistencies, should they exist, do not need to be reconciled since the data sets are fundamentally different. Indeed, I believe it is important to consider how the two data sets offer different views of the house, to illustrate the potential variability in interpretation, rather than to reconcile the interpretations suggested by each of them.

The determination of which levels to include as fill associated with the house involved a number of criteria. First, the stratigraphy was considered – specifically, the nature of the dirt and where changes were detected. Second, the types and quantities of artifacts provide additional insight. Finally, in this process there is a bit of logical intuition that guides the decision.

I am assuming that in the fill levels there is a slow process of household erosion. While some artifacts could have rolled in from other sources during this process, the only possible place we can ascribe them to is the blacksmith's house. There was no evidence of flood deposits that would bring in significant quantities of artifacts from beyond this mound. So it seems reasonable to consider that the artifacts found within these levels came from within the limits of the house. This is

also the most analogous way to treat the data if we wish to compare them to the other excavations of Leon Viejo, which presumed an association between artifacts found and the structure they were found within.¹⁸

Above the roof fall in unit 3000, the levels defined as household fill are 3002 through 3013, or about 110 centimeters. The bottom of the household fill was easily determined by a change in dirt and the beginning of the roof fall at level 3014. The increase in artifacts that comes along with the roof fall poses the only ambiguity. In this analysis they are assigned to the room beneath since they are mixed in with the roof tiles, but it is possible that they were deposited post-destruction from other areas of the house. Defining the upper limit of the fill was not as easily accomplished. The first object of Spanish origin came in level 3002 but the first sign of architecture did not appear until 3009. Since the dirt was uniform from 3002 downward, the decision was to define the household fill at the uppermost limit possible – level 3002. While this approach increases the risk that there is some contamination from beyond the house mound at the upper levels, this approach is the most analogous to that used in

¹⁸ It is important to raise one caveat for the assemblage found within the fill levels – the issue of construction materials. Samples of Spanish walls were excavated in previous seasons to determine the content. Local dirt was mixed with pumice to form the durable, compact building material. Mixed in with the dirt were small sherds, undoubtedly present in the dirt collected for construction. These sherds logically are pre-contact since the dirt would have been taken from beneath the level of Spanish construction. Therefore, the assemblage of sherds, both decorated and plain, from level 3009 and above (from where the wall fall is first present) may be a mixture of ceramics from the house construction and house activities. There is no way to distinguish between these. The best option, therefore, no matter how imperfect, is to be aware of the mixture and continue cautiously. (We can look at types known to predate colonial period versus those known to be colonial but relatively few sherds could be divided this way, especially due to their small size).

the excavations of other houses at Leon Viejo, which made no stratigraphic distinctions once Spanish artifacts were found.¹⁹

The assemblage of artifacts from levels 3002 to 3013 includes a broad array of ceramics, but relatively few are of Spanish origin. The fill levels yielded no glass, only two pieces of majolica, no porcelain, six olive jar sherds, and 13 pieces of metal. The metal objects were scattered throughout the fill levels and not concentrated in any particular levels. This is a stark contrast to the 30 centimeters of in situ remains, below that contained seven pieces of glass, 33 pieces porcelain and majolica, and 53 pieces of metal. In other words, the fill levels do not offer a particularly strong assemblage of Spanish artifacts, and definitely not an array representative of the in situ remains below. If the fill levels were our only basis for our interpretation, this house would appear far more impoverished than is suggested by the finds within the room. This should be kept in mind when we consider the assemblages of other

¹⁹ Unifying these levels for the purpose of analysis, however, is not intended to suggest that they represent a single episode or event post occupation. From levels 3002 to 3013, three separate periods of accumulation can be identified. Between 3010 and 3013, the very low density of artifacts suggests a post abandonment period of accumulation with little habitation or land use. Once the building was destroyed and the interior rooms sealed, this area was abandoned for some time. Depending on the cause of the house destruction (earthquake, flood, etc), the accumulation of dirt for the * centimeters above could have taken place relatively quickly or over a longer time. Some of it could have been deposited during the destruction process. Whatever the time frame, however, dirt moved in and sealed the roof fall with the occupation debris below. At 3010, the concentration of bones and ceramics suggests a short-term use of the land – perhaps nothing more than a meal stop for travelers. Within the excavation unit there was no evidence of even a temporary structure (such as post holes), but the unit was small enough that such a structure associated with the feature could be beyond the excavation. It is also possible that at that point, the wall of the house was more intact, providing some shelter. In any event, at 3010, the surface was exposed long enough to be used as an activity surface. The remains associated with the feature of 3010, therefore, should not be considered part of the fill deriving from the household. Finally from 3009 to 3002, there was a slow accumulation of household debris as it eroded over time.

excavated houses in which only fill and refuse were found, rather than sealed remains such as were found under the roof fall in this excavation.

The ceramic assemblage from the fill levels of unit 3000 offers a wide variety of indigenous styles, but the majority of sherds are plain. The highest concentration of decorated sherds came from levels 3006 to 3010, with a notable drop-off from 3011 to 3013.²⁰ A total of 1572 sherds were found in the 110 centimeters of fill. Slightly more than half (814 or 51.78%) of these were basic, unelaborated sherds with either a self-slip or no slip at all and no indication of decoration. Another 707 (44.97%) had distinct slips or finishes, predominantly burnished finishes in black, brown, and red. Together these two categories make up the vast majority of sherds within the fill levels (96.75%).

The remaining 51 sherds had distinct elaboration, including special decorative styles and distinct vessel forms. They can be broken down into three broad categories. First, there are the highly elaborate types such as polychromes and special incised vessels. Second, there are those that have a minimal but distinct form of elaboration such as the bichromes and fine burnished wares. Finally there are those that are in distinct forms or have unusual marks from production.

²⁰ While most of the types came from levels other than the feature level of 3010, all the fine black burnished ware (six sherds) and incised red ware (one sherd) were found in 3010. This level had the highest concentration of decorated ceramics of any single level in the fill. However, the ceramics from the feature of 3010 should not be associated with the household fill since quite clearly it is some post-occupation event. Otherwise, there are no discernable distinctions for the scattering of decorated ceramics found within the fill.

Analytical Category	Numbers	% of Total
Plain Sherds	814	51.8%
Distinct Finishes	707	44.95%
Elaborated	51	3.2%
	2 Managua Black-on red	
	4 Managua Polychrome	
	1 Vaillejo	
	4 Eroded polychromes	
	2 Las Brisas	
	2 Sacasa	
	3 Castillo Esgrafiado	
	7 Misc. incised	
	6 Banded bichromes	
	9 Fine Burnish ware	
	4 Leon Punteado	
	3 molded attachments	
	4 Cloth Impressed	
Total Number of Sherds	1572	

Figure 16: Unit 3000 Fill levels (3002-3013) Ceramic sherds

In the first category there are two Managua black-on-red sherds and four Managua polychrome sherds. There was one sherd that had remnants of Vaillejo Polychrome, a highly elaborate indigenous style predating contact. Three additional sherds clearly came from polychrome vessels, based upon the quality of paste and the fine slips remaining, but the decoration was too far eroded to classify further. There are seven sherds that belong to well-documented decorative types that are seen in Pacific Nicaragua prior to contact. These include two in Las Brisas, two in Sacasa, and three in Castillo Esgrafiado. Additionally there are seven other sherds with incised decoration, but not enough remains to classify them further.

In the second category, there are six sherds from the broad category of bichrome vessels. These vessels are slipped in buff or red and have simple bands of

black or red on them. A lot of the plain sherds probably belong to these types of vessels since most of the body remains undecorated. Three sherds have molded attachments, common on indigenous vessels in Pacific Nicaragua prior to contact. Again, many of the plain sherds probably belong with these sherds to form vessels that were mostly plain but had small areas of elaboration. There are nine highly burnished sherds, six of which were black burnished and found in the vicinity of the bone concentrations in level 3010. In other words, these may belong not to the household fill, but instead to the activities associated with the feature. The other three are fine red burnished ware that could be from vessels produced specifically for Spanish demand, but these sherds are too small to determine vessel form.

There are eight sherds in the final category: four from Leon Punteado vessels, and four that have cloth impressions on the inside. While the significance of the second type is not known, it is a distinct production mark that may be worthy of further study. The four Leon Punteado sherds are of the common vessel form long predating contact, which presumably served a utilitarian function (grinding) as well as being a canvas for decorative expression.

Overall this assemblage, in terms of finishes and styles, is basically indistinguishable from what we might find in an indigenous assemblage at or prior to contact. The variety of decorated types found within the fill is broader than the assemblage found within the room below. This suggests that the overall household had a wider variety of indigenous decorated forms than found within the single room.

While this is not surprising, we must be cautious about how much we can extrapolate from the household fill levels or from the remains of a single room.

The assemblages of obsidian and lithic peak at levels 3006 to 3007 and diminish, along with the ceramics, after level 3010. There is a total of 26 pieces of lithics and 28 pieces of obsidian from the fill in this unit. There are three whole tools and two fragments of tools in the lithic assemblage, or 19.23% of the collection is from tools. Nineteen lithic flakes (73.07%), seven of which show signs of use, and two small bits that look unworked are the remaining pieces of lithic from the fill. Of the 28 pieces of obsidian, more than half come from tools (18 or 64.28%), and the other ten (35.71%) are flakes. The 18 pieces from tools are all blade fragments, ten from prismatic blades and the other eight from standard triangular form blades.

In unit 3100, the levels of habitation fill were not clearly separate in the stratigraphy, but there were limited choices of where to separate the cap. Habitation fill probably began immediately underneath the volcanic cap that covers the surface (level 3103), but definitely by level 3105. The first sign of architecture is part of a wall in unit 3103 and the first artifactual finds of Spanish origin, specifically brick and metal remains, were in level 3105. The transition from volcanic cap to fill seems gradual in this unit over the course of 20 centimeters, rather than being an abrupt switch. Volcanic sands permeate levels 3103 and 3104, and, although the dirt of the fill levels is present, the levels are virtually sterile of artifacts. But since the dirt of

the fill begins at 3103, I included the two upper levels, acknowledging that the impact is negligible since there are so few artifacts.

Artifact Type	Lithic	Obsidian
Whole Tools	3	0
Tool Fragments	2	18
Flakes	20	10
Debitage/Raw material	1	0
Total Number of Pieces	26	28

Figure 17: Unit 3000 Fill levels Lithic and Obsidian Remains

The bottom of the fill was defined at level 3108, a natural level that was dug exposing a compact black surface with mottles of dirt and a scattering of carbon. During excavation, this surface was interpreted as the destruction level of the house – as it coincided with the roof fall at 3015 – below which were more intact remains of the household. It is possible that the compact surface reached at the bottom of level 3108 was exposed for some time before the house eroded. But throughout the fill levels in this unit there is no evidence of any habitation or significant post-occupation use.

There were a total of 647 ceramic sherds from the levels of fill in unit 3100, which were predominantly unelaborated (82.84% or 536 sherds). Distinct finishes could be identified on 78 sherds (14.45%), and another 33 sherds had distinct decorations (5.1%). There were no sherds of porcelain, majolica, olive jars or other distinct vessels of European origin. In other words, the ceramic assemblage from the fill levels can be characterized as more indigenous than European. The sherds of distinct finishes could be classified mostly as those used in food preparation and

service. The majority of the sherds are burnished, black or red, on the inside, outside or both. Because of the small size of the sherds, it is impossible to tell whether the vessels are typical of indigenous traditions or are newer forms that were made to suit Spanish demand.

Analytical Category	Numbers	% of Total
Plain Sherds	536	82.84%
Distinct Finishes	78	14.45%
Elaborated	33	5.1%

- 5 Managua Polychrome
- 8 Eroded polychromes
- 1 Las Brisas
- 2 Castillo Esgrafiado
- 8 Fine Burnish ware
- 5 Leon Punteado
- 2 molded attachments
- 2 Cloth Impressed

Total Number of Sherds 647

Figure 18: Unit 3100 Fill levels (3103-3108) Ceramic sherds

Of the 33 decorated sherds, there were eight too far eroded to classify. Based upon scant evidence of paint and fine pastes, however, they were clearly from painted vessels. Of the remaining 25, 10 came from two types that illustrate the variety of ceramics in the household fill. Five sherds had the distinct type of decoration of Managua Polychrome. Another five were from vessels of Leon Punteado. The first vessel type is an ornamental indigenous type, which may be new to the colonial period. The latter is also an indigenous decorated type, but it also had a clear functional use for grinding, and is a style that began long before the Spanish

arrival in Pacific Nicaragua. Of the remaining 15 sherds, eight were from highly burnished vessels in black and red, and seven were from decorative types typical of indigenous ceramics of Pacific Nicaragua during the period prior to contact.

	Lithic	Obsidian
Whole Tools	1	0
Tool Fragments	0	13
Flakes	7	6
Debitage/Raw material	2	0
Total	10	19

Figure 19: Unit 3100 fill levels (3103-3108) lithic and obsidian remains

Only 10 lithics were found in the fill levels of unit 3100, all from levels 3104 to 3106. Seven of the remains were flakes, four of which showed evidence of use. Two small pieces looked like unworked raw material. From level 3106 there was one whole tool. There were 22 pieces of obsidian found in the same fill levels of unit 3100. Nearly half the pieces were flakes with evidence of use. Three pieces of debitage and one core suggest tool production. The remaining six pieces were all fragments of blade tools, four from prismatic and the other two from triangle blades. All of these blade fragments showed some use along the edges.

Comparing the fill from these two units ultimately tells us little. It is immediately clear that the fill levels do not provide insight into what may lie beneath. The higher density of ceramics in unit 3000 versus unit 3100 could be viewed as an indicator for what we would find below. Combined, the fill from both units provides some insight into the contents of the house, but the view is by no means

comprehensive. This collection best used is in comparison with the collections from other houses excavated at Leon Viejo.

The House In Context: The Blacksmith In His Neighborhood

It is easy to envision how important a blacksmith would have been to the Spaniards settling at Leon Viejo. Metallurgy was the one technology that they relied on for a variety of essential products that could not be produced using local know-how. Historical Spanish documents demonstrate the awareness of this important skill in early settlements. No matter how different from their own traditions, local know-how could provide basic necessities of life, such as food and labor. Metallurgy relied on the imported skills of a blacksmith. The lifestyle of the blacksmith, therefore, might reflect the indispensable service he provided to the people of Leon Viejo.

The location of the house suggests that the blacksmith established a prominent place in Leon Viejo. The house is on the east side of the main north-south road, within half a kilometer of the main square and cathedral. He lived next to a secondary church identified as the Iglesia de la Merced and close to buildings that are identified as housing the major administrative offices and prominent people of the town (even if the current identifications of buildings are suspect, these were clearly prominent buildings based on size and location). Within sight from the blacksmith's house is a fully excavated house identified as belonging to Gonzalo Cano, with preserved brick floors and underground water drainage.

On the other hand, we do not know what lies beyond the blacksmith's house except to say that surface indications suggest the presence of more houses for at least another 100 meters. So while the blacksmith did not live at the very edge of Leon Viejo, his house may have been on one of the outer blocks of the south side of town. And since the north side of town is largely lost under the modern town of Puerto Momotombo, it is hard to know how the town spread out around the main square. The south side of town could have been less desirable than the part of the town we cannot access.

Even absent these data, the proximity to the main square and the location on the major road suggests that the blacksmith's importance to the town was expressed through the location of his house. Whether he was offered this status or had to bargain for it we do not know, but it is known that not all early settlers were allotted property, and only a few, believed to be politicians and religious leaders, lived in the vicinity of the administrative and religious buildings of the town. It appears the blacksmith was among them.

While the location suggests prominence, the excavated building materials do not reinforce this perspective. My excavations did not uncover any brick architecture -- the basic building material of the houses at Leon Viejo.²¹ The hundreds of roof tiles in unit 3000 suggest that the structure was solid enough to

²¹ Bricks were used in the second phase of construction at Leon Viejo. The earliest phase of construction apparently relied on wood buildings until brick production provided materials for more permanent structures.

support a heavy roof, but that does not necessitate brick walls. The wall partially uncovered in unit 3000 was sealed by the roof fall, so if it had been faced with brick, we should have found more than the scatter of brick fragments in the unit. It would seem that this internal wall was of mud brick without a brick facing such as those seen in other parts of the ruins of Leon Viejo.²²

In my excavations, however, I intentionally avoided the perimeter of the mound where I would be most likely to find the exterior walls of the house – those that would be the best candidates for brick facing. If this house truly lacks bricks, it is an important statement about the materials and labor that the blacksmith was able to gather to build his house. In this circumstance, the prestige of his location would be mitigated by the building materials. It is also worth considering that since the furnace was no longer intact, there may have been 17th century removal of bricks from some areas to use in the construction of the new town. This would not explain the lack of brick on the internal wall already mentioned. In addition, we did not find any evidence of brick flooring such as seen at the house identified as Gonzalo Cano. So at the very least we can conclude that the architecture of the house was not the finest used in building houses at Leon Viejo.

²² Conservation projects at Leon Viejo have freely used materials found throughout the site wherever re-building was thought appropriate. While many walls had bricks intact there may be others where they were built up to preserve the mud brick that is exposed in many areas. There is no longer any way to determine the original condition at excavation of many areas that have been rebuilt with a variety of materials from the ruins. In other words, while brick walls certainly seem the norm at the site, there may have been those that were not covered in brick that were either overlooked in excavation or later faced with extra bricks.

The next perspective of the blacksmith's position in town is based upon comparing the contents of the house with collections from others houses at Leon Viejo. In 1998, the data from previous excavations were reanalyzed by an American graduate student, Kira Blaisdell-Sloan, in an attempt to synthesize a view of life at Leon Viejo. Her research, which was a salvage operation in many respects, combined available field reports with actual artifacts from well-defined excavation units. The result was the identification of eight clusters, each centering around a different building, most of which are exposed today. The clusters varied in number of units as well as in size and location around the mounds. When available, sherds were reanalyzed by Blaisdell-Sloan. In some circumstances, however, in particular in the case of Asian and Spanish imports, the artifacts could not be found, and the field reports were relied on for data quantities and descriptions.

The results presented by Blaisdell-Sloan provide valuable data for interpreting the position of the blacksmith relative to his neighbors. Of the eight clusters evaluated by Blaisdell-Sloan, five provide reasonable basis for comparison. These five are Household Clusters 1, 2, 3, 4 and 7. The precise location of most of the units in the clusters is not known, but general descriptions of their locations in relation to the buildings is given. Of the 17 total units, most are from areas around structures rather than within rooms. In many instances the excavations were done after buildings were cleared, so they were forced to dig outside the building or below the floors. Although a few floors were identified, the excavations for the most part

did not distinguish between fill and in situ remains. In many respects, therefore, the comparative contexts are not completely analogous to my excavations. Despite the imperfections in analogous data sets, however, these five clusters offer the best chance to contextualize the contents of the blacksmith's house.

The five clusters from Blaisdell-Sloan's work that provide useful comparison to the blacksmith's house are from structures believed to be primarily private dwellings, with the exception of cluster 3, which may have served an administrative function for the town.²³ Cluster 1 is called 'La Casa de Ana Jimenez', and is adjacent to the main cathedral. Cluster 2 is called 'Casa de los Espanoles' and is set back from the main north-south boulevard. Cluster 3, along the east side of the main road, is called the 'Casa de la Fundación' and as such is considered the Foundry for Leon Viejo, where all gold would have been brought and melted down. Cluster 4, 'Casa de Alonso Sillero,' is next to cluster 3 along the main road. Finally, cluster 7 comes from a house called Casa de Gonzalo Cano' on the west side of the main road. It is furthest of all the clusters from the main square. The house of cluster 7, however, is the one where intact brick floors and gutter systems are found.

²³ The names of the clusters are those given to the buildings by Nicaraguan archaeologists and historians working at the site. As previously mentioned, these identifications are tenuous at best and I use them as a point of reference since they are used in the literature. The basis for my interpretation of these as houses is based upon their design, which is typical of early colonial houses. However, as with the blacksmith's house, other residences may have served public purposes as well.

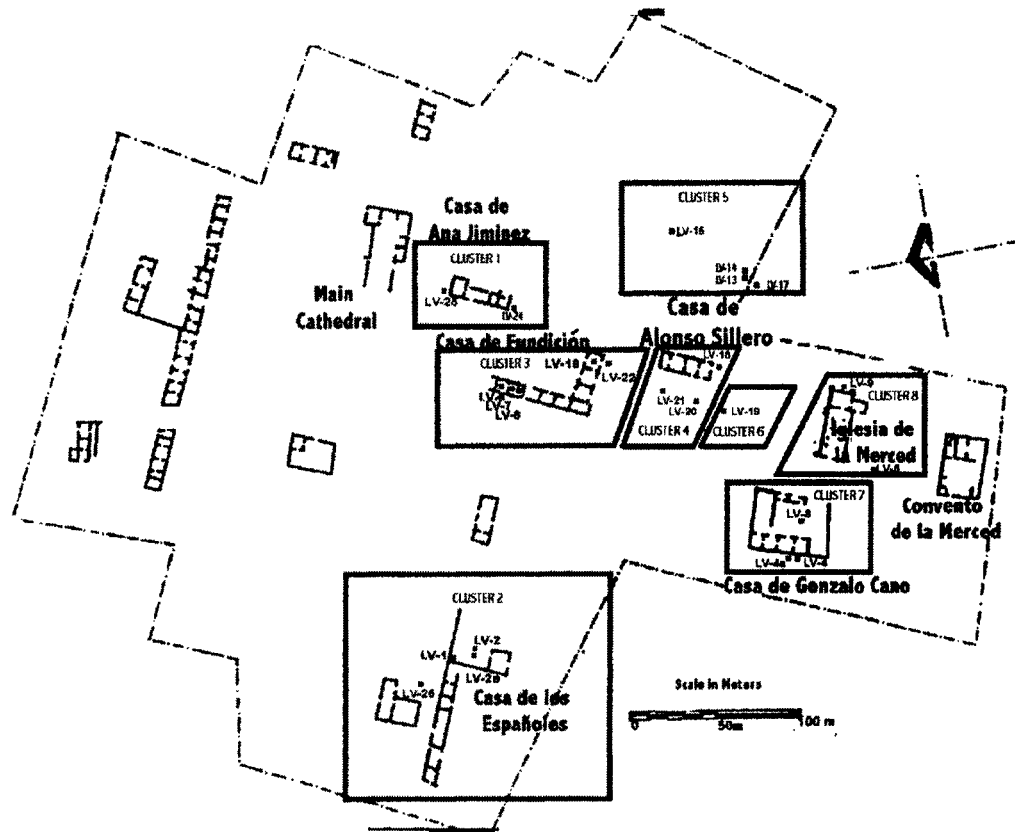


Figure 20: Household clusters of previous excavations (as recorded by Blaisdell-Sloan 1999).

Comparing the analysis of the five clusters to the finds in the blacksmith's house, it becomes evident that despite what I saw as an impressive concentration of porcelains and majolicas in a single room of the blacksmith's house, the overall picture of the house is not so impressive. In fact, with the exception of the units from cluster 3, the blacksmith's house has the lowest percentage of Old World ceramics of the group. Of all the ceramics Blaisdell-Sloan incorporated in her study, a total of 3.51% were of Old World traditions (1998:83), close to the percentage at the blacksmith's house. The difference is not so great as to declare him impoverished in

terms of Old World items, but certainly he was no better off. With both samples and numbers of artifacts so small, the differences are not significant enough to warrant further interpretation. But it is clear that based upon a general comparison, the blacksmith had materials similar to those in other houses near to the center of town. Rather than declare all these residents impoverished, however, we may need to alter our standards in light of the context of this early colonial town.²⁴

There are also similarities in the breakdown of Old World types between the Blaisdell-Sloan clusters and the blacksmith's house. At the blacksmith's house, olive jars comprise the majority of Old World ceramics at 71.42%. Of the Old World ceramics from Blaisdell-Sloan, olive jars are 65.09%.²⁵ Porcelains and Spanish table wares also appear in quite similar percentages in the blacksmith's house and the clusters of Blaisdell-Sloan. And although we see a slightly greater variety of indigenous wares at the blacksmith's house, the overall breakdowns of elaborated, distinct finishes and plain are similar enough to make the differences unremarkable. The only notable difference is that there was glass found in the blacksmith's house, while none is mentioned in the Blaisdell-Sloan study. I have observed other samples of materials from the preserved ruins that include some glass, but apparently this

²⁴ Thomas argues that in New World sites the simplistic categories of high and low status may not be productive because the contexts of the materials are so altered. He writes about Santa Catalina that, "It seems curious, that in light of such apparent poverty, that the archaeological record of Santa Catalina, presumably one of these destitute outposts, should contain such a rich inventory, in some cases, the very best examples of European 'art' in Spanish Florida." (1988:115).

²⁵ I am using the totals provided in Blaisdell-Sloan for all eight clusters she analyzed (1998:84).

glass was not from the excavations included in Blaisdell-Sloan's review. Metal is another important object that Blaisdell-Sloan was not able to analyze and I do not know whether this material was not found in excavations or available for later analysis.

Beyond the materials themselves, there are two significant issues of context that can be addressed despite the fact that the excavation contexts are not fully analogous. First, Blaisdell-Sloan identified units where there were no Old World ceramics, just like unit 3100 at the blacksmith's house. For example, in cluster 2 only one of the two units had any Old World ceramics, and in cluster 7 the unit that seems to come from the patio area lacked Old World ceramics. Yet in all units where Old World ceramics are found, the vast majority of the sherds are still of local origin. As with the blacksmith's house, we can speculate that Old World objects were kept in certain parts of the house, but these areas still reflect a strong influence of local tradition in the activities of daily life. There is no evidence of areas of pure Spanish tradition within houses.

Second, based on the descriptions and locations of the units, almost all of the units where Blaisdell-Sloan found Old World ceramic data were from middens and not sealed room contexts.²⁶ This creates a significant difference between the blacksmith's house and the clusters evaluated by Blaisdell-Sloan. The Old World ceramics from these clusters were found as refuse and not in the contexts of their use

²⁶ The notable exception is Cluster 4, which was from an uncleared house, so the location of the units in terms of the overall house architecture was not established.

in Leon Viejo, where as the blacksmith's assemblage came from a room presumably in use until the house was destroyed. It is easy to imagine that over the 80-year lifespan of Leon Viejo, plenty of Old World ceramics broke and were tossed out. So the question remains what the actual household contents of these houses were during the same lifespan as the blacksmith's house. While the only data I have to rely on for comparison suggest there is no great difference between the contents of the cluster houses and those of the blacksmith's house, this one great difference in context ultimately leaves the question unanswered.

Finally, Blaisdell-Sloan compares the materials from the clusters she analyzed to data available from four other early colonial sites. Her conclusion (1998:64) is that the "number of [Old World ceramics] is dramatically lower" than in the other early colonial sites, and she attributes this difference to low purchasing power and the limited access to imports at this Pacific colonial site (1988:74-76). In terms of numbers and percentages of Old World ceramics the addition of the blacksmith's house to the Blaisdell-Sloan data set does nothing to change the comparison between Leon Viejo and the other sites. Undeniably the excavations at Leon Viejo suggest the houses had a lower percentage of Old World ceramics than houses of other early colonial towns and the blacksmith's house appears to be no exception.

Finally, given the vastly different circumstances of Leon Viejo in terms of its location, access to imports, and ultimate success as an early colonial town,

applying the same standards of wealth and status as used for other towns may not be a meaningful approach. The context of this town's existence is so different from the coastal Caribbean towns (such as Puerto Real) that a much richer analysis will emerge if we consider those contexts in the process of interpretation. People at Leon Viejo did not have much, but they probably had as many strategies and methods to accumulate and demonstrate wealth within their means as any early capital. To conclude that Leon Viejo was impoverished over simplifies the complexities of the town socio-economic system, which seems to have functioned with less than most other of its contemporaneous towns.

Leon Viejo As Seen Through The Contents Of The Blacksmith's House

My general impression of Leon Viejo, based upon previously excavated ruins, available reports from those excavations, and historical accounts, was of a fledgling Spanish outpost inhabited by people whose unfulfilled aspirations of wealth and power led them from other parts of the Americas to Nicaragua in search of their own glory and gold. Lacking a known town plan from the 16th century, size estimates of Leon Viejo vary but it seems it was a small town although perhaps not unusual among its 16th century contemporaries. Certainly the archaeological evidence to date supports the view of a modest sized capital. But the lack of wealth and stature does not mean this town was stagnant or less vibrant than those that overshadowed it. And in many ways, it may be easier to gain insight into early colonial life at a place

such as Leon Viejo, since we are not distracted by displays of wealth and military might.

At the very least, sites such as Leon Viejo provide archaeological access to evidence of early colonial contact that has been too deeply buried or destroyed at many major centers. My excavations of a small portion of a house at Leon Viejo demonstrate the potential of data recovered in well-preserved contexts. My interpretation of this house as that of a blacksmith is based upon carefully established contexts and is the first time that a structure's function has been assigned at Leon Viejo based upon archaeological, rather than historical, data. It is a slow process and only slowly creates a database large enough to see patterns and issues of significance emerge. But without the process such interpretations of daily life would be impossible to reach on at all. And ultimately, even with a small amount of data, much can be learned about life at Leon Viejo.

PART III: NATIVE NEIGHBORS OF LEON VIEJO

CHAPTER 5:

SEARCHING FOR CONTACT IN THE INDIGENOUS COMMUNITY

Puerto Momotombo: A Door To The Past

For one of my seasons of fieldwork I took up residence in Puerto Momotombo. I found a four-room house with water and electricity that served as a field lab and home for four students and me. On occasion a few curious children from the school across the street would come to visit, but the only regular visitors were pigs that came to enjoy the puddles from artifact washing. Since we had no kitchen, we relied on the one local restaurant in town that grudgingly agreed to make breakfast for us at 6:30am. To the best of our ability we tried to be open and friendly guests in this obscure town, but few people greeted us with any warmth. Despite the awkwardness of our presence, living in Puerto Momotombo offered me much more than just a base camp close to our excavations. The town's history and modern condition provided an ethnohistorical example of what life might have been like at contact for the towns around Leon Viejo.

Puerto Momotombo is named after the austere volcano under which it lies. The town's name (in English it means 'door to Momotombo') implies that it is the portal through which people pass to get to the volcano. But in fact the main roads to Volcan Momotombo completely bypass the town. And in many respects, the town's

existence today is as much an enigma as the name is a misnomer. Established in the late 19th century, and having survived earthquakes, volcanic eruptions, revolution and political scandals, Puerto Momotombo endures even though its *raison d'être* seems long since lost.

The social and economic systems created by the Spaniards when Leon Viejo was still capital are largely responsible for Puerto Momotombo's existence until the Sandinista Revolution. Puerto Momotombo was a town amidst huge privately owned farms. These farms are legacies of land grants dating back to the colonial period. The earliest form of this labor system was the Spanish *encomienda* system that divided up the people of native towns to work on different farms. The towns were left intact but the fundamental purpose of the town became to provide labor to Spanish farms.

Prior to the Sandinista Revolution, the people of Puerto Momotombo worked on surrounding farms. The town itself had a certain amount of autonomy, since it was not controlled by a single landowner, and the people had a small but relatively stable income that sustained the town's internal economy. The recollections of people from Puerto Momotombo who worked under that system were almost always nostalgic. People told me that they had good homes in town even if they did not own the land. They knew they had work one day to the next, and one year to the next. If their children were sick, their employers provided medical care. Their children were given basic (and useful) education in classes provided by the landowners. And, most

importantly, people stressed they always had enough food to eat – for themselves and their families.

While I do not suppose that these recollections provide a complete or balanced view of life under the pre-revolutionary system, it is illuminating that so many people wanted to reminisce so fondly. Medical care, sufficient food, basic education, adequate housing, and employment are no longer taken for granted among a large portion of the people in Puerto Momotombo. In fact, the ruins of Leon Viejo have become the major employer of the area, hiring a mere dozen people a year as tour guides, groundskeepers, and guards. Sadly, the Government has found it necessary to hire a site manager from outside town, since the pressures on a local person for favors (such as jobs by family and friends) would be untenable.

Since the revolution and the disintegration of the post-colonial version of the *encomienda* system, the people of Puerto Momotombo have struggled to find a new means of existence, new purpose, and identity. Only one farm in the area has started up again. And although many of the town's people now own land, not many people reap benefits from their property. The freedoms touted by the Sandinistas have brought about few manifest benefits for the majority of people in Puerto Momotombo. Since much of the land was given to people by fleeing landowners, or were confiscated and redistributed by the Sandinistas during the Revolution, the current landholders have no deeds. Consequently they cannot use the land they live on as collateral for a small bank loan, or even sell the land to pursue other dreams.

Even retired soldiers who have been given large tracts of lands in Sandinista cooperatives at the edge of town find it hard to provide for their families. They admit they lack the skills to run even small farms, and the capital to invest in necessities such as fences to protect their small cattle herds. On the cooperative where I worked, they often threw out the daily milk from the cattle if the truck to buy it did not come, since they lacked transportation to take it to market or the knowledge to make fresh cheese from it.

It is hard to identify what, if anything, maintains a sense of community among the residents of Puerto Momotombo today, especially as more and more people leave the town for employment. There is no town government, police force, or any formal community organization. For all administrative needs, the town relies on La Paz Centro. If the police need to be called, people go to the store that has one of a few phones in town. A doctor comes a few mornings a week to triage people for hospitals in La Paz or Managua. The Catholic priest only comes to give mass one or two times a month.

While I cannot speculate on the future, today the town is under great strain and at a crossroads that will undoubtedly result in significant change, albeit slow. The material manifestations of this strain are visible in simple ways such as the disregard given to their homes, stores that open when the mood strikes, and the abandonment of many projects never finished. I also felt it in the attitude among the residents and depressed ethos that lingered in the streets. There is a feeling of

subdued, insecure spirits without dreams of a better tomorrow. I wonder, perhaps, whether this has lingered in this area since the arrival of the Spaniards over 500 years ago.

But amidst this generally depressed attitude and economy, there are people who seem to thrive on the challenges in Puerto Momotombo today. There is incredible ingenuity, dedication, and persistence among some residents of the town. They are the exception rather than the rule, but they are as much a part of the fabric of the town as those who seem to have given up.

I envision that the indigenous towns at contact were faced with many of the same challenges that people of Puerto Momotombo confront today and that the responses during contact were as varied as they are today. Native towns at contact had new situations thrust upon them, but they still had the capacity to choose how to respond. Some people found new avenues to pursue and others were weighed down by the burdens. As a community, however, the arrival of the Spanish and the demands that came with them undoubtedly challenged the identity, sense of purpose, and structure of the communities that became neighbors to Leon Viejo.

Goals Of Native Habitation Excavations Around Leon Viejo

I had intentionally begun my fieldwork with the Spanish ruins at Leon Viejo because it was the most accessible area for immediate excavation. I knew where to look for a site and I gained immediate access to the needed land. As I excavated the

blacksmith's house I simultaneously explored my options for excavation at indigenous areas. My intent at the conception of my project was to look for native habitation as close as possible to the ruins of Leon Viejo in hopes of identifying contact period indigenous sites. These sites would be used in two ways. First, data from the indigenous site would be compared to data from Leon Viejo to examine the relationship between the native community and the Spanish community during the existence of Leon Viejo. Second, data from the indigenous sites could be compared to pre-contact data from the same area in order to gain insight into the changes that affected the native people with the establishment of Leon Viejo. These goals, while basic to research at any contact native site, were unusually difficult to achieve at Leon Viejo for both intellectual and methodological reasons. Articulating these challenges is integral to understanding both the approach to the fieldwork and the interpretation of the collected data.

Methodological Challenges

At the outset, I knew finding colonial period native sites would be challenging in the active landscape of the area, for two main reasons. First, I knew I could not rely on surface remains to identify a native site, much less to determine its chronological period. Second, it could be challenging to identify a contact period site unless there were obvious markers, such as the presence of materials brought by the Spaniards (like metal or porcelain), and I could not presume that a native house at

contact would contain these items. In the best-case scenario, I would be able to find indigenous mounds that had long-term habitation beginning before contact and continuing into the contact period. In such an instance, there might be subtle indicators of change, even absent clear Spanish markers. But knowing I could not rely on this, I set modest goals for my work in the native area, even though it was an area of great interest to me.

I also realized at the outset that even if I found native contact sites, contextualizing them for comparisons would require certain stretches of the available data. Unless I found native habitation within the limits of Leon Viejo, any assumptions I made about the relationships between the town and the native site would be no more than speculation. While we know that the Spaniards chose Leon Viejo in part because of the proximity of local towns to be used as labor sources (Davila reported this in 1525), the context of contact between a native house and the town could only be glimpsed through the material data. Equally difficult would be to understand the changes in native life at contact, given the paucity of information about pre-contact indigenous communities and life in this area. While a mound with continuous habitation would offer a good specific context to interpret changes at contact, there would be little on which to base any extrapolations for the native communities of the region.

Given the potential limitations created by these obstacles, I was willing to settle for demonstrating the proximity of the native community to Leon Viejo and

providing some general insight into where and how they lived. More than that I was not willing to count on, given the limitations of time and money for this field project. I knew that substantive progress in our view of native life of this area, both before and during contact (and perhaps even after), would require many more seasons of work than I could afford at the time. However, given that my training and primary interests have been in native communities of the Americas, I was not willing to jettison this part of the project altogether.

Intellectual Challenges

The focus of Nicaraguan archaeology, both in terms of geography and intellectual questions, was the first hurdle I had to overcome as I began the indigenous part of my project. In order to elucidate how life changed for the native communities at contact, we need a clear picture of life during the period immediately prior to contact.¹ While I expected that in my excavations I would find some pre-contact sites, I also hoped to rely on our general knowledge of pre-contact communities in Pacific Nicaragua as a source for comparison. Unfortunately, despite the fact that Pacific Nicaragua is the most archaeologically researched part of the country, the region around Leon Viejo is not well researched or understood. In

¹ In Pacific Nicaragua the period prior to contact is commonly referred to as the Late Polychrome period (dated from 1350 to contact) based upon the variety of highly elaborated polychrome vessels that show up during these years.

general terms, all we do know suggests that this region differed significantly in a variety of ways from areas more extensively researched to the south.²

The majority of archaeological research in Pacific Nicaragua has been in the area defined as Gran Nicoya. This includes areas in and around Managua, the Rivas region around Lake Nicaragua, and the Gulf of Nicoya region further south, extending into modern Costa Rica. North of Managua, the amount of data collected and number of sites examined drop significantly. Consequently, while the period prior to contact can be characterized for the region, there is minimal data to rely upon for the indigenous towns that we know existed at contact around Leon Viejo. Currently, we have more information (and it is very little) on the towns of the area from Spanish documents than from archaeological research. In fact, the only reason we can even speculate on the names of the pre-contact towns is due to Spanish documentary sources (Lange et al 1992:7 citing Davila 1525). These sources provide little information on the life of the towns, except on occasion as it relates to interactions with the Spaniards.³

² The area north of Managua, including the area of Leon Viejo, has at times been considered the "...non-Greater Nicoya part of Pacific Nicaragua..." (Lange et al 1992:277). While these terms are problematic, as discussed in chapter 2, here they are useful to illustrate that the area around Leon Viejo is not considered part of the cultural trends that characterize sites further to the south. Although Gran Nicoya has been redefined over the years, it has never included this northern region in the same cultural sphere as southern Pacific Nicaragua.

³ For example, the tribute lists provide some idea of the requirements imposed upon the native communities in terms of crop production and animals. However, these documents were intended for the Crown to read and may well not reflect real expectations of the natives or what the natives actually

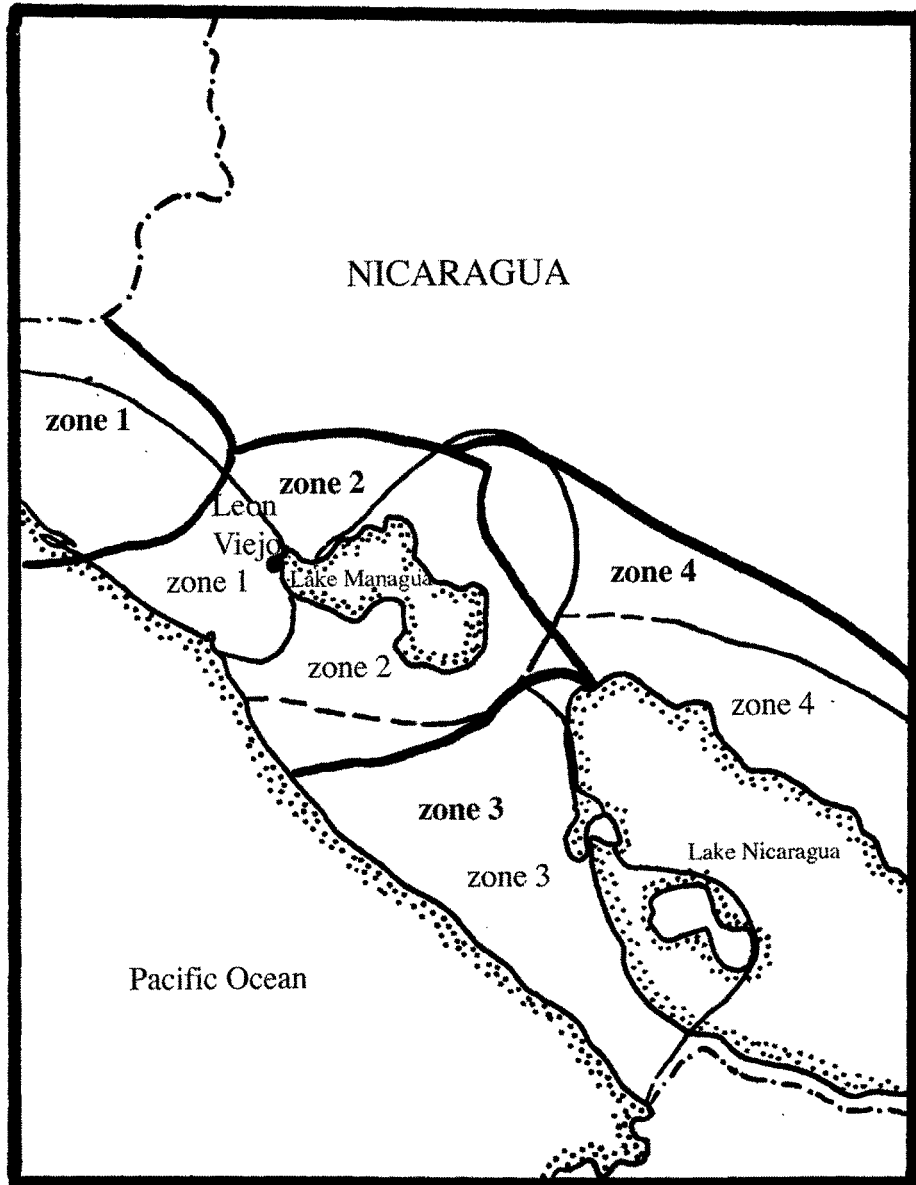


Figure 21: Map of Pacific Nicaragua showing the lithic and ceramic zones as defined by Lange et al. 1992 (bold delineates lithic zones).

were able to produce. Although informative, these documents offer a limited sphere of information upon which to base an understanding of the town.

The best archaeological information for this area comes from a synthesis of survey work that examined ceramics, lithic and obsidian remains (the latter two as one analytical category) (Lange et al. 1992). This survey attempted to define areas of regional variation based upon these three material types. The results shed light on the significant amount of regional variation that can be expected in Pacific Nicaragua. The area around Leon Viejo sits at the edge of two ceramic zones and centrally within a lithic zone established in the survey reports (Lange et al. 1992:61). This survey works suggests that variation is significant even within short distances and not parallel across material types. Even across a short distance of 20 kilometers, we might expect to find very different traditions in the material culture (Lange 1993:297). While this study draws boundaries for differences seen across the landscape, clearly these are fluid lines that should be open to changes as more data are available. The implication is that we should be hesitant to extrapolate from non-local data for regions less well researched.

This variation is critical to understanding the nature of community and socio-political structures in pre-Columbian Nicaragua. Investigating these differences in relation to each other may provide the key to seeing independent identities that the small communities maintained across the region. However, research in Nicaragua has persistently turned to external sources to explain both change and variation (Lange et al 1992:272-3). At this point, therefore, I cannot even discuss in general terms the significance of the variation across the landscape as it pertains to identity

and interaction.⁴ At the indigenous sites around Leon Viejo, where preliminary evidence suggests significant variation from the southern part of Pacific Nicaragua, we are thus unable to speculate as to the material objects that most likely express significant aspects of identity of these pre-contact communities.

Given these caveats, I still have a set of general expectations that can reasonably be applied to the area of Leon Viejo prior to contact. To start with, Spanish documents identify two native towns in the vicinity of Leon Viejo -- Imabite and Subtiaba (Newson 1987:173). In 1525, Davila reported that Leon Viejo was settled in the middle of the indigenous province of Imabite and that in the district of Leon Viejo there were 15,000 indigenous 'vecinos'(Newson 1987:48).⁵ The general consensus among scholars is that the region is believed to have had "...a substantial density of population on the Pacific side of the lakes at contact." (Lange et al 1992:13). This somewhat vague statement is a generalization based upon vastly

⁴ A good example of an ethnographically studied area with certain parallels is Highland New Guinea where multiple small tribes live across a landscape of repetitive ecological niches. The expression of identity and distinction among the tribes are central issues of scholarly work. Although the differences between the tribes are quite visible to the observer, even with the advantage of ethnographic data it is not easy to explain the reasons for the distinctions. This should serve as a cautionary note to those of us trying to address the same questions through more limited archaeological data.

⁵ I have not changed 'vecinos' here to the literal English translation of 'neighbors' since that is not what the Spaniards meant. For natives it may have meant heads of households, or total male adults. It is unclear. Also I assume that the terms 'province' and 'district' used by Davila are Spanish impositions that do not necessarily reflect indigenous socio-political organization.

different estimates arrived at by different scholars using different sources.⁶ It is not important here to debate these estimates, but rather to capture their essential vision: that towns around Leon Viejo, while small in scale compared to major urban centers of the Maya, Inca or Aztec, could have been substantial in their size and development for the region where they were located.

While up to this point we have no material remains of the towns surrounding Leon Viejo, we can create a general characterization of a period town based on both archaeological work and documents. The towns of the Late Polychrome period are characterized as small, independent but interrelating communities making use of the repetitive ecological niches found across the landscape. In particular, by the Late Polychrome period, settlements are believed to have been common along the lakeshores, where the communities would have exploited water resources for both food and travel. The western side of Lake Managua is generally considered culturally Chorotegan based upon oral histories and Spanish descriptions of spoken languages (Newson 1987: 27-28).⁷ The consensus in the literature is that the Chorotegans had a less structured, less stratified, less complex social order than the neighboring Nicarao

⁶ Many scholars have weighed in on this debate including Newson (1987), Stanislawski (1983), Fowler (1985) and Lange (1992, 1997), and offer more of a detailed discussion of the conclusions that I present here.

⁷ I am not altogether comfortable for the basis for such designations since they rely heavily on migration theories that I find unsatisfactory. But if we find significant material differences in this area, I am willing to consider that these people had a different cultural identity from their southern neighbors whether or not we identify them as Chorotegan.

to the south (Stanislowski 1983:6-7; Newson 1987:48-49). If this is true, we might expect less in terms of large-scale architecture for public or elite use. Spanish descriptions also suggest that agriculture was widely practiced and was supplemented with hunting, fishing, and gathering (Newson 1987: 49-50).

So in the towns outside of Leon Viejo we can expect habitation along the lakeshore, without large scale or monumental architecture. The material culture of the towns probably reflects both their own distinct identities as well as their participation in pan-regional traditions fostered through trade and exchange of goods and perhaps the movement of people. We know that while some raw materials were locally available, such as clay and volcanic rocks, others had to have arrived via trade, such as obsidian and many of the lithic materials. We should find evidence of agricultural practices and the cultivation of a few basic crops such as maize, squash and perhaps cotton. There also should be evidence of exploitation of fish and other marine resources as well as hunting of birds and small animals. The ways in which any of these generalized characterizations may manifest themselves materially remains the challenge, as well as identifying those aspects of life of which we have no general preconceived notions.

The Methods Of Indigenous Excavations: Finding The Sites

The approach I designed at the inception of the project was based upon my greatest hopes, tempered with the reality of the challenges discussed above. While

survey work from the 1980s suggested some areas with concentrations of indigenous artifacts, the lack of precision of the maps and the changes to the landscape since then made this information questionable at best as a starting point. Therefore, my hope was that in the process of my work at Leon Viejo I would be able to find the town's southern limit, beyond which I would begin my search for native habitation. The assumption here was that the closer to Leon Viejo I could find native habitation, the better chance I would have of linking it to the town. The plan was to find one or more areas of native habitation close to the town and sample a variety of these to find useful data.

Finding the limits of Leon Viejo was not as easy as I had hoped. I had expected that the large rectilinear brick buildings characteristic of Spanish architecture would stand out even in this landscape and that their disappearance would define the limits of Leon Viejo. However, as my sampling of low-lying areas demonstrated, brick architecture lurks beneath fields that seem devoid of Spanish remains. My initial hope -- that enough would be visible to permit some estimation of the town's limits and to provide guidance as to where to begin my search for native habitation -- was therefore in doubt.

As a base line, I had some information from the survey work completed by a Nicaraguan team in 1985-86 (Ortega et al 1988; Navarro 1985).⁸ This survey work

⁸ While I would have liked to use the artifacts collected from the survey work as a means to contextualize data I would collect from excavation, such surveys do not provide adequate temporal or spatial control to create useful contexts.

was an attempt to explore systematically the area in and around Leon Viejo. These surveys collected samples of artifacts from around Leon Viejo and identified areas with concentrated remains suggesting habitation. They attempted to define the limits of Leon Viejo and areas of indigenous habitation. Unfortunately, the criteria they used to identify sites and the limits of Leon Viejo were not, in my mind, accurate measures. The presence of brick architecture automatically warranted a designation of Spanish colonial, while concentrations of native artifacts on the surface were used to define potential indigenous sites (Navarro 1985:9-11). Based upon what I knew of the landscape and the post-abandonment shift of land use to farmsteads by Spaniards, I felt there was insufficient justification for the extended limits of Leon Viejo they suggested (Ortega 1988:52). While I would have pursued the survey data more thoroughly, a final obstacle made this impossible.

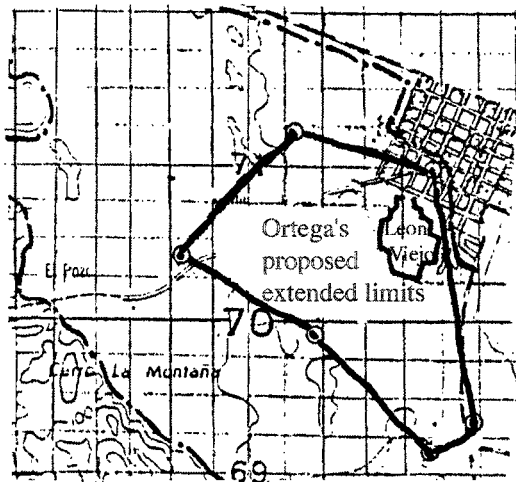


Figure 22: Map showing current limits of Leon Viejo and The extended limits proposed by Ortega (1988).

The natural and political landscape brought about the ultimate demise of this approach to the search for indigenous habitation. Within 200 meters of the blacksmith's house, a large modern drainage canal rips through the landscape. While there is great potential for learning from the canal, which in places runs more than three meters deep and eight meters wide, the erosion and movement of dirt and artifacts both within and over the sides of the canal makes it an enormous project.⁹ The geomorphology is better preserved for the earlier periods than in the upper strata that are more exposed to erosion. Ultimately, anything within five or ten meters of the canal on either side at the surface was so mixed as to be useless from my standpoint.

Beyond the canal are a series of small hills that obstruct easy mapping and clear visibility of the land around them. I envisioned that these might have provided a natural boundary for the Spanish town, since the Spaniards were concerned for their safety from both other European explorers and indigenous resistance. So despite the fact that I could not demonstrate a clear absence of Spanish habitation, it seemed that the other side of the hills was a reasonable place to begin to search for native habitation. However, the area on the other side of the hills was inaccessible, for two reasons. First, there was very little surface visibility due to a high density of trees. Second, the lands were owned by absentee landlords whose claim to the properties were tenuous at best since the revolution. There was a consensus that even if I could

⁹ Based upon their extensive survey work Lange and colleagues caution that while such exposures are potentially useful, they create so much disturbance that they are not reliable sources for well stratified remains (Lange et al 1992:260).

find these landowners, they were unlikely to tolerate any work on their lands, especially under the auspices of the Government. So the areas covered in the 1985-86 survey work were inaccessible to me.

Consequently, the approach to the native archaeology part of this project was completely reinvented while in the field. I leapt far a field from the area around Leon Viejo, with at least the certainty that at the distance of three kilometers I was definitely beyond the limits of the Spanish town. But I was fearful also that so far out, any hope of finding links to Leon Viejo would be lost.

Revised Field Plan

Since my initial conception had failed to provide a useful course of action, I decided instead to listen to local people who had ideas about finding indigenous sites. This process began with information from my foreman and some elders of the community as to where, in decades past, native sites had been identified. The consensus was that in the area outside the southern limits of Puerto Momotombo, there was open land where in decades past people had identified ruins of native habitation. Specifically, my 90-year-old landlady brought us to the area where her family had had a large farm prior to the revolution. She told me that prior to 'the war' (in this instance World War I), an archaeologist had visited and uncovered evidence of native habitation, and further a field, native burial sites. While I was not

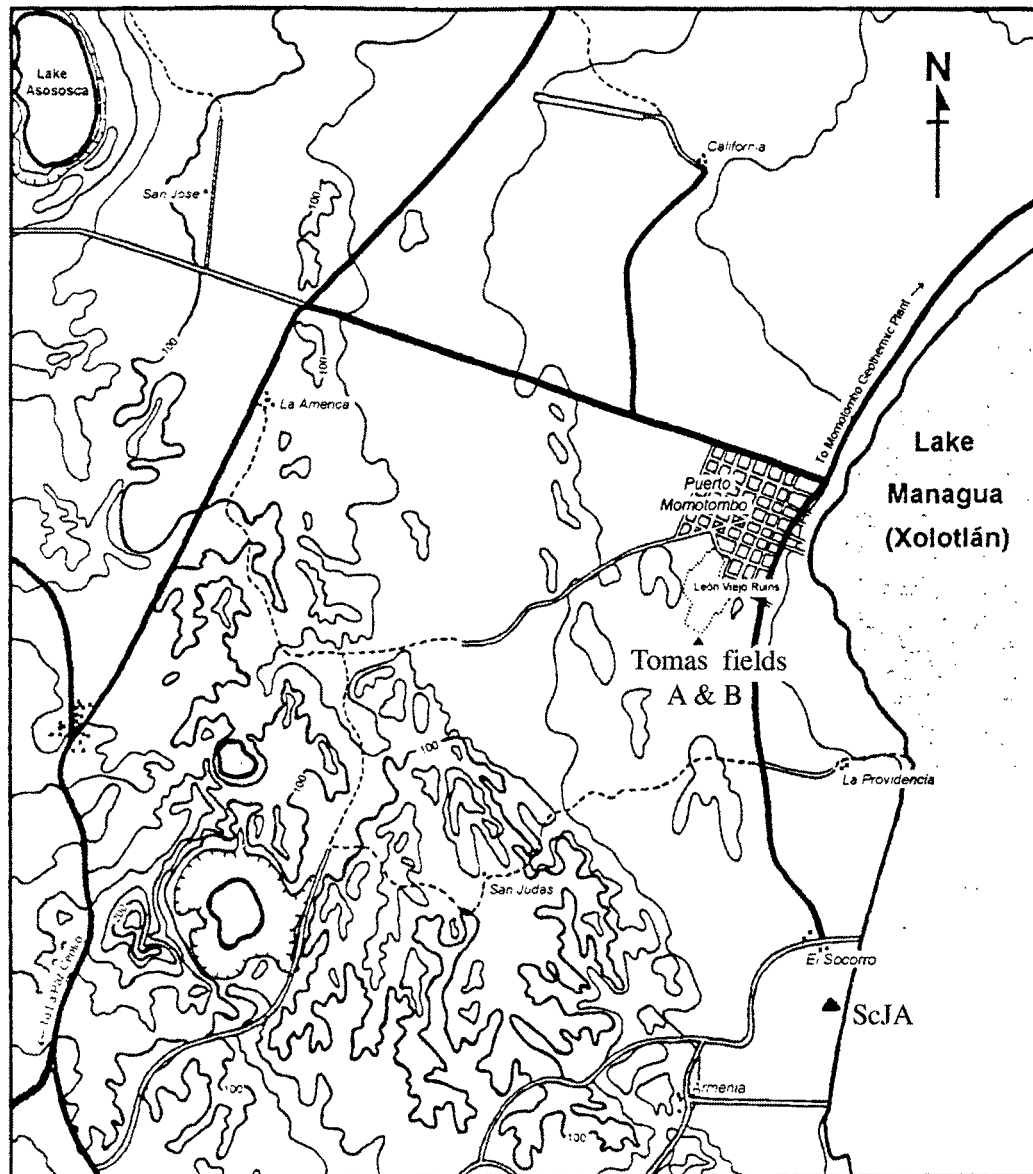


Figure 23: Area map of Leon Viejo with Spanish and indigenous excavation sites

interested in the burial sites, and I was unsure how reliable this information was, it provided me with another starting point in my search.

At the southern outskirts of Puerto Momotombo, beyond the reach of running water and electricity, are large open fields owned today by a cooperative established during the Sandinista period. The land is divided among four landholders each of whom have his own ramshackle homestead and lots of open land to use how he sees fit. Aside from grazing by some small cattle herds, the land mostly sits fallow. The landholders cultivate at most a small portion of the land, which is not usually enough for their own subsistence. This area is naturally bounded on the south and west by steeply rising rocky hills and on the east by Lake Managua. The northern limit of this cooperative land seems to be the town of Puerto Momotombo, although no one could tell me exactly where the town ends. For the purposes of my work, the land held by absentee landowners between Leon Viejo and the cooperative land was the northern limit for exploration.

The surface of this area had no clear clues to finding native habitation. In fact, the surface was mostly scattered with ruins of modern farm buildings destroyed during the revolution. Only one field had a surface scatter of artifacts, but it had no visible mounds or other evidence of structures. This is not a surprising condition, given that floods occasionally cover this area, even since the excavation of the drainage canal in Puerto Momotombo. However, the active nature of this landscape concerned me, since the extent of disruption caused by floods from the lake and the

run off from the hills, as well as by the shifting sand dunes and lakeshore itself, could not be established prior to our excavations.

I began with a simple strategy of randomly placing one by one meter units starting about half a kilometer from the lake. I began at the furthest point from the lake in hopes that there would be fewer alluvial deposits and more material closer to the surface. I chose fields for the test units based upon permission granted to me by the residents. These units were shovel dug and screened as soon as first material culture appeared. Once we found evidence of a cultural deposit or layer, we dug for only another ten centimeters to gain a small sample of artifacts. If no substantial evidence of habitation showed up within the 50 centimeters beneath the sand cap, we did not dig further.

The aim was to identify three to five areas that might yield sufficient data about native habitation from before and during the colonial period. Since I expected that no single site would provide me with enough information on both time periods, I was hoping that a sample of areas might create a useful data set. While I would not have a good overview of the overall habitation, there was no way to establish that without long-term sampling below surface.

Perhaps not surprisingly, this sampling stage of my fieldwork provided me with information that once again altered my plan for excavation. The first three units, all more than 150 meters from the lake, yielded virtually no material culture. There was enough to suggest that I was within cultural layers, but the scarcity of finds was

demoralizing. Within 150 meters of the lake, however, the density of artifacts increased dramatically, suggesting that indigenous habitation was kept close to the lakefront (although how close I cannot say without reconstructing the shifting lakeshore over time). The landholder of the fields closest to the lake let me dig two test pits, both of which revealed dense cultural layers within 50 centimeters. He also pointed out a circular mound within his field, about 50 meters from the lake. Although possibly a modern plough mound or accumulation from the destroyed pre-revolutionary farm, it was a candidate for further investigation as perhaps the only visible indigenous mound in the area. I decided, therefore, to begin my sampling of indigenous habitation on this mound.

As it turned out, my excavation of native settlement around Leon Viejo was limited to this one mound and a small area nearby to test for remains off mound.¹⁰ The reasons for excavating just this one site were twofold. First, and most amazingly, the mound provided evidence of continuous habitation from what appeared to be the colonial period going back possibly into the Late Polychrome period. Colonial period markers appeared at both the mound and the off-mound excavations in the form of Spanish objects, in particular metal and porcelains. Second, the density of artifacts from this excavation was significantly higher than I had anticipated. For the purposes

¹⁰ Two preliminary test pits in this field indicated that there was a high density of artifacts to be found in low lying areas, and the artifacts recovered included porcelains, suggesting we were at a colonial period site. Thus, for the same reasons as at Leon Viejo, I combined excavation of an obvious mound with excavations of low lying areas to test for subsurface features that have no surface indicators.

of my project, given time, space, and monetary limitations, this site yielded more data than I could incorporate. To date the National Museum still has not provided adequate storage space for the data collected from this one excavation. Until we were prepared to house the artifacts we removed, I felt it would be irresponsible to excavate any further.

Excavation Methods

The mound chosen for excavation was given the designation SC-J-A to indicate that we were excavating on land that was once part of the Socorro Farm (SC), now inhabited by Julio (J), and our first chosen area of excavation (A).¹¹ The mound was covered with a grid set square on a north-south/east-west axis and divided into 16 two-meter squares. This was enough area to cover the height of the mound and the down slopes. Unlike excavations at the Spanish site, the excavation aimed to uncover as much evidence of architecture as possible. Given the probability that remnants of indigenous houses would be scant, I wanted the excavations to provide a full sample of the mound. Eight units of the grid were chosen for excavation (units 1000, 1200, 1400, 1600, 1800, 2300 and 2500), using a checkerboard pattern. All 16

¹¹ It is a common practice in Nicaragua to refer to a place first as what it once was and then by its current incarnation. Directions to my residence in Managua begin with “donde fue restaurante Arragon’ – where the Restaurant Arragon was. When I asked people how long ago it was there, I found it had been closed for over a decade and was not remembered as an outstanding place to eat. It nonetheless became a landmark by which directions were given.

units were given designations, however, in case other units were opened during excavations.

I did not have time to start with a single unit to establish the stratigraphic sequence, so excavations began in all eight units. Levels were dug by trowel or shovel, as required by the context. All dirt was screened through quarter inch mesh, except for the upper levels of a few units once it had been established these were modern use levels and devoid of useful cultural material. Artifacts were bagged by material and labeled with double tags. Levels were artificially divided every ten centimeters unless a natural level could be detected. Unit 1000, in the southwest corner of the grid was chosen to explore the full depth of cultural remains and was dug until we reached sterile. Other units were dug until we reached the end of the main cultural levels or as close as possible to that within our time constraints.

The second part of the excavation on this land consisted of trenching in flat, low terrain. The main purpose of this part of the excavation was to confirm the presence of off-mound remains as suggested by some of the one by one meter test pits dug earlier. The trench units were dug approximately 20 meters south of the mound. A six by six square was cleared and divided into six trenches, labeled A through F. Trenches B, D, and F were shovel dug and all remains were screened once we were below the modern cap. The other three were left undisturbed.

Stratigraphy and Chronology of the Indigenous House mound

The test pit dug in this field prior to opening the mound had showed a distinct change around 55 centimeters below surface, where the dirt changed from a soft sandy loam into a darker sandy loam mixed with volcanics. It was with this change that material culture appeared in a significant amount. The top 55 centimeters had been virtually sterile. We used this pit as a rough guide for what we might expect atop the mound but recognized that deposits accumulate in a different pattern on mounds. Excavations proceeded slowly to find the change in dirt, if it was present. Until we established the change in a given part of the mound, all dirt was screened from the upper levels. Once we identified the depth of the shift, we took the remaining units down to the volcanic deposit without screening any more of the modern cap.

The deposit of small volcanic rocks and sand appeared in most units at depths between 70 centimeters and 85 centimeters. In unit 1000 there was the least evidence of volcanics. This I attribute to its location on the mound. Presuming this deposit is related to some event from the volcano, debris would accumulate from the northeast to the top of the mound and then erode off the southwest side, where unit 1000 was located. The cultural remains in unit 1000 nonetheless picked up at about the same depth as in the other units – at about one meter below our string line.

The modern deposit on the top of the mound showed various periods of land use, including levels with large root systems, compact grey ash indicative of field

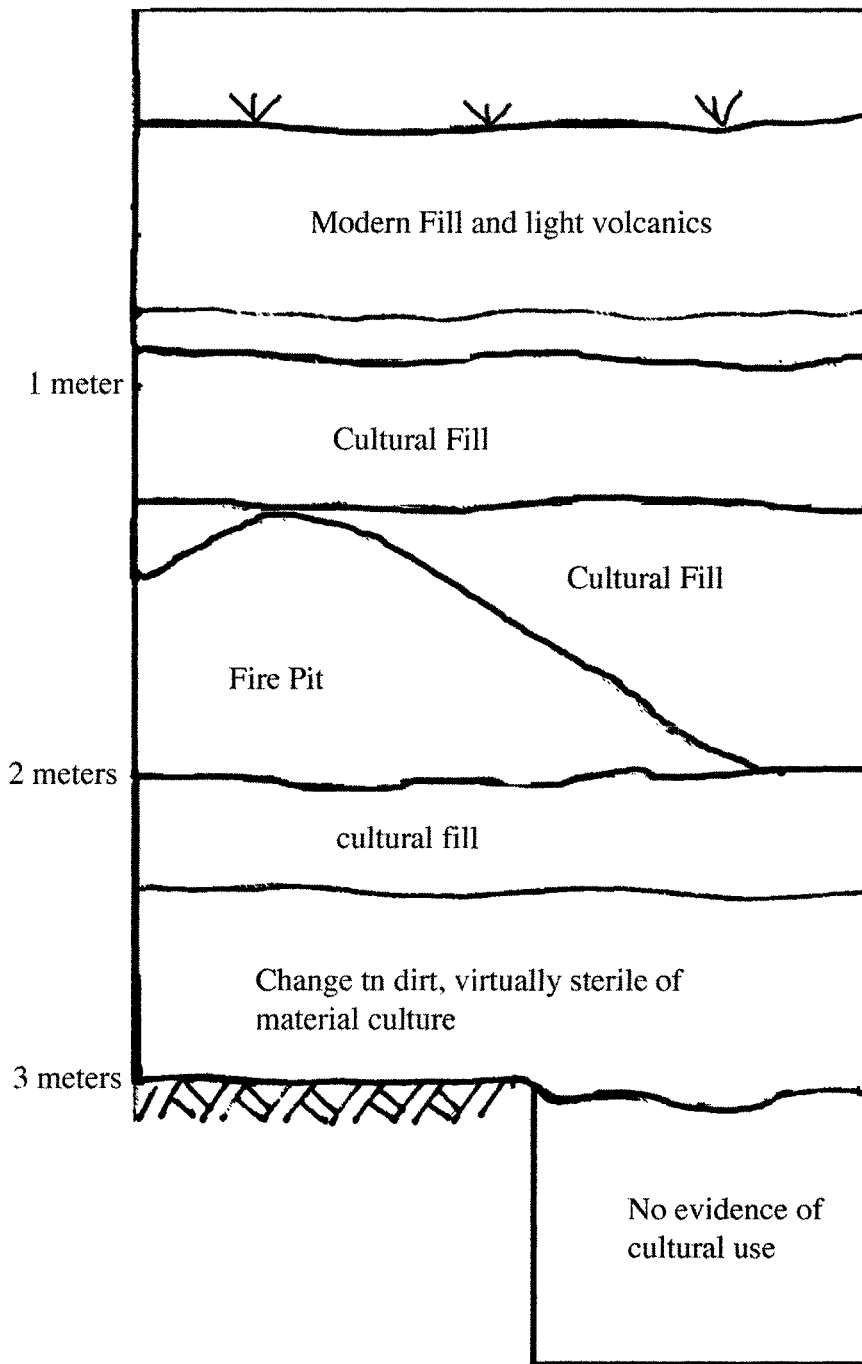


Figure 24: Stratigraphic profile from unit 1000, indigenous house mound, ScJA

burning, and fine roots suggestive of normal native plant growth. There was no evidence of modern structures from the farming period of this land. The volcanic cap, where it appeared, provided a clear division between the modern era and the deposits left from earlier periods. However, it was not a sealed level but rather a mixture of the volcanics with material culture and a brown sandy loam. Ultimately, much of what comprised this mound was a modern deposit sealing off the pre-contact remains below.

Immediately within the first levels of cultural deposit, we were able to assign the remains to the contact period. Five metal objects were found in the first two cultural levels (about one meter in depth). There were three nails, a ring and a small rod, all made of iron, and clearly Spanish in style and origin. Along with these objects came a rapid increase in density of other artifacts, suggesting a habitation site. The trenches also clearly revealed contact period remains. In the trench excavations we recovered nine metal objects (or fragments of objects), five Spanish majolica fragments, three pieces of Asian porcelain, and one fragment of glass.

The jubilation of having struck a contact period indigenous site at my first try was immediately tempered by the challenge of identifying the transition, if it existed, from pre-contact to contact in the stratigraphy and material deposits. In the field, it seemed there was a gradual transition in the dirt and density of material remains at level ten of most units. The dirt had slightly higher clay content, there were inclusions of pumice, and in some areas there were patches of sand. It was not a clear

or abrupt change, but it coincided with a drop in material culture that suggests transition, perhaps from contact to pre-contact habitation.¹² As the density of material culture increased again by level 12, we interpreted this as the pre-contact habitation of the mound, belonging to the Late Polychrome period. In the trench excavation, we stopped excavation in the contact level, having demonstrated the presence of off-mound remains as well as finding significant amounts of rock architecture we did not want to remove.

Then, in unit 1400 at level 17, well below the transition to pre-contact we speculated in the field, we removed a small fragment of metal – a flat piece of iron that looked like unworked sheet metal. This forced a complete re-evaluation of the chronological assignment of levels ten and beneath.¹³ The possibility suddenly

¹² Overall, the homogeneity of the dirt absent any clear breaks in habitation suggests that occupation was more or less continuous at this location. The lack of clear changes in dirt did make separating different periods more challenging.

¹³ This one piece of metal also illustrates in a microcosm Thomas Kuhn's argument about paradigms (1970). In the field I labeled the metal fragment as 'metal?' since I did not expect to find metal at that depth. It clearly was from within the unit and not, as was the temptation to consider, a fallen artifact from higher up on the unit's wall. When I first returned to this data out of the field and I saw metal from level 1417, my immediate reaction was that it was mis-tagged in the field or mis-recorded in the lab. But I returned to the field notes and saw it listed as an artifact bag at the time of excavation. Because I had established in my mind that I was no longer in contact levels at every point from the excavation to the write-up, I resisted acknowledging the implication of this metal. And in fact I sought excuses for it, or reasons to exclude it from my analysis because it did not fit my view. This is what Kuhn says happens to information that does not fit the prevailing paradigm (Kuhn 1970:63). Kuhn argues that anomalies generally are dismissed in order to maintain the validity of the paradigm. While my belief that I had a pre-contact level is hardly a Kuhnian paradigmatic view, a fundamental issue for archaeology is highlighted – how we respond to data that does not fit our expectations. All too often I believe such pieces are dismissed in order to present a neat and cohesive argument. I strongly believe that we would be better off at least admitting the anomalies even if we are not willing to adjust our perspective accordingly.

emerged that we were still within contact period and that there was simply more than one occupation level associated with contact. And while this would provide an interesting opportunity to see change in indigenous habitation through contact, it also would mean we would not be able to compare such habitation with pre-contact levels.

Ceramic analysis also suggests that levels beneath level ten still might be in contact period. Managua Polychrome is postulated to be a contact period style. While this is not an established consensus, in large part because there are not many colonial sites excavated in Nicaragua, the divergent style is believed to have arrived sometime during the contact period. Managua Polychrome is found as far down as level 12 in unit 1000 and level 14 in unit 1400. Absent the metal in 1417 we might be tempted to interpret the presence of Managua polychrome at this depth as evidence of its pre-contact origins, but together with the metal it is more reasonable to conclude that we are still within contact remains.

Ultimately, it seems probable that this mound had two episodes of habitation, both during contact. The first one peaks between 150 centimeters and 200 centimeters down, and the second peaks at 100 centimeters, or right below the modern cap and volcanic deposit described above.¹⁴ The early episode could well represent the period of transition and thus is in many ways a pre-contact assemblage being slowly

¹⁴ Due to time restrictions and the mounting tensions with our landowner over Diane, the cow, we were not able to take all units to the end of this earlier habitation. Unit 1000 demonstrated that material culture petered out significantly by level 18, or a depth of two meters. While other units still had significant material culture at that depth, we believe we were near to the end of the habitation in all units when we stopped. However, full excavation to lower depths may have given us a better sample of this critical period of transition.

impacted by the arrival of the Spanish. The upper episode, it could be speculated, is from a later time, perhaps once the Spanish settlement was established and the interactions between the indigenous and Spanish communities were more regularized.

It is interesting to speculate whether these two habitation levels correspond to any events we can see archaeologically, or have reported historically from Leon Viejo. For example, one of the reasons given for the abandonment of Leon Viejo was an eruption of Momotombo. And indeed we do see a large cap of volcanics on top of the colonial site (which may or may not be attributable to an eruption event). It is reasonable to consider that the volcanic cap between the modern land use and the cultural remains at SCJA is part of the same event. At an additional three kilometers away, the deposit would be of lighter materials such as those we found at SCJA, rather than the coarser rocks found on top of the blacksmith's house. The reason why this house was rebuilt during the contact period could be as simple as a storm or other natural event that destroyed the less durable architecture of indigenous houses. Or it could be a result of changes in life style in reaction to the changes brought about under Spanish leadership. While explanations for the two habitation levels remain speculative, the next chapter considers in more detail the differences and similarities in an attempt to elucidate how life changed in one house as it lived through the period of contact.

CHAPTER 6:
INTERPRETING CONTACT AT AN INDIGENOUS HOUSE

The Sacrificial Cow

It took only one day of excavations on Julio's land to realize that 500 years ago, the natives knew the best spot to live. At Leon Viejo, the air was stagnant and the heat oppressive. The air often felt as old as the Spanish ruins and as hot as the volcano itself. Just three kilometers from Leon Viejo, however, we found an almost refreshing breeze that swept across the field every afternoon. In addition, we had a breathtaking view of the volcano that took on a different character daily. I realized that when the Spaniards went looking for a location near to a native community to build their capital, they found the land open for a very good reason. I imagine that the native community knew full well what a poor choice the Spaniards had made. Unfortunately, Puerto Momotombo followed in the footsteps of the Spaniards. Perhaps, when the town was founded in the late 19th century, the area had special appeal because people knew it was the location of the Spanish town.

The climatic difference between the indigenous site and Puerto Momotombo was not the only contrast I noticed. The difference in ambiance between the cooperative lands and Puerto Momotombo made the distance feel much greater than three kilometers. The members of the cooperative received the land grants as a reward for their participation in the Sandinista Revolution. Yet there was almost

nothing to suggest they felt any victory or pride in what they had gained as a result of their participation in the revolution. Most felt they were entitled to more and were disinclined to cooperate with each other to take advantage of their situation. In fact, the only thing that seemed to unite them was their contempt for their neighbors in Puerto Momotombo who, according to the cooperative members, had life a lot easier. Given what I had learned already about Puerto Momotombo, I found this impression both hard to believe and a sad commentary on the cooperative, supposedly a symbol of progress brought about by the Sandinistas.

When I approached Julio about working on his land, he was agreeable and fairly blasé about the prospect. He did not request compensation since he said he was not using the land where I was interested in digging. He seemed mildly enthused about having some company on a regular basis, and most especially about the radio that came with us. Julio gave us *carte blanche* and did not even ask us to employ his son (I offered, however). I was excited by the ease with which I had obtained permission and cooperation, but in the back of my mind I was a bit nervous that he had not asked for anything in return.

As we began our work at Julio's, I was struck by how little he did with his land. He had a small herd of cattle, but otherwise he did nothing on the land he had been granted. Julio claimed he did not have the skills he needed to farm, but it also became apparent he did not have much desire. The extent of Julio's laziness was revealed the day he asked us if we had water he could drink. Mario inquired what was

wrong with the well. Julio explained without an ounce of embarrassment that he was waiting for his young son to return to fix the broken bucket rope. From then on, in the eyes of the members of my crew from town, Julio epitomized all that was wrong with the cooperative system. While I did not much understand the animosity between the town and the cooperative, I had to admit Julio's laziness and refusal to make any effort to improve his situation would be offensive to a hard working person.

As it turns out, however, Julio had plans to improve his life – plans that emerged a few weeks later. Late one afternoon, two men arrived on horse back at my house in Puerto Momotombo to inform me of an accident at Julio's farm. While I could not imagine what had happened, I was immediately nervous. As they explained, I felt for the first time that my Spanish was failing me. So, I repeated to the men what I had understood them to say and found myself flabbergasted by the fact that there was now a dead cow in unit 1000 of our mound excavation.

I organized a group of people from town to help me retrieve the cow. My foreman immediately tried to discuss with me what I suspected in my gut. But I told him that I had to focus on removing the cow. We contacted the local butcher, who agreed to buy the cow (we ate chicken in town for the duration of the field season), and found a harness to lift the cow out. Hours later and well into the dark of night, the cow was hoisted out. I had spent the time talking with Julio, who professed to be devastated and embarrassed, especially since the cow was his mother's (a claim as dubious as the accident itself) and she would be angry at his carelessness. I offered to

speaking to his mother myself, but he refused and said it was his responsibility to break the news to her.

I knew the truth in what Rey was telling me. This cow had not accidentally walked over a four-foot barbed wire fence and accidentally fallen into the deepest pit of the excavation. It was highly improbable, especially since Julio (and later the butcher) told me she was old and not in the best of health. She had been led over the wires and pushed in, or at least encouraged. I should have been outraged. But I could not afford to be outraged.

This attempt to manipulate me had two possible outcomes. I could confront Julio, which I knew would result in the immediate end of my permission to work on his land. Or, I could indulge Julio his story and go along with it at least as long as it served my purpose. Both options would leave a bad taste in my mouth, but only one would allow me to see through the investment I had already made in the excavation of the mound. It was too late to find another site and too early to be willing to stop excavations.

I spent the rest of the excavation, under the disapproving glare of Rey and others, negotiating with Julio as to proper compensation. Julio insisted that he only was asking for my help since it was his mother's cow. I had a crash course in the cattle market as I pursued options; replacing her with a young, healthy cow seemed like the most logical option. But, not surprisingly, Julio wanted the money -- and much more money than an average cow was worth. A few days after the incident,

Mario discovered that Julio had a bank loan due for the same amount he was asking for the cow. I delayed paying Julio until the end of the season, at which point I gave him the fair market value of a young cow. He was irate as I left. Finally, I could afford to be a bit peeved myself. I also had a new appreciation for the multitude of creative and extreme ways people manage to take advantage of whatever situation they find themselves in. As I ended the excavations of the indigenous mound on Julio's land I was left wondering how 500 years ago the natives living here had dealt with the opportunities and circumstances of life when the Spaniards of Leon Viejo settled in their backyard.

Indigenous Contact Uncovered

Despite the problems with Julio, the excavations in his field were worth the aggravation. The excavation of both the mound and the nearby trenches provided substantial data. From this one field I recovered a sample of indigenous habitation that appeared to be from the contact period. The depth of the cultural layers and my initial impressions from the field led me to believe that there was a pre-contact occupation in the mound. Therefore, the comparison of pre-contact with contact period indigenous life could be approached from this one mound. However, upon further examination, the chronological assignment of the early occupation came into doubt, and the possibility of three occupations became evident.

Since the time periods of the occupations could not be clearly established based upon the architecture, stratigraphy, and ceramics, the comparisons became contingent upon interpretive decisions of chronology. Rather than a linear progression in the analysis moving from chronology to artifact analysis, the process of interpretation became a dialogue between the different data sets. The architectural remains provided scenarios for how we might divide the artifacts, the artifacts became a means through which the different occupations might be delineated, the temporally diagnostic materials provided both clarification and confusion. Ultimately, moving between the data sets was the best way to interpret the chronology and changes of this indigenous habitation.

Architecture and Objects of Contact from the Trenches

The most straightforward data set to analyze from the indigenous excavations was from the trenches dug in area 6000. Although this excavation was intended primarily as a methodological test, it provided the clearest example of architecture associated with contact period artifacts. I would have liked to continue exploring this area, but when the area was started the season was almost over, as was Julio's patience waiting for compensation. Despite the limited depth of the trenches, the materials recovered provide a good contact assemblage, confirmation of the presence of sub-surface features and the utility of trench excavations.

We cleared the entire area of the six by six meter square and chose to excavate three one by six meter trenches. The cultural level, which began between 26 and 30 centimeters below the surface, was mixed with volcanic rocks in the upper five to eight centimeters. The excavations stopped a depth of 80 centimeters below the surface when we reached substantial architectural remains that we did not want to disturb. The three trenches were dug and screened together except when we saw evidence of features that warranted separating a specific area or an entire trench. In the field, therefore, some levels grouped all three trenches, while other levels separated out an area or trench.

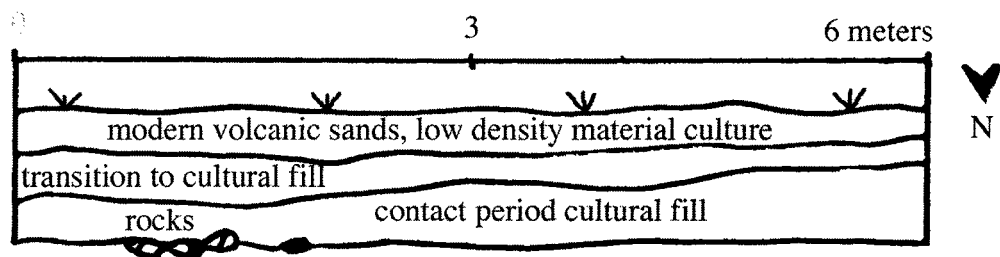


Figure 25: Stratigraphic profile from trench 6000 D.

Dense material remains began by 35 centimeters below surface and provided diagnostics for the contact period, including pieces of metal, Old World ceramics and glass. While scattered rocks, pumice concentrations, and clumps of what looked like mud-brick were scattered in the trenches from 35 centimeters down, we did not find conclusive evidence of architecture until a depth of 60 centimeters, when we came upon large rocks in trench D. Within ten centimeters more we had found an assemblage of in situ rocks that clearly were part of a structure.

Unfortunately, within the three trenches excavated, we could not establish the structure to which these rocks contributed. The scatter of pumice and mud-brick in the levels above creates the possibility that the rocks were a foundation for a mud-brick wall. But the amount of mud-brick we removed was not great enough to substantiate this interpretation. At contact sites in El Salvador, there are indigenous houses built on stone platforms (Fowler 1997: personal communication). If this was the case here, the rocks may have been part of a retaining wall with nothing built directly on top of it. Ultimately, we are forced to accept that all we can say is that we found a series of intentionally placed rocks that were part of a foundation or retaining wall.

Absent a clear understanding of the architectural context, the artifacts found above and around the wall are defined as coming from occupational fill. In other words, with one exception of a group of large sherds from one pot, there is nothing to suggest that we recovered artifacts in their primary area of use. Therefore, the levels of the excavation were grouped as one cultural deposit, approximately 50 centimeters deep. In addition, there seemed no reason to separate the materials by trenches since all three trenches had elements of a single architectural feature. So for purposes of analysis here, the artifacts from the cultural deposit of the three trenches are grouped.

As we dug the trenches we were struck by the range and quantity of European items emerging. Although in a lighter density than from the blacksmith's interior room, we found the same range of objects – metal, glass, porcelain, and majolica. In

fact, this assemblage looked more European than the one from the courtyard room of the blacksmith's house. Based upon these finds it occurred to me that we could be digging in an area of Spanish occupation outside of Leon Viejo. But such an interpretation, based solely on the presence of Old World artifacts, denies the possibility that indigenous people had access to these objects. Since there was no other corroborating evidence (such as brick architecture) to suggest a Spanish occupation, I continued under the assumption that this was native habitation during contact.

Old World Artifacts	Total number from three trenches
Metal	9
Glass	1
Porcelain & majolica	7
Olive jars	3

Figure 26: Old World Artifacts from the trenches

A total of nine metal objects were found in the trenches, from levels 6004, 6005, and 6006. Most of the objects were types seen in the assemblage from the blacksmith's house. There were four nails, including one whole long nail and one whole tack. There were three small strips, two of lead and one of iron. One of the lead strips appeared burned (there was no indication of burning in the cultural level itself). There also were two metal artifacts in types not seen in the blacksmith's house – a musket ball and half a horseshoe. These provide material evidence of Spanish activities and technologies that we presumed existed – metal weaponry and horseback riding – but so far had been invisible archaeologically.

Along with the metal objects, there were 22 fragments of Old World ceramics. Three small sherds showed evidence of being wheel made and probably were from olive jars. Eleven small sherds showed traces of glaze or fine pastes associated with Old World ceramics. It is possible that these represent an emerging New World tradition of glazing, but they are at the very least not typical indigenous ceramics. Three small pieces of fine porcelain were found in levels 6002 (one) and 6004 (two). Five pieces of majolica were found in levels 6004 and 6005. The four sherds from 6004 likely came from a single vessel. In addition, there was one small fragment of clear glass that looked tinged (burned) from level 6004.

While this assemblage of European goods is smaller than what was recovered from the blacksmith's house, it is still significant in this context.¹ It demonstrates that, through whatever means, native access to Spanish goods existed. Although we would like to get at the specifics of the interaction resulting in the presence of these items in a native community, the context limits us to speculation.² These items may have been found amid garbage or picked up on the street, given as a form of payment, or purchased for use or collection. The nails raise the possibility of a cross-over of construction styles between Spanish and native houses. Most interesting are the

¹ The assemblage from the trench area was comprised of highly eroded small sherds that may dilute the actual ratio between native and Old World ceramic objects. However, even taking this into account, the percentage of European goods is drastically smaller than within the Spanish house.

² The very nature of archaeological data (that is passive) makes it hard to speculate on the specific active ways in which people acquire objects. But without good contexts, there is no reasonable basis to suggest one form of acquisition over another.

musket ball and half-horseshoe. They could be the result of collecting Spanish objects of interest, but they also could be the result of access to the activities in which they were used – activities we might expect to have been guarded by the Spaniards.

The vast majority of artifacts recovered from the trenches were indigenous in both material and style. A total of 10,716 sherds from ceramic objects were collected from levels 6000 to 6008.³ The top three levels of volcanic deposit had a much lighter density of ceramics (a total of 603 sherds). If we had an in situ occupation below, I would have excluded these from the analysis. But since we are dealing with general fill, it does not seem to detract from the context to include the ceramics from these levels. Clearly, however, at level 6003, the density increases substantially and as we approach the architectural remains. Unfortunately, the condition of these sherds hindered our analysis even more so than the erosion of sherds from the Spanish house. The sherds from the trenches were small and highly worn, almost without exception. On many sherds the smoothness of the surface and the worn, rounded edges suggested water erosion. The result of the erosion was that among the plain sherds, many finishes and slips were largely worn off and on other sherds most paint was lost too. Even among the sherds that were further classified, the identifications were mostly tentative due to the small size and erosion of the sherds.

While the classification of the assemblage may overstate the number of undecorated vessels due to the erosion, it is still clear that the vast majority of the

³ In addition to ceramic vessels this includes sherd disks, figurine fragments, and beads.

assemblage is plain. Ninety-seven percent of the sherds showed no sign of decoration based upon the surface and the temper (typically, finer decorated native styles were painted on vessels with distinctly fine tempers in lighter brown to grey colors). Because of the erosion, I did not attempt to sort the plain sherds by finishes, but the variety of slips and tempers appears similar to what was seen at the blacksmith's house. The majority of the plain sherds had brown pastes and at most a simple self-slip. There are also some red and orange slips and pastes in the assemblage. The rims showed a variety of forms, but mostly simple rounded rims typical of plates and bowls.

Polychromes		Incised		Other Painted		Other	
Papagayo	3	Misc.	5	Rivas Rojo	1	Molded	14
Vaillejo	8	Leon	79	Chavez	1	Appendages	39
		Punteado					
Managua	3	Belen	2	Las Brisas	2	Fine	71
Polychrome						Burnished	
Rosales	1	Huerta	3	Delirio	2	Misc. eroded	79
Northern	2	Castillo	1	Borgonia	2		
misc.							
eroded	3	Hole	7	Simple	12		
		impressed		banded			
				Tenampua	2		
				Cacauli	1		
Total	325						
Classified							

Figure 27: Classified sherds from trenches 6000, ScJA

The 325 sherds that could be further classified were divided into three main categories: decorated wares, fine burnished wares, and appendages.⁴ Appendages were included as a category since often they are part of decorated vessels such as Leon Punteado, various polychrome types, and incensarios. In addition, the pre-Columbian ceramics of Pacific Nicaragua often include appendages that are themselves a form of decoration – such as feet shaped as animal heads. There were 21 appendages, only one of which had remnants of paint on it (a white slip, suggestive of a polychrome decoration). The remaining 20 were a variety of feet (11 total) and handles (nine total).

Fine burnished wares included 71 sherds, and almost all were of a red burnish finish. Of these 71 sherds, 34 were found together in trench F at level 6004. The sherds from this concentration had remnants of red burnish on them and appeared to be from one or two vessels. While the category of red burnished vessels is of particular interest in early contact sites (since it is a style used both by native and Spanish populations), here there was not enough to determine vessel forms that could suggest to which tradition these belong. There were three black burnished sherds that in all likelihood were part of decorated vessels such as Castillo or Belen, decorative types that have incised geometric designs on fine black burnished vessels.

⁴ These are distinct categories only for analysis. In reality, sherds from all three categories may combine into one vessel – such as a black-burnished vessel with handles, incised around the outer rim (a type known as Belen Inciso).

The majority of the classified sherds (233 or 71%) were from a wide range of decorative types including polychromes, bichromes (or simply painted), and incised and molded ceramic types. Of these, 79 were too eroded to identify a specific type but based upon scant remains, clearly were once decorated. The remaining 154 were preserved sufficiently to permit more specific classification, although often only a tentative one.

The most easily identifiable type among the decorative sherds is Leon Punteado. Despite the variation within the type (specifically the ways in which the dots and lines are impressed in the bottom), the standardized tripod form with red interior walls and impressions in the bottom, makes it easy to recognize. Its chunkier style, probably to support its presumed function of grinding, also means it suffered less erosion than the finer paste vessels. There were 74 sherds from Leon Punteado vessels, nearly half of the classified sherds. There was substantial variation in the styles of the impressed bottoms, including small, even holes made in rows, impressed squares, dots, and dashes randomly placed across the bottom. There were five additional sherds that had the characteristics of Leon Punteado vessels, but the impressions on the bottom were so widely spaced as to raise doubts that they could have provided a good grinding service. These sherds raise the possibility of a purely decorative form of this type.

The remaining classified sherds were relatively evenly distributed among the decorative categories. There were 20 polychrome sherds, 18 incised sherds (apart

from the Leon Punteado sherds described above), 23 bichrome (or simple painted) sherds and 14 sherds with added molded decoration. No single type dominated besides Leon Punteado. In fact, the assemblage is best characterized as widely varied.⁵ Among the polychromes there are 11 typical of the Late Polychrome period in Pacific Nicaragua (eight Vaillejo and three Papagayo sherds), three that may be diagnostic of contact (Managua Polychromes), and three that are identified as styles from areas north of Leon Viejo (none of which could be securely identified, but all were very different from the typical polychromes of Pacific Nicaragua).

Similarly, there are a wide variety of types represented among the bichrome sherds. Of the 23, ten were given specific type names and the other 13 identified only as general bichromes. The ten classified sherds include types typical of Pacific Nicaragua (Las Brisas, Chavez, and Rivas Rojo) and styles originating from the north (including Tenampua, Caculai, and Delirio).⁶ The twelve undefined sherds are part

⁵ In the classification of these sherds I relied heavily on the expertise of Nicaraguan archaeologists of the National Museum who had vastly more experience than me. The process of identification was so contentious that I consider most of the identifications as tentative. While a certain amount of disagreement is normal, one in particular illustrates the problem with the current system of identification in Nicaragua. There were some sherds, for example a sherd identified as Chavez, which were quickly labeled by my colleagues. Chavez is defined in the Early Polychrome period, but this site clearly is Late Polychrome into contact. When I asked them if they had seen other Chavez sherds this late, they said that if this was a Late Polychrome site then it could not be Chavez, but they did not have an alternative definition. Their conception of the type-variety system is so rigid as to almost preclude new knowledge or discovery. Ultimately I based my identifications on what type the sherds most closely resembled regardless of chronological assignment. In many instances I fall back on my own descriptive terms rather than forcing the sherds into defined types.

⁶ Originating from the north here means that the type has been defined by archaeological research in Honduras. It does not necessarily mean that the style itself originated there.

of a strong tradition of the Late Polychrome period in Pacific Nicaragua where simple horizontal bands of color are applied around the rim (exterior or interior) on otherwise plain vessels. There is a great deal of variation in paint and slip colors, but the vessels are usually shallow bowls.

Finally there were 14 sherds that had molded pieces attached to them and 18 sherds with incised designs. The molded pieces were almost all the small cones typically attached to the outside of an incensario.⁷ The other sherds had small applied pieces of clay that probably were part of the indigenous tradition of decorating large, otherwise plain, vessels with small molded creatures (human or animal). Of the 18 incised sherds, only three could be classified. The remaining 15 were too fragmentary. There were two types defined – one typical of Pacific Nicaragua (Castillo Esgrafiado) and one typical of the north (Huerta). Both these assignments are tentative.

The indigenous ceramics assemblage from the trenches cannot be considered a typical assemblage because we do not know what is typical for this area. In addition we cannot say whether there is anything indicative of contact in this assemblage with the possible exception of the Managua Polychrome sherds (and the three were all eroded sufficiently as to raise some doubt in the classification), since we do not know

⁷ The assignment of these sherds as parts of incensarios, is a definition based more on presumption than proof. It is widely assumed that vessels with the conical attachments are incensarios but there may be a wider variety of vessels decorated with them. Unfortunately here the sherds are too small and too few to permit me to investigate this decorative style further.

what a typical assemblage of the Late Polychrome period would look like from this region. However, we do know that this assemblage has an impressive amount of variety, perhaps due to its cultural identity, geographic location, and/or chronological period (presumably contact). From this we can begin to see the identity of this community as distinct from its neighbors and perhaps identify cultural markers in the assemblage.

The quantities of lithic and obsidian are somewhat surprising given the amount of ceramics from the trenches. There were a total of 88 obsidian pieces and only 23 lithic fragments from the entire excavation of area 6000. Twelve of the obsidian pieces were fragments of prismatic blades (13.6%), 70 were flakes (79%), and the remaining six were small pieces of debitage (6.8%). The lithic assemblage is comprised of four tool fragments and one whole tool (a total of 21% of the collection is from designed tools), 15 flakes (65%), two pieces of debitage and one small core (these three comprise a total of 13% of the assemblage). Interestingly, despite the different quantities of lithics and obsidian pieces recovered, the percentage of tool fragments of each material is relatively close.

The relatively small number of obsidian and lithic artifacts recovered may be simply a matter of excavating in fill rather than in actual areas of occupation. And the difference in absolute numbers between the two tool materials may be due to the nature of each -- obsidian is more likely to flake off in small pieces than most of the lithic materials. But the differences may also have to do with access to either the raw

materials or the finished tools of each category. The differences suggest, as at the blacksmith's house, that these two materials may have served similar functions but were not used and available in the same ways.

This assemblage of artifacts from the cultural fill layers of the trenches offers little chance to derive specific interpretations about life in the community. But it is useful in two significant ways. First, it demonstrates the presence of cultural remains that are invisible at the surface. This is a critical methodological challenge that requires solutions if the goal is to understand the community of the area. Second, the presence of Old World objects – metal, glass, majolica, and porcelain – in levels of cultural fill suggests a certain amount of access among the indigenous people. Regardless of how they were acquired, there was sufficient saturation of these materials in the native community to find them in fill levels. This is worth noting because in the cultural fill levels of the blacksmith's house, in comparison, there was very little Old World material. While the quantity and density of artifacts is lower here, the sheer presence of these materials, which by all accounts were relatively scarce at Leon Viejo, is remarkable. Whether it indicates scavenging, cultural or economic interaction, or cultural assimilation is unclear, but nonetheless the discovery of these materials is a first step towards establishing the relationship between the native community and Leon Viejo. The next step is to evaluate artifacts in more meaningful contexts to permit more detailed interpretations.

The Household Mound

There was no question in my mind that I was extraordinarily lucky to have dug this mound in my first attempt to find native habitation from the contact period. The evidence of habitation was plentiful and the density of artifacts far greater than I had anticipated, based upon the recovery from the blacksmith's house. But interpreting this indigenous mound posed much more of a challenge than figuring out what we had dug in the Spanish house. The fleeting nature of native building materials and the lack of examples from other excavations as to what I might expect left me digging at a disadvantage. Despite the fact that, based upon my own experience, I felt more confident dealing with indigenous materials than Spanish, I was overwhelmed by the amount of data that came out of this mound in need of context and interpretation.

To facilitate interpretation, I chose the data from the units that gave me the best chance of defining the chronology of the habitation in the mound. At least three units we dug appeared to be midden deposit (units 1800, 2300 and 2500), and while we recovered an impressive array of artifacts from them, the data did not provide the context I needed.⁸ I chose to include the units that contained evidence of

⁸ Analysis space at the National Museum precluded appropriate analysis of the midden materials, which included large sherds that could be reconstructed. I had only a small four-foot area to work in and thus did not have the space to spread out sherds for reconstruction. At some point, when the archaeology lab space is expanded, the midden assemblages warrant careful attention as we might be able to reconstruct vessel forms. But as I write, the National Museum, located in the Palacio Nacional and across a courtyard from the President's house, is functioning minimally. After months of unpaid electric bill for the Palacio, Nicaragua's electric company has shut off power to the Palacio until the Government pays what is owed.

architecture, habitation, and some chance to establish temporal divisions. These units are 1000, 1200 and 1400, all on the south-west part of the mound.

In the field, my impression was that there were two occupations in the mound, probably one from pre-contact and one from the contact period. However, defining the habitations and the artifacts associated with each occupation was not straightforward as I had hoped. There were no clear-cut divisions in the stratigraphy or material culture besides the volcanic cap that separated the modern deposit from the indigenous occupation. There was no roof fall as at the blacksmith's house, and we did not have any definite floors. The shifts in dirt were gradual and not always continuous across the mound or even a single unit. And while the quantity of artifacts ebbed and flowed, they never ceased in the entire two-meter excavation of the mound. Finally, the metal found at level 17 raised doubt as to whether we had any pre-contact habitation at all.

As the post-excavation analysis progressed, two challenges emerged. The first was deciding whether there were two or three occupations of the mound. Despite a reasonable interpretation that there were three occupations in the mound, after considering all the materials, I returned to my initial impression of only two. The second was whether any of the occupations was truly pre-contact, or if not, whether I could delineate different stages of contact from the materials. Based upon the artifact analysis, I have assigned both occupations to the contact period, but changes through

the occupations suggest the period of earliest contact may be visible at the lower occupation.

Ultimately, the process of defining the occupations of the mound and the artifacts associated with each period required examining data from all categories. The goal was to synthesize as much data as possible into the most coherent picture that we could create of this mound's lifespan. The presentation includes the data that fits my ultimate interpretation, as well as the data that suggested alternative paths. Evidence of architecture is considered first, since it set the original parameters for artifact analysis. However, I do not consider that the remnants of architecture we found warrant giving it more weight than the other data sets analyzed.

Defining Time and Space in Indigenous Habitation

In order to define the levels of habitation and the fill associated with those occupations, I used three criteria: architecture, features of occupation, and stratigraphy. Ideally, these three data sets provide parallel and consistent information for interpretation. However, it is equally possible that these different categories do not create a single view of the habitation of the mound, but rather bits and pieces of information that may overlap or contradict each other.

STRATIGRAPHY

The most natural way to divide occupations within a single mound is through changes in the stratigraphy – particularly changes in dirt, sterile levels, and evidence

of natural disasters. However, the dirt in this mound was remarkably homogenous throughout the occupation levels. In unit 1000 there was a gradual shift at two meters, well below the evidence of architecture in other units, from a clayey sandy loam to a sandy loam, which coincided with a decrease in the material culture. Otherwise, the dirt around the cultural remains was relatively consistent in color and texture. In addition, there were no natural stratigraphic layers below the volcanic cap, with the exception of a thin sand cap of five centimeters from 125 to 130 centimeters down in the west side of unit 1200. The conclusion we can draw based upon the stratigraphic record is that habitation was continuous in this mound, resulting in approximately 120 centimeters of cultural accumulation.

ARCHITECTURE

In the excavation of the mound, evidence of architecture came in three forms: post holes, rock formations, and material interpreted as wall fall. While floors are one of the best features to establish and distinguish occupations, there were no definite floors identified in the field. Possible floors were described but ultimately they are *interpreted* as floors rather than identified as an architectural element. In other words, in this excavation we could not use floors as a *prima facie* element to establish occupations.

POSTHOLES

At about 1 meter below surface, postholes were found in units 1200 and 1400 (level eight of each unit). In 1208, ten, or possibly 11, postholes were identified. Ten

of these lined up roughly in a row. The postholes of the line ranged in diameter from two to three centimeters and seemed to continue for a depth of between ten and 15 centimeters.⁹ These holes probably held stakes cut of local materials, perhaps forming a frame for weaving a softer material (such as palms or grasses) horizontally across to create walls. In some modern examples of traditional houses the stakes are tied together to form a tight wall without any additional woven material. But these holes were not close enough together to support this method of wall construction.

The last hole at level 1208 is along the west wall of the excavation unit, but since it was isolated, the identification as a posthole was not as secure. This hole was filled with loose dirt as seen in the small postholes, but it was ten centimeters in diameter. If a posthole, it was clearly for a larger beam such as a roof support or corner post, rather than a wall post. Ultimately, its location at the same depth as the line of postholes provided a context that suggested it also was an architectural element of a structure.

In unit 1400 there were five post holes in level eight. While these did not line up in rows as neatly as in unit 1200, four of them were close enough together to suggest they were part of a single architectural feature. In this series, three holes were large (18 to 23 centimeters in diameter), and the other two, which flanked one of the large holes, both measured four centimeters in diameter. The layout of these

⁹ This was based upon inserting a thin metal stake into the loose dirt filling the holes until more compact dirt was detected. Later the postholes were followed in the levels to confirm the depth.

postholes creates the impression of a curving or turning wall if we assume that all five interconnected.

The postholes from these two units appear at the top of the cultural deposit found directly beneath the volcanic cap that sealed off these remains from the modern activity in the top 80 centimeters of the mound. The volcanic sand that filled the postholes is the finer material from the volcanic cap. Whether the deposit of the volcanic cap is what destroyed the structures, or whether it capped an already abandoned structure, is hard to say. But these postholes, in conjunction with patches of hardened dirt around them, suggest that at 80 centimeters below surface there was a living surface and structure.

Since the postholes from these two units were found at the same depth, it is reasonable to assume they were part of the same structure, but with only every other unit open on the mound, it was difficult to connect the postholes from these two units. However, it is possible to speculate interior versus exterior space, and perhaps the functions of the spaces. The lack of architecture in unit 1000 at the same depth suggests that it is outside of any structures of the mound. Therefore, unit 1200, as it is the closest to unit 1000, becomes the more likely candidate for exterior space. The architecture alone, however, does not provide any other useful clues to makes any further spatial distinctions.

We found the final set of postholes in level 13 of unit 1400. These were at a depth of 150 centimeters below the surface of the mound and therefore not associated

with the postholes at level eight in either unit 1200 or 1400. This set had three large holes, each ten to 12 centimeters in diameter and each filled with soft dirt that continued for about ten to 15 centimeters below where the holes were first noticed. These three holes were not immediately defined as postholes, but in association with rocks found in the level above, it seemed likely they were part of some structural feature. The distance between the holes (between 50 and 80 centimeters) and lack of small holes in between suggests they were probably support beams rather than wall frames.

Depth	Unit 1000	Unit 1200	Unit 1400	Level
100		Wall debris, postholes	Postholes	8
120	Wall debris			9
130		Wall Debris	Wall Debris	10
140	Wall Debris	Wall Debris	Rock Formation	11
150		Rock Concentration	Postholes	12
160	Possible Floor		Possible Floor	13
170			Wall Debris	14
180	Evidence of feature	Possible Floor	Wall Debris	15
190	Fire Pit			16
200	Change in dirt			17
210	Decrease in material culture			18
220				19

Figure 28: Summary of evidence of Architecture from SCJA House mound

ROCK FORMATIONS

Rock concentrations were found in the same two units of excavation as the postholes, units 1200 and 1400. The deepest rocks were found 180 centimeters down in unit 1200. There were three rocks along the north wall of the excavation unit.

They were volcanic rocks, and the unusual reddish tinge suggested they had been burned. However, they were not in any clear formation and we did not extend our excavation to further investigate any possible feature.

In unit 1200, between 140 and 150 centimeters down we found three volcanic rocks in the center of the unit. At this depth there were a lot of small pumice pieces scattered throughout the unit. The three rocks, ranging from six to 13 centimeters long, might have been just more of this pumice debris. However, these rocks were defined as possible architectural features because they were found at the same depth as a more significant rock formation in unit 1400.

In unit 1400, between 140 and 150 centimeters down, we found a series of rocks in groups across a large part of the level. There were two groups of rocks and three more individual rocks, ranging in size from five to 17 centimeters long. The dirt between the rocks appeared different from the dirt of the rest of the unit. The standard dirt at that depth was a medium to dark brown sandy loam, while the dirt between the rocks (if we were to create imaginary lines connecting them) was coarse, black-grey volcanic sand and came out in clumps that crumbled only with significant pressure. This distinction in dirt gave credibility to the idea that we had the foundation of some sort of wall.

While the area in the middle of the roughly u-shaped form created by these rocks was not very large (40 centimeters across at the widest point), it is possible that not all these rocks are in their original location. Even if they are all in situ, there is

not enough left to determine what part of a structure these supported. However, in conjunction with the postholes found ten centimeters below, the rocks may have been used as support for the rather large posts or foundations upon which walls were built.

WALL DEBRIS

Debris from wall fall was the hardest architectural element to define and interpret. We found no intact walls to provide an example of what constituted wall material in native houses. In fact, based upon traditional houses seen around Puerto Momotombo today, I expected the only evidence we would find would be postholes. But throughout the excavations of the mound we found concentrated areas of compact dirt mixed with small pieces of pumice and other small rocks, reminiscent of the wall material we found in the blacksmith's house. While it seemed incongruous with the posthole elements we had found, the presence of what we know was a building material elsewhere strongly suggests that at least some elements of this indigenous house used this mixture of rock, pumice, and dirt to form walls.¹⁰

The uppermost level where wall debris was found is in unit 1200 at the same level as the postholes (1208). In the southwest corner of the excavation unit of level 1208, there was a concentration of very hard, compact dirt filled with pebbles and pumice. Combined, the postholes and wall debris strongly suggest a structure at this

¹⁰ Hamilton and Hodges, in their research of Puerto Real, found ordinances in Spanish records for early settlers to immediately build houses out of locally available materials and then begin the process of formal Spanish style architecture (1995:430). Perhaps, therefore, there was a crossover of building materials -- but it may have started as a local tradition and was put to use in the building of Leon Viejo.

depth, most of which was destroyed by the volcanic debris we found on top. In the same unit, similar combinations of dirt and pumice were found at depths of 120 and 140 centimeters, the latter depth being the same level as the two rocks discussed above.

In unit 1400 there is a scatter of wall debris at a depth of 120 centimeters that continues down to the depth of 150 centimeters. Scattered around the rocks at 150 centimeters were chunks of this wall material that were tinged in red, perhaps burned, and other chunks that were so compact they appeared at first to be rocks. Finally, in unit 1400 between 170 and 180 centimeters down we found another concentration of wall debris that had among it some larger rocks, but none that formed any pattern discernable during excavation. There is no clear association of the wall fall at this depth to the rocks above, and therefore the possibility of a lower occupation is introduced.

In addition to the wall fall in units 1200 and 1400, there were concentrations of wall debris in unit 1000 starting at a depth of 140 centimeters, and continued in pockets for 20 centimeters down. However, there were no other suggestions of architecture around this wall debris. This unit, which is on the down slope at the southwest corner of the mound, appears to be outside the architecture that stood here. The wall fall is interpreted as a deposit from structures of adjacent units.

OCCUPATION FEATURES

FIRE PIT

The interpretation of unit 1000 as outdoor space is furthered by the discovery of a fire pit at 190 centimeters below surface. The pit was in the southwest corner of the excavation unit and continued into the walls of the unit. We estimated that we had about two-thirds of the fire pit exposed for excavation. Based upon what was accessible to excavate, this was a well-made pit constructed for repetitive use (rather than a one use pit). In all, over 30 rocks formed the pit's walls and bottom lining, and created a roughly circular shape. The pit was filled with large pieces of carbon and a few small but impressive artifacts, including a stone axe head and a hooked lithic tool. Outside the pit there was more carbon, patches of ash, and a compact surface. Ceramic artifacts were scattered both in and around the fire pit, but not in large quantity.

The fire pit is below the architectural features of the adjacent units, by a significant amount. Therefore, the relationship of the pit to the structures of the mound is unclear. However, the first evidence of a feature in the southwest quad of the unit came at level 16 (180 cm), where we found patches of ash and a few rocks. Field notes remark that we suspected that we might be coming upon a feature in that area. If indeed the fire pit extended up into level 16, it is possible that it was used in conjunction with the occupation at 150 centimeters depth. It could have been a sunken pit used for slow cooking or smoking. However, given the gap between

where we found the majority of the pit and the definite evidence of architecture, this fire pit may represent another episode of use of this mound.

FLOORS

As previously mentioned, in the field we found no obvious floors that would establish habitation levels with which these features are associated. We found some levels of compact dirt, some of which had higher clay content, and some of which came out of the unit in clumps. But there was never a compact surface across an entire unit that was definitively a floor.¹¹ Creating more confusion, the depths of the compact dirt areas were not easily associated with the architectural features we found. The areas defined in the field as possible floors were unit 1000 at 160 centimeters below surface, unit 1200 at 180 centimeters below surface, and in unit 1400 at 160 centimeters down. In unit 1000 the dirt was very compact sandy loam that came out in clumps. In unit 1200 the dirt contained a notable clay content that was compact and hard to break apart. While it seems possible that these floors are related to the architecture we found, they also create the possibility of three habitation levels rather than two.

¹¹ When I excavated in Mexico, floors were easily identifiable and so hard and compact that they were impossible to miss. In my excavations at Leon Viejo I never found such a surface. The processes of erosion and preservation were very different in Pacific Nicaragua. In the two areas I dug, both clearly had structures but the best I could do was define likely floor levels even when I knew for sure they had to have been there.

INTERPRETIVE OPTIONS

Overall, there is substantial evidence supporting two occupations of this mound, one immediately beneath the volcanic cap at a depth of one meter and the other at 120 to 160 centimeters below surface. The upper habitation, at one meter below surface, appears largely lost because it was exposed when the volcanic debris was deposited. But enough architectural evidence remains (the postholes and wall fall in both units 1200 and 1400) to interpret a structure at this level. While it would be nice to have a floor associated with this habitation, at this depth the dirt did not appear to be compact or distinct except for small areas around the postholes. Perhaps the duration of habitation at this point was so short that floors were not firmly established. It seems more likely, however, that the coarseness of the volcanic deposit eroded any floor that may have been there. The assumption made here is that the level at which we first see the postholes was the living surface.

There is more evidence of an earlier habitation, including wall fall, rocks, postholes and possible floors. The evidence of habitation comes from all three units and spans 40 centimeters, from 120 centimeters to 160 centimeters below surface. The sequence of the evidence creates a fairly clear picture of the occupation. Between 120 and 160 centimeters we found wall debris in all three units. Between 140 and 150 centimeters we found rocks and postholes in units 1200 and 1400. Finally, at 160 centimeters we found possible floors in units 1000 and 1200. Based upon the architectural evidence and location of each unit in the mound, we can

interpret unit 1000 as space outside the structure and units 1200 and 1400 as in or directly around the structure.

Finally, there is evidence in each unit of a third occupation. Between 170 and 180 centimeters we have wall fall (unit 1400), rock and a possible floor (unit 1200) and the first evidence of a fire pit in unit 1000. By 190 centimeters the fire pit is exposed in unit 1000. And we know that by two meters below surface there is a rapid decrease in material culture and no more evidence of architecture. The evidence of a third occupation, therefore, spans at most 30 centimeters. While the evidence of architecture is mostly indirect, in the form of wall debris, overall there is enough evidence to support the interpretation of a third occupation at this depth. My initial impression was that this occupation was part of the one above, but the surface of this fire pit and the possibility of a floor at 180 centimeters suggest a distinct period of use. In addition, features beneath the possible floor at 160 centimeters cannot be associated with the occupation above that living surface.

Establishing three occupations within this mound still does not provide me with clear evidence of a pre-contact assemblage. The piece of metal found in unit 1400 was from a depth of 190 centimeters below surface –which would be within the lowest occupation (the one I would have liked to assign to pre-contact). If all three occupations are from the contact period, then the analysis offers a chance to see th e

changes that took place during the earliest period.¹² As previously stated, however, regardless of the chronology of these occupations, any relationship between this site and Leon Viejo is speculative.

While the stratigraphic depths of the lowest features (possible floor, fire pit and wall fall) could be separated into a third occupation, ultimately the evidence to combine it with the remains from above was more persuasive to me for three main reasons. First, the fact that the possible floor at the lowest depth was from unit 1400 where I had seen no evidence of a floor in the middle zone suggested that this floor was related to the middle occupation. Second, the fire pit feature, while bottoming out at 190 centimeters, clearly was used above that depth. If, as I interpreted it, this fire pit was dug in and used over a period of time, then relating it to the middle occupation seems reasonable. Finally, the artifact assemblages suggested continuity between the middle and lower areas of occupation more than a break. Ultimately, it seemed more reasonable to interpret the lowest evidence of occupation as part of the middle occupation that either shifted lower as a result of seismic activity or was part of a tiered or sloped house compound.

¹² Although we have a relatively clear view of the chronology of the Spanish occupation of Leon Viejo, the same cannot be said for the indigenous communities surrounding the town. Therefore, this mound may have occupations that were contemporaneous with the lifespan of Leon Viejo as well as occupations that post-date the abandonment of the city. This possibility introduces another context to consider when evaluating the materials from the indigenous mound.

Artifacts of the Indigenous House mound

There are many ways to approach the analysis of the artifacts from the mound. Here, I have based the analysis on the divisions created by the architectural remains. In this approach the architectural evidence is given primacy to determine how the artifacts are grouped and separated. Since the interpretation of the architecture is by no means definitive and we could not identify any in situ habitation levels, dividing the artifacts according to these divisions should not be considered the only way to approach the data. However, by using these divisions as a starting point, we can see if the artifacts offer parallel patterns to the architecture or perhaps another way of viewing the habitation of the mound.

Relying on the architectural evidence creates three different occupations into which the artifacts are divided. The uppermost occupation is at one meter beneath surface and probably has only about ten centimeters of remains associated with it. While it is possible that the occupation includes another ten centimeters of remains, there are no architectural features that can be used to determine this one way or the other. Therefore, in this analysis the occupation includes the artifacts from level eight. The second occupation is defined as extending from 110 centimeters to 160 centimeters down (levels nine to 14, 50 centimeters of remains). At the top of this occupation is level nine, which appears to be a transitional level into the second occupation, and at the bottom is the possible floor identified in units 1200 and 1400.

The final occupation is from 170 centimeters to 200 centimeters (or until excavations stopped), in which we have the fire pit and scant evidence of other architecture.

The artifacts from each unit are divided according to the three defined occupations. In order to preserve as much context as possible, the materials from the three units were not grouped by occupation. There is no evidence of in situ material culture with the exception of the area around the fire pit, but absent a clear understanding of the habitation contexts, keeping the three units separate offered more perspective on the mound. The spaces from each unit might have been used in different ways within one occupation (as suggested by the different types of architectural remains in each). In addition, the use of space may have changed over time.

THE TOP OCCUPATION

In the uppermost occupation there is evidence of architecture in units 1200 and 1400 but not 1000. The quantity of ceramics from the three units suggests that there was less activity in unit 1000 at this level. In unit 1000 there are 235 sherds from this occupation, only 14 (5%) of which were not standard plain ware. Among the 14 sherds classified, there were six possible polychromes but none that could be identified. None appeared to be Managua Polychrome in either vessel form or remaining decoration. One of the 6 has scant paint remains that suggested a northern polychrome form. The classified sherds offer nothing useful for determining chronological period. In addition to the vessel sherds, there were three reworked

sherds and three small beads. The level appears to be a light density of cultural fill with little remarkable about it.

Units 1200 and 1400 both have higher density of ceramic remains but still a relatively low percentage of decorated sherds (5.6% and 4.5% respectively). Among the decorated sherds there is no dominant decorated type, but instead a sparse amount of a variety of styles. Both units have examples of Managua Polychrome and a few eroded polychrome sherds that appear to be northern in style. There is only one example of the simple banded bichrome style from each unit. In unit 1200 the two dominant categories of sherds are Leon Punteado vessels (eight or 21% of decorated sherds) and burnished (nine or 24% of all decorated sherds). In addition to the vessel sherds, there was one bead from each unit and another ceramic jewelry piece (possibly a lip plug) from unit 1400. Both units also had reworked sherds in various shapes and sizes.

Not surprisingly, the materials from this upper occupation are highly eroded. The best chronological markers are the three Managua Polychromes suggesting a contact period habitation. While the absolute number of sherds is low, the density for the depth of the occupation is actually greater than in the occupation beneath in unit 1200 and 1400. In unit 1000 the density is much lighter, which is best explained by the lack of habitation at this level in this unit.

Obsidian remains from the upper occupation provide evidence of activity consistent with the ceramic remains. The number of obsidian fragments in unit 1000

is not significantly greater than the amount found in the upper levels of volcanic sand. Four fragments were found in level 1008, one of which was a tool fragment. In 1200 there is a marked increase in the quantity of obsidian in the upper habitation compared to the fill above. In addition, there is more evidence of tools in this level than from the fill. There were six blade fragments among the 18 pieces of obsidian found in 1208. The first obsidian finds from unit 1400 were from level 1408 and include 14 pieces, four of which were blade fragments. Once again the quantity of obsidian reinforces that in level eight we have the beginning of significant cultural remains. In addition, the obsidian supports the idea that unit 1000 had the least amount of activity, consistent with the absence of architecture at this level.

No metal objects were found in this upper occupation (although from one of the midden units there was metal found at the same depth in the form of a nail), and there were no other objects that could establish any relationship with the Spaniards. While I am assuming that this occupation is a contact period site from the period of Leon Viejo, it is also possible that it was inhabited after Leon Viejo was abandoned. While this would not necessarily explain the lack of contact objects, we should not assume that local native communities abandoned their homes concurrently with the relocation of Leon Viejo.

	Level 8	Levels 9-14	Levels 15-18
Plain sherds	1581 (95%)	6304 (89%)	3420 (79%)
Classified sherds	85 (5%)	785 (11%)	943 (21%)
Total sherd count	1666	7089	4363

Figure 29: Summary of ceramics from units 1000, 1200 and 1400 divided by Occupations

THE MIDDLE OCCUPATION

The middle occupation extends for 60 centimeters in all three units, from level nine through level 14. It is the most significant habitation of the mound in terms of depth of cultural remains. It is possible that the uppermost level (from 110 to 120 centimeters) could be combined with the upper habitation, but since there was no evidence that the architectural features of level eight continued into this level, it was assigned to the middle occupation. Even removing this level would leave this as the dominant occupation of the mound. The 60 centimeters has multiple forms of architectural evidence in all three units (although more in units 1200 and 1400) and possible floors in both units 1000 and 1400.

There is a much higher density of ceramic sherds in unit 1000 in this second occupation than in the upper occupation. A total of 2285 sherds were analyzed from the six levels that constitute the occupation. However, there was still a low percentage of sherds that had any sort of elaboration. Only 175 (or 7.6% of the total number of sherds) were further classified. Among these, Leon Punteado was the dominant type that could be defined (47 sherds or 26% of the elaborated assemblage). There also was a significant number of sherds that showed evidence that they had

painted decorations (41 sherds or 23% of the elaborated assemblage) but only 27 of these could be defined (and many of these were tentative classifications). The dominant painted type was Managua Polychrome (14 sherds). In addition, there was one sherd that looked wheel made and was probably an olive jar fragment. This sherd, combined with the Managua Polychrome sherds, is the only suggestions of contact in this assemblage. In addition to the sherds, there were ten reworked sherds, two beads, one fragment of a figurine and one ceramic blowpipe.

In unit 1200, the ceramic assemblage of the middle occupation is generally similar in character to that in unit 1000. The percentage of elaborated sherds is marginally higher than in the upper occupation but still quite low (8.2% or 176 sherds). There are two Managua Polychrome sherds, and a variety of other painted types are represented, many of which appear to be northern in style. There is a significant quantity of Leon Punteado (88 sherds or 50% of the elaborated sherds) and a relatively small number of burnished sherds (11 sherds or 6% of the elaborated sherds). There is an increase in the number of Borgonia sherds (six sherds) and also the broad category of banded bichrome sherds (20 sherds). But no single painted type dominates the assemblage. In addition to the vessel sherds, there were 13 reworked sherds and two beads.

Unit 1400 stands apart from the other two in this middle occupation. Although the total number of sherds is in the same range as from the other two units, the percentage of elaborated sherds is substantially higher (15.8%). Almost half of

these (192 or 45%) are from burnished sherds. There are two Managua Polychrome sherds, and a sparse variety of other painted types including two types typical of the Late Polychrome period in Pacific Nicaragua (Vaillejo and Papagayo). Borgonia sherds are the single most dominant painted type of the assemblage (still only 41 sherds or 9% of the elaborated sherds). Leon Punteado increases substantially from the upper occupation, in terms both of total number and percentage. In addition to the vessel sherds, in unit 1400 there was 19 reworked sherds, 13 beads, one decorative ceramics piece (lip plug?) and five figurine fragments.

The middle occupation also has an interesting assemblage of ceramic objects not from vessels. There were 42 sherd disks or fragments of reworked sherds. There were 17 beads, predominantly notched oval beads in a variety of lengths. Thirteen of the beads came from unit 1400. One small ceramic tube, defined as a blowpipe, was found in unit 1000. Finally, there were six fragments from figurines, five of which were from unit 1400. These are all artifacts that are linked to native traditions predating contact and that played functional as well as symbolic roles in native life.

The obsidian in all three units from the relevant levels supports the pattern we see in the ceramics. In all three units there is an increase in number of obsidian artifacts in this occupation from the previous, and unit 1400 stands apart as having the greatest number of artifacts (135). The assemblage from 1400 is overwhelmingly flakes (90%) with relatively little debitage (2%) and the greatest number and percentage of cores (six cores, 4% of the assemblage). There is a low percentage of

tools and tool fragments in unit 1400 (2.9%, or four artifacts). The higher percentage of tools and tool fragments in units 1000 and 1200 (7% and 4% respectively) might be a coincidence of fill distribution, but also could be a suggestion of distinct activity areas of the house mound.¹³

Overall this occupation has little evidence of contact period. My impression in the field was that by level ten I was in a pre-contact occupation and certainly the majority of artifacts support this initial evaluation. There was no porcelain, majolica, metal or glass found at all in this occupation. However, there are two indicators that this is a contact occupation. There was one sherd from unit 1000 that looked like a fragment of a Spanish olive jar. Managua Polychrome is found in all three units (although in significantly different quantities). This is not much to support the chronological assignment, but nonetheless they are sufficient to raise the possibility that this middle occupation is from the contact period.

THE LOWEST OCCUPATION

The lowest occupation in this mound is defined primarily based upon the fire feature in unit 1000 and a possible floor at a depth of 180 centimeters in unit 1200. The occupation includes 40 centimeters of material and extends from level 15 to level 18 (except in unit 1200 where excavations stopped at level 16 or 180 centimeters).

¹³ The architectural evidence suggests that unit 1000 is most likely an exterior space, unit 1400 is the best candidate for interior space and unit 1200 could be interior, exterior, or both. The higher percentage of tools is linked to the exterior space, and thus may be the area where the activities linked to obsidian blades we conducted.

The bottom of this occupation is somewhat arbitrarily defined based upon the finds from unit 1000. If there is a floor at 180 centimeters it might be a more logical place to end the habitation, but since the fire pit seems associated with the floor but is slightly lower, the occupation is defined as ending at two meters. By two meters down there was a slight transition in the dirt, an absence of material culture and a decrease in material culture. Even if the bottom two levels should not have been included, the amount of material culture from these two levels is minimal compared to the upper levels of the occupation.

This is the most tentative of the three occupations defined here. It was not defined in the field, but rather in the process of analysis after the excavations. In other words, in the field, there was no clear break between what we have defined as the middle and later occupations. This is one instance where an evaluation of the artifacts in the next section may help to determine whether this is a distinct occupation. But this first analysis relies upon the divisions suggested by the architectural remains.

The fire pit area of unit 1000 offered the best hope of finding artifacts in their contexts of use. However, the areas around the fire pit did not have an assemblage of artifacts that could be clearly linked to the pit. Therefore, despite the feature, the ceramics of the entire occupation from unit 1000 are grouped. There were a total of 1113 sherds, 997 (or 90%) of which were basic simple slips and not classified further. The remaining 10% of sherds could be further classified and were dominated by three

main types: burnished wares, Leon Punteado and Borghonia (39%, 18%, and 12% of the 116 classified sherds respectively). There were very few polychromes, and the tentative type assignments were all northern types. There were no Managua Polychromes found in this occupation. Overall, even the sherds that were further classified had mostly simple forms of elaboration rather than highly elaborate decorative forms.

Unit 1200 has a similar pattern. Of the 1114 sherds that were found, 211 could be further classified (18.9%). This is a significant increase from the previous occupation (where 8.2% of the sherds were further classified), but there are actually fewer decorative types in this lowest occupation. Burnished sherds (brown, black and red) form the largest category of classified sherds, comprising 38% of the assemblage. Leon Punteado was the next largest type (37 sherds or 17%) and Borghonia was the only painted type to show up in significant number (32 or 15%). There were no Managua Polychromes, only one possible northern polychrome and two sherds defined as Papagayo (and an additional five sherds that had remnants of paint but were too eroded to classify). There was also a notable amount (26 sherds or 12%) of the simple bichrome vessels. As in unit 1000, the types that were defined from this unit were relatively simple decorative styles and not fancy polychromes.

In unit 1400 the overall pattern is similar, but the number of sherds that were classified as having more than a basic slip is substantially greater than from the other two units. In unit 1400 there were 2149 sherds, and 630 of them could be further

classified (41%). The same three types seen in units 1000 and 1200 dominate the assemblage here: burnished (423 sherds or 67% of the further classified sherds), Leon Punteado (52 or 8.3%), and Borgonia (37 or 5.8%). The high percentage of sherds that were classified is largely attributable to the burnished sherds which were mostly red wares (320 or 75% of the burnished sherds), with some brown (76 sherds or 17.9%) and some black burnished sherds (27 or 6.3%). There were also 54 simple banded bichromes (8.5%) in the assemblage. No Managua polychromes were found and only five possible polychromes, including one possible Ullua sherd (northern style) and one Papagayo that had a repair hole drilled through it. This hole suggests that while not common, the Papagayo style was worth repairing.

In addition to the vessel sherds, there was a small array of other ceramic items from the three units in the lowest occupation. There were 20 reworked sherds (five from unit 1000, three from unit 1200 and twelve from unit 1400). These were in a range of shapes and sizes that did not suggest any dominant style. There was one blow tube found in unit 1200 similar to the one found in the middle occupation. Finally, there were five fragments from figurines (two from 1200 and three from 1400).

The quantity of obsidian in the lowest occupation is consistent with the ceramics in terms of density of remains. Units 1000 and 1200 have about the same number of artifacts (66 and 68 respectively), while unit 1400 has almost double (125) that number. Despite the large quantity of obsidian in this occupation, there are only

four blade fragments (two from unit 1000 and two from unit 1400). One blade from unit 100 was found in the level of the fire pit. The remainder of the assemblage is flakes and debitage in all three units.

Finally, in unit 1400 at level 17 there was one small fragment of a piece of iron sheet metal recovered. There were no other Old World artifacts or New World artifacts suggestive of the contact period. This one piece of metal stands in complete isolation and is the best chronological marker we have from this occupation. It strongly suggests a contact period occupation despite the fact that everything else indicates otherwise, or at the very least does nothing to support this chronological assignment. While there are other possible interpretations that can be offered, none of them exclude the possibility that the occupation, and the entire mound until this depth, was inhabited during the contact period.¹⁴ Ultimately, I have decided to accept this piece of metal as sufficient evidence of contact period occupation, but probably at its very earliest period.

Material Trends of the Three Occupations

There are clear differences in the material assemblages of the three occupations. The differences include variation across the three units within a single

¹⁴ Two other interpretations immediately come to mind. First, it could be a result of contamination either due to rodent tunneling or falling dirt. There was no evidence of the former and the piece was not found at the surface of the level. Second, this level could be pre-contact Nicaragua and the metal brought in through trade and exchange from other areas that already had a Spanish presence. While there is no way to disprove this, it seems like a less likely option than local procurement.

occupation and variation through time from one occupation to the next. Given that the materials probably come from post-occupation fill, there is a limit to the extent of contextual distinctions that can be drawn between units. However, if we assume that the cultural fill has some intrinsic relationship to the place where it was found (even if not in its primary use context), there are a few general trends that suggest different types of space in the three units. Likewise, there are a few trends that can be generalized from the data as it changes from upper to lowest occupation.

Overall, comparing the material remains from each occupation in each unit reveals a pattern that seems consistent with the architectural evidence. In the upper occupation the most significant difference is between the two units that have architectural remains (1200 and 1400) and unit 1000, which does not have any structural remains. There is a much smaller assemblage of material objects from unit 1000 than from the other two units. Both units 1200 and 1400 have substantially more artifacts, but interestingly about the same percentage of classified sherds as unit 1000. In the second and third occupations, unit 1400 stands apart with a substantially higher percentage of classified sherds. In the lowest occupation, unit 1400 stands apart both for the density of remains and the percentage of classified sherds. While the percentage of classified sherds increases in all three units at the lower occupation, in unit 1400 the percentage more than doubles from the middle to the lower occupation.

The density of artifacts from unit 1400 in the middle occupation can be viewed as part of a household assemblage that is consistent with the architectural finds. It is interesting, however, that while there is variation in the amount and type of architectural remains found in each unit, the number of ceramics is roughly equal. So, while the overall density of artifacts in the middle occupation supports the interpretation of habitation, there is no direct relationship between the amount of architecture found and the density of material remains.

In the third occupation, where the number of sherds from 1400 remains high, there is little evidence of architecture in this unit. Once again, therefore, we cannot assume a simple correlation between architecture and a high density of artifacts.¹⁵ Furthermore, there does not seem to be a direct relationship between the number of artifacts and the occupation divisions. Examining the number of ceramic artifacts from each excavation level in unit 1400 suggests a different interpretation of the data. The number of artifacts in unit 1400, after a low point in level 13, increases substantially in levels 14, 15 and 16 and then drops again in level 17. This pattern does not in any way fit with the interpretation offered by the architectural evidence. The large number of artifacts from level 14, where a possible floor is evident, and 15, defined as the start of the lowest occupation beneath the floor, suggests continuity rather than a break. The assemblages from these two levels are similar in overall

¹⁵ It certainly is possible that in the lowest occupation unit 1400 was within a structure that was not visible in the unit. But that is a purely speculative option.

character as well as quantity. However, there is one potentially significant difference between the two levels. Level 14 has two Managua polychrome sherds whereas level 15 has none. If indeed this type is a colonial marker than it is significant that none are found in level 15 from unit 1400 (and none from the other two units at that depth either).

Overall, these comparisons reveal that interpretation of the mound depends on which criteria are given priority. If we decide that architecture is most important, then it is reasonable to create a division from level 14 to 15. Alternatively, if the character and size of an overall assemblage is most important, then there is continuity from level 14 through to 16. In this scenario the lowest occupation is integrated back into the middle occupation. Finally, if specific artifact types are considered determinative, then once again we can make a distinction between levels 14 and 15 based upon the presence and absence of Managua Polychrome sherds. Choosing which of these interpretive options to promote is a subjective decision, but ultimately all three can be considered as the data is further analyzed. As more data are incorporated, it may become clearer which option offers the best chance to provide an integrated view.

Moving from the questions raised by one unit to a broader perspective creates an additional vantage point. The three assemblages as established by the three occupations offer fairly consistent patterns in all three units. First, there are a number of candidates for types that may be good temporal markers. While some types appear

only once or twice in the entire mound, other types are dominant enough that they may be sensitive markers of change whether it be over space or through time. For example, no Borgonia or Chavez sherds were identified in the upper habitation (with one possible exception of a tentative Chavez sherds in unit 1200) and in the lowest occupation there were no Managua Polychrome sherds. Also, the molded pieces used to create simple animal or human figures on otherwise plain vessels are not found in the upper occupation.¹⁶ Another type that may be significant is the broad category of simple banded bichromes, which are almost absent from the upper occupation but found in significant quantities in the lower two occupations. Certain types that are well established in the chronology of Pacific Nicaragua, such as Papagayo and Vaillejo, appear in the lower two occupations but not in the upper one, once again suggesting a temporal difference between the occupations.

Second, the percentage of sherds that were classified increased from the upper to the lowest occupation. While the increase was most dramatic in unit 1400, all three at least doubled the percentage of classified sherds from top to bottom. Interestingly, the variety of polychromes and other decorated types decreased as the percentage of classified sherds increased between the middle and lower occupation.

¹⁶ It was a common decorative tradition in Pacific Nicaragua through the Late Polychrome period to add simple, small animal or human figures - almost stick figures - to a variety of otherwise completely plain vessels. In my study of pre-Columbian ceramics of Pacific Nicaragua I was struck by how many vessels were given simple forms of elaboration such as this. Virtually every vessel seemed imbued with symbolic meaning, many of them brought to life by these molded creatures. It strikes me that this was an active symbolic system in these vessels. If indeed, this tradition stops or decreases in the contact period, we are, I believe, seeing an important shift worthy of further consideration.

In other words, the increase is not explained by a greater variety of types, but rather a larger quantity of a few particular types as the overall variety decreased. In particular, burnished sherds account for the largest part of the increase in classified sherds in the lower occupations. In this mound, over time there is a visible shift in ceramics from types elaborated with minimal, but significant decorative elements (such as burnished surfaces, painted or incised bands) to highly decorative types (such as ornate polychromes). This shift is most visible between the upper occupation and the lower two, suggesting the possibility of social change that was expressed through the ceramic vessels.

Broader Interpretive Options

Our ability to interpret the significance of the changes in material assemblages from the three occupations is limited, due to the ambiguities of the data and the limited context into which we can place the materials. It is unreasonable to conclude that the changes seen here represent those of the entire community. However, the available data can point us in certain interpretive directions. Here they are presented as preliminary ideas. As more data is gathered, these ideas may become reasonable interpretations or unlikely explanations.

Based upon the data presented here, I have formulated a reasonable interpretation of the chronology and habitation of the mound. Beginning with the evidence of lower occupations, I ultimately believe that there was one lower

occupation of the mound. While it is hard to fully reconcile all the data, the distinction between what I proposed as the second and third occupations seems more tentative than the evidence that unites the levels in question. In particular, the large numbers of sherds from level 14 through 16 in unit 1400, where the greatest amount of architectural remains is found, suggests continuity rather than a break. It seems more reasonable to integrate the architectural features of the lowest levels into two occupations than divide the ceramic assemblage based upon the ambiguous evidence of structures.¹⁷

This lower occupation spans almost one meter of deposits and is assigned to the contact period, but very possibly is the transition from pre-contact into the contact period. In other words, the remains are fundamentally an indigenous Late Polychrome period assemblage with only the scantest evidence of Spanish presence (the metal at 1417). As time passes in this occupation we see slightly more evidence of Spanish presence (for example Managua Polychrome) as the entire assemblage changes character in subtle ways. Rather than a middle and lower occupation we

¹⁷ An additional source of evidence comes from the botanical samples recovered from the excavations. The preliminary botanical results from flotations reveal the greatest number of samples from levels 13 through 17 across the three units. There was almost nothing found in levels eight through 12, and nothing below level 17. The variety of botanical remains includes amaranth, legumes, maize and crotalaria, all of which are reasonable to find within an indigenous household. The greatest density of remains from all three units combined is from level 16, or 180 centimeters, and unit 1200 has the biggest data set both in terms of number and variety. This level (1408) is one of places that a possible floor was located. The botanical remains offer support of this interpretation in this unit at this level, but not in units 1000 and 1400 at level 14 where other possible floors were identified. Overall, however, botanical remains were very hard to recover from this site and the methods need to be altered to provide better recovery and results.

have two parts of the same occupation that allows us to see the actual process of change. The upper occupation is, as previously described, at the top of the cultural deposits and only contains ten centimeters of remains defined as contact period. However short the occupation, the differences in the assemblage demonstrate significant changes in material trends at this point and time.

For the purpose of this analysis, evidence of occupations from the three units is combined, but the lower occupation is still divided into two parts. Combining the three units highlights specific trends in the ceramics that suggest interpretations about the changes during contact. First, there is a marked increase in the quantity of burnished sherds in the lower occupation, and it is substantial in the lowest part of the occupation. Specifically, there is an increase in the amount of red burnished sherds, and an appearance of brown burnished sherds. Red burnish is a finish of particular interest during the contact period because it was used during by both the Spanish and native communities. Only one red burnished sherd came from the upper occupation, which was a dramatic drop from the earlier occupation. The explanation may be that as the Spanish demand for red ware increased, a demand placed upon the native community, there was less available for indigenous use. The decreasing number of red burnished sherds from the lower levels into the middle levels of the second occupation suggests a steady loss of the type as the Spanish demand increased. Black burnished sherds show the same pattern but in much lower quantities.

The brown burnished sherds that only appear in the lower occupation, and more so in the lowest part may tell another related story about native ceramic during contact. Brown burnished sherds are an elaboration of the standard brown slip seen on the vast majority of the plain ware. That it was sometimes burnished in the early occupation, more so in the earlier part of it, is part of a trend that I see in the Late Polychrome period – where the vast majority of vessels receive some, albeit small, form of elaboration. I believe that if brown burnished sherds do not appear, or do in a vastly smaller quantity, in the upper occupation it has to do with a fundamental shift in the attention given to ceramic decoration once into the contact period.

There are subtle shifts in the sherds with painted decoration from the upper to lower occupation. The percentage of painted sherds remains small in both occupations, and in both parts of the lower occupation. However, the distribution of types through the occupations is significant. As already mentioned, certain types that may offer chronological markers have distinct distributions. Managua Polychrome is only in the upper occupation and in the upper part of the lower occupation (not found beneath level 14). Papagayo sherds are only found in the lower occupation. Borgonia sherds, which appear in a large number in the lower occupation, are not part of the upper assemblage. As broad categories, sherds with simple incised decoration and bichrome bands decrease in the upper level occupation. Also as a category, sherds with molded pieces from attached figures and incensarios decrease in the upper occupation.

All of this points to a shift in the ceramic industry during the contact period. As previously mentioned, in my observations of Late Polychrome ceramics there were virtually no truly plain sherds.¹⁸ Even the most functional pot or dish received some slight, often careless or small form of elaboration. Simple horizontal bands around the rim, burnished finish, small attached human or animal stick figures, and simple geometric incised bands of decoration, are all common on vessels of the period. The vast majority of plain sherds from a Late Polychrome period assemblage probably come from vessels with one of these simple, yet significant forms of decoration. In addition to these relatively simple forms, there were also the more ornate types including polychromes and other more elaborate forms of some of the styles mentioned above. We see evidence of this tradition in the lower occupation of the indigenous mound.

In the upper occupation, the decrease in the range and quantity (in both numbers and percentages) of these types of decoration suggests that during the contact period there was a radical shift in the ceramics. Many of the various forms of decoration may have been left behind, perhaps because a new social order placed different demands on people, directed them toward other beliefs, shifted their aesthetic, or altered their motivation to use ceramics as a form of communication in

¹⁸ I had the opportunity to study one of the largest private collections of ceramic vessels from Pacific Nicaragua, held by the family of an early explorer of the archaeology of the region. It was during this time that I realized the extent to which virtually every vessel is imbued with some form of decoration, very often bringing an animal or human form to it. Ceramics of Pacific Nicaragua impress me as vibrant and active in the role they must have played in society.

this way. It may be a combination of reasons, or a range of reasons that changed over time. The evidence here is certainly too scant to draw confident conclusions, but they point out an interesting path for further research.

Connecting the Dots: Relationships between the Mound and Trenches in Julio's field

The relationship between the mound occupations and the remains in the trenches is unclear, but certainly the proximity suggests a connection. They come roughly from the same chronological period, although we are unable to fine-tune it further. Based on depths of remains, the trenches are most likely associated with the upper occupation of the mound. Both have cultural material immediately beneath the volcanic cap, and the amount of fill on top of the structural evidence from each area differs probably because of their relative height and location in the field. On top of the mound there would have been more erosion, while the trench area is an area where such erosion would settle.

Whatever the exact relationship, it is clear that both the trench and mound are from the contact period. While the mound has good evidence for a household, the rock wall of the trenches is somewhat harder to define. It is interesting, however, that it is in the area of the rock wall that all of the Old World ceramics were found, rather than in the house of the mound. It is possible that the rock wall was part of a house wall and the artifacts therefore come from a similar context as the house mound assemblage. But either way, the comparison is interesting. Either there are two

nearby houses and only one had acquired New World ceramics and glass, or these artifacts come from an outdoor area and were not kept in the house. The obvious caveat to this comparison is that the cultural materials from both areas are more likely fill than contextually preserved artifacts. However, the best possible context we can offer is that they come from the vicinity in which they were found. So, keeping in mind the caveat, we have an interesting comparison. There was not a single sherd of majolica or porcelain found in the excavation of the mound, despite the evidence that it was inhabited during the contact period. While it is possible that both the mound and the area of the trenches were part of the same compound, it still does not explain the differences in the assemblages. But it is hard to speculate further without a better understanding of each context and the relationship between the two. Most important to this discussion is the reminder that assemblages can vary even across a very small area.

Indigenous Contact

The trench and mound excavations in Julio's field provide one small glimpse into indigenous life at contact. While alone they cannot create a picture of the community, they nonetheless begin to form views of life during contact. Within an Interpretive framework, the small scale of the excavation and limited perspective that they offer does not restrict the ability to suggest interpretations based upon the available data. Two fundamental goals have been accomplished through this

excavation. First, I have been able to identify an indigenous habitation from the contact period and establish some relationship with the Spaniards. Second, the data have led to observations about life at contact and how indigenous traditions may have changed. The goal here is not to model contact interaction but to look for the various ways in which the interaction may have occurred. The excavations also provide a data set that can be used to compare indigenous and Spanish life at contact, at least in some general ways.

CHAPTER SEVEN:
PERSPECTIVES ON CONTACT AT LEON VIEJO

Interpretive Archaeology of Contact

Interpretive Archaeology offers the theoretical tools to examine contact between two cultures. It does so because it is not confined by closed models, bounded systems, or evolutionary assumptions to provide interpretations. First and foremost, Interpretive Archaeology is a data-centered approach to archaeological interpretation. The approach is more interested in generating particularistic interpretations based on contextual analysis of data than in abstracting general truths or demonstrating the validity of specific theories. Interpretive Archaeology is uniquely able to evaluate contact because it offers an approach that can interpret both European and indigenous sites under the same theoretical rubric. Whereas dominant approaches in contact archaeology generally look at how one group (the Europeans or indigenous) reacted to the other, here the two groups can be studied side by side.

There may not be many sites that have both native and European habitation in close proximity. But when we do have the opportunity to study the interaction between these two cultural groups, an approach that can accommodate both is necessary.¹ In the case of Leon Viejo and its indigenous neighbors, I began to think

¹ The benefits of such an approach extend beyond contact archaeology to the examination of many types of cultural contact and interaction. For example, understanding the complexity of community identity, interaction and distinction in pre-Columbian Pacific Nicaragua.

less about two communities in contact (and conflict) but more about one diverse community struggling to survive. Through such a framework, I can offer comparisons between the remains of the blacksmith's house and the indigenous house mound, despite the fact that there is no direct link between the two.

Examining these two houses as different parts of the same community creates a new context within which to evaluate contact. The perspective of one community is another way to create appropriate contexts to place the data for interpretation.² It seems almost meaningless to compare the Spaniards of Leon Viejo to residents of 16th century Spain. Clearly, Leon Viejo shares relatively little in common with the towns of Spain at the time and it is probably unreasonable for us to expect that it would share much in common with Old World towns. Yet, when we evaluate the Spanish material culture there is an implicit use of the European standards of wealth – using the Old World items to determine the relative status of New World Spaniards (South 1988:36-37; Charlton and Fournier 1993:209). While we can compare Leon Viejo to other early contact towns, it vastly broadens the context for analysis and this may be premature if we have not attempted to understand the town in the context of its closest neighbors – the native community. Integrating the Spanish and native communities into one also provides a new context within which to evaluate indigenous life at contact.

² Hodder argues for the constant placement of data into more and more contexts to reveal or read as much as possible from them (1986:145).

Interpreting the materials from the blacksmith's house and native site in the context of this new community offers new perspectives on early contact. Clearly, contact brought about new circumstances for both groups. For the Spaniards, the changes were abrupt and began before they settled at Leon Viejo, since this was not their first stop in the New World. For the native community, the changes in the lower occupation of the mound suggest an incremental shift in their lives during the earliest part of contact (although still quite compressed in archaeological time).³ The process of change suggests that at least initially, the native community maintained some cohesion in its cultural identity.

Despite the fact that the Spaniards had certain technologies that were not part of the native tradition, the implicit assumption of their dominance may be premature at Leon Viejo.⁴ The material remains from the blacksmith's house demonstrate the extent to which they were dependent on the native community. The overwhelming majority of objects associated with daily living were native in style. This includes a tool assemblage made up of obsidian and lithic tools and the absence of metal tools that could fill the same functions. The assemblage from the blacksmith's house is similar in many significant ways to that from the native house mound, particularly the upper occupation of the mound. The high percentage of plain sherds, the presence of

³ This process of change maybe similar in character to changes during pre-Columbian times when we shifts in material culture traditions that have been used to suggest new cultural groups moving across the landscape.

⁴ In particular the presumption is that the Spaniards had dominance militarily.

Managua Polychrome and black-on-red as the dominant painted type, and the presence of the distinct Leon Punteado style (definitely an indigenous style) are common traits in both assemblages. The variation occurs more when specific excavation contexts are considered, but comparing the cultural fill from the blacksmith's house and the mound suggests these neighbors shared many basic daily-use objects in their houses.

This focus on subsistence items raises the issue of the role that European and other specialty items may have played among the Spaniards. As I suggested in chapter four, these objects may have secured some status if they retained their symbolic value. However, amidst the insecurities of life at Leon Viejo, these objects may have been less important than securing food. In other words, as is often suggested (although more often in terms of colonial objects in a native community), these Old World objects may have taken on new meaning in this new context (Thomas 1991:101; Cohn 1996:18). The context in which Old World objects were found in the blacksmith's house furthers the interpretation that they had a different place at Leon Viejo than they would have in Spain. The Old World ceramics were found in the blacksmith's interior room, mixed with native sherds, both plain and decorated. This suggests an integration of the European objects into the life of Leon Viejo, which was constituted largely of native objects.

These observations, based upon the artifacts, are supported by what we know of Spanish tribute demands on the local native community. Almost without exception

the Spaniards placed high demands on the natives for basic subsistence items local to the region (Stanislawki 1986:26, 131). Clearly the Spanish population was concerned with meeting its own basic needs of food, clothing and shelter. While these demands must have placed great stress on the native population, they were the group better equipped to live in those surroundings and thus produce those items. So as the Spaniards sought profit through the sale of natives into slavery, they were undermining their own survival, which clearly necessitated native labor and know-how (Pinto 1989:228). Perhaps in the eyes of the natives who were forced into working for Spanish survival, the Spaniards were dominant, but that dominance, to whatever degree it existed, was precarious at best during the early period of contact.

The materials of the native house mound suggest a different circumstance during the early contact period. The lower occupation, which is defined here as transitional into the contact period, shows a gradual change in types of materials. The lowest levels are indigenous in style with only a piece of metal to suggest contact had occurred. During the later part of the lower occupation there is an increase in types of decorated sherds that are probably northern styles, suggesting a change in areas of trade or contact among native communities. Most often indigenous communities at contact are evaluated only in terms of how they react to their situation with the European presence. However, many of their own socio-economic relationships may have continued into contact and changed during this period, perhaps due to the European presence, but not necessarily.

The emergence of Managua Polychrome vessels, considered to be a contact period style, is one example of changing native traditions that may have been only indirectly related to contact. This style is distinct in vessel form and painted decoration from all other polychromes from Pacific Nicaragua. The tripod form and deep red paint are vaguely reminiscent of other Mesoamerican styles, leading some to speculate that this style emerged during the contact period as people migrated or were forced to move from Mesoamerica into Central America. While this style differs from Late Polychrome decorative types, the differences are no greater than those between dominant polychrome styles during periods of the pre-Columbian era. In other words, there may still be native patterns of interaction at work during the contact period that were at least to some extent independent of Spanish rule.

The upper level of occupation, along with the materials from the trenches, is defined as contemporaneous with the life of Leon Viejo. In this assemblage it is fair to state that there appears to be an overall simplification in styles as argued for elsewhere in the Americas (Charlton and Fournier 1993:211). This is the point at which I believe we see the impact of the damage to native populations in the archaeological record. The habitation is smaller and range of objects is narrower. There is a drop in both the most elaborate styles and mid-range decorative types (such as burnished finishes). As an industry, it would appear native ceramic production for native use received less attention. Given the disruptions to life, this is not an unreasonable interpretation. The most interesting questions surround the earliest

period of contact in the lower habitation – the earliest processes of change before the overall social structure changed.

The comparisons between the native and Spanish remains are general and based on a limited data set. It is not inappropriate to make these observations within Interpretive Archaeology since the goal is to seek meaning in the data at various levels. However, it is important to point out that I am generalizing about a community as a whole based on two examples of individual houses. The materials I recovered are first and foremost of a person or family, which formed one part of a much larger community. The materials found in houses are there because of actions and choices made by individuals within the parameters of the opportunities afforded to them. I am not attempting to interpret mental choices made by individuals past or present. It is critical to remember, however, in the process of understanding larger social patterns that the data are comprised of assemblages from individuals. And within these assemblages we may be able to see some individual strategies used in this period of contact. Ironically, evaluating the individual actions becomes more possible when we have more examples of individual houses to use in comparison.

Ultimately this is what is needed at Leon Viejo. Intensive, small-scale excavations need to gather data from carefully detailed contexts. In part this is because of the complexity of the site that precludes any hope of understanding the site from the surface. And in part this is because it is through such small-scale, context based excavations that we will recover meaningful data. The process will be slow but

it will be the only way to access contextual data aimed at interpreting contact. Interpretive Archaeology permits us a theoretical framework within which meaningful interpretations can be made regardless throughout the process. This is because the goal of the approach is to find as many avenues of meaning as can be reasonably extracted from the data and pursue those points of particular interest. By considering the data in a variety of contexts, we can use the materials to gain insight into the materials provide insight into individual houses, community identity or interaction, and broader social patterns. The contexts in which we place the data in may be based upon evidence from excavation or questions we wish to investigate. Along the path of interpretation we may find that the data are better suited to answer questions from one context more than another, which in and of itself should be viewed as an informative interpretive result. But as the process continues there will be ever greater insights into the complexity of contact communities such as Leon Viejo.

From the Present to the Past – and Back Again

During my project at Leon Viejo, I found myself constantly moving between the past and the present. At the practical level, I was investigating the past of an area where simultaneously I was trying to live in the present. The complexity of the excavations and the logistics of living in Puerto Momotombo divided my attention on a daily basis. While the challenges of daily life in Puerto Momotombo often were a

distraction to my focus on the archaeology, ultimately I benefited from them. The more I learned about modern life in Puerto Momotombo, the more I began to see parallels between its challenges and those facing communities – Spanish and indigenous – during contact. This inspired me to learn more about the history of Nicaragua from the colonial period to the present as a means of understanding present circumstances, designed ultimately to gain insights into the past that was the subject of my research.

Prior to working in Nicaragua, I had felt that there was no event in the modern era that could possibly compare to the contact in the Americas (except possibly for other more recent contact events elsewhere in the world) and that could provide insight into the period. Everything from worldview to daily survival was so profoundly altered that, in my mind, contact was an unparalleled time that always remained slightly beyond my reach to comprehend. While I realized that artifacts from the contact period might provide material manifestation of the drastic shifts in all aspects of life, the objects seemed mute when it came to imagining what it was like when, for example, the founders of Leon Viejo began construction as the native community watched and probably was forced to help. And for me, it had seemed impossible to characterize contact when I simply could not fathom what it must have been like.

Nicaragua changed this for me. Working in Nicaragua, seeing the effects of the 1972 Managua earthquake and the decade of Revolution, has given me insight

into life at contact. I am not drawing parallels in the events themselves, but rather in the resulting fall out. Clearly a natural disaster, no matter the magnitude, nor a revolution, no matter how violent, can compare to the collision of two worlds. But witnessing the physical and material impacts of the earthquake and revolution, and listening to the perspectives of people who lived through these events, led me to believe that for the first time I had some glimpse into how communities and people coped with and reacted to contact.

AUTHORITY PRESENT AND PAST

I did not first visit Nicaragua until after the earthquake and revolution, but in the 1990s, when I first visited, these events still permeated every aspect of life, much in the same way I imagine contact must have had a long-lasting impact. In 1990s Nicaragua, at the national level there was a new government that was slowly establishing itself but that lacked the loyalty of the people it governed. The government was tentative in its rule, and the people sidestepped it whenever possible due to their lack of trust developed from decades of experience, under first Somoza and then the Sandinistas. The new government still could not provide basic necessities to the people, and consequently people had little use for the government. For example, when shopping I frequently was asked if I wanted a receipt since if I did not, the sale could be made without charging and paying taxes. Circumventing laws was an art form in the last decade of the 20th century.

I could imagine a similar set of circumstances in the relationship between the indigenous people and the Spanish government established at Leon Viejo during the early years of contact. The Spaniards attempted to bring the natives under their control and placed substantial demands on local communities for a wide variety of goods (mostly subsistence items). The Spaniards also introduced Christianity to the natives and tried to enforce conversion. It is easy to imagine that small communities prior to contact, such as those around Leon Viejo, had enjoyed a certain amount of autonomy, and thus might resist the authority of the Spanish. This resistance was not necessarily overt. There may have been many strategies to avoid, deceive, and comply in careful balance.

The relationship between the leaders of Leon Viejo and the Spanish crown may have had a similar dynamic. The tension between the Crown's rule and the local colonial governments is ubiquitous in early contact towns, and there is no doubt that circumventing the Crown's authority was commonplace. Ultimately, the native communities and the Spanish town may have shared a similar situation when it came to accepting and defying authority.

POPULATION PRESENT AND PAST

Both the earthquake and the revolution drastically changed the population of Nicaragua. The first killed 10,000 instantly in the capital and then altered the life of the survivors. The revolution killed many more in war, and caused many to leave the country to escape military or the hardships that resulted from the conflict. As a result

Nicaragua lost a generation. By the end of the war the population was top and bottom heavy, and the middle group – the most important to an economy and society – was missing. Among the people who survived and endured these events, their psyche was changed. It seemed as though their expectations of life were altered, their dreams for the future taken away. People spoke more about the past than any hopes they had for the future – I believe in large part because they did not have the confidence that there was a future for them. And still today if someone complains a lot in Nicaragua, the saying is, ‘in 1972 there was a much bigger problem.’

Certainly during the earliest period of contact the estimates indicate that many more people died from conflict and disease than during the last decades of the twentieth century. In addition, huge numbers of people were sold into slavery and exported. By all accounts the Spaniards so severely depopulated Nicaragua as to threaten their own well-being. The impact on those remaining must have been devastating. While Spanish records indicate they did not formally reorganize indigenous towns during the early contact period, this seems irrelevant since all communities must have been severely impacted by the depopulation. Community structure and relationships (both within and between communities), as it had existed prior to contact, could not have sustained the depopulation, even if the Spanish government did not set out to destroy them.

COMMUNITY LIFE PRESENT AND PAST

As a result of the revolution, both the structure and character of Puerto Momotombo fundamentally changed. As the identity of a farm labor community disappeared with the abandonment of the farms, so did the cohesiveness of the town. By the time I lived in Puerto Momotombo, there was little that could be used to identify it as a community besides a shared water system and an elementary school. There were no town leaders, formal or informal, to meet. During the total of six months that I worked there I never saw celebrations for weddings, birthdays, etc. that would bring together members of the town. It was not common to see neighbors chatting or kids playing. At one edge of town stood, just barely, an early 20th century house of President Zelaya. It looked about ready to fall over with the next major wind, and I understand that Hurricane Mitch just about destroyed it. The condition of this house was indicative of the overall character of Puerto Momotombo. The town felt like it had already taken one step towards the archaeological ruins that it neighbored.

I envision that the indigenous towns at contact may have had a lot in common with Puerto Momotombo. Not only were their populations depleted and their social organization stressed but also their belief systems were challenged. While the new demands placed upon them probably provided a sense of purpose, this was in no way their own identity. The new circumstances must have demanded redefining roles and

relationships at the town and family levels. While the towns may have survived contact, the essence of their character and form probably did not.

Puerto Momotombo, in particular the way in which the modern town manages to survive largely beyond the interference of the federal government, led me to think about the Spanish town of Leon Viejo. The largest presence of the federal government in Puerto Momotombo is at the ruins of Leon Viejo. The ruins are virtually the only opportunity for employment in Puerto Momotombo, but since the federal Office of Cultural Patrimony controls the site, local people gain very little from the tourism. In fact, more than anything, the ruins create insecurity among landholders who fear that the government could confiscate their lands in the name of cultural patrimony. Consequently, people seek their own profits from antiquities found in and around town, and avoid contact with the government whenever possible. They like their independence when it suits them, but at the same time they may complain they do not receive more support.

Leon Viejo and its residents may have functioned in a similar fashion. The function of Leon Viejo was clear as the administrative capital of new territory. But given its disadvantageous location and the overall failure of the mining industry intended to bring wealth to the town, Leon Viejo must have suffered an identity crisis. The Spaniards who lived at Leon Viejo did so under the official authority of the Spanish crown. The reality of life in Nicaragua, however, required constant adjustments of the crown's expectations and laws. And sometimes the laws were just

plain ignored. We know that the crown tried hard to control both the slave trade and encomienda system in Nicaragua with little real impact on the behavior of the people of Leon Viejo. Orders from the crown were followed or ignored based upon motives independent of the crown. This autonomy gave the residents the freedom to do as they wanted but also alienated them even further from their home country. Leon Viejo was part of a much larger system, but its identity, success, and survival were very much in the hands of its own residents.

INDIVIDUALS PAST AND PRESENT

My overall impressions of Puerto Momotombo do not encapsulate the individual responses to the challenges of the post-revolutionary town. Throughout the decades of conflict individual residents made different choices that resulted in a variety of opportunities for them in the years following. Don Tomas, who gave me permission to use his land adjacent to Leon Viejo, was not so much an exception to the rule as an illustration of the unexpected paths that people chose during times of change. What Don Tomas may have foreseen at the start of the revolution is now hard to determine. But he had the motivation to take advantage of the situation and accumulate plots of land. This was no doubt a risk, since he could not know the outcome of the revolution and whether the laws of land ownership would favor him in the end. Don Tomas was not afraid of struggle or risk. It struck me that he had the most to lose by allowing me to work on his land. If I found, as I ultimately did, substantial remains of Leon Viejo, the government could confiscate the land. Don

Tomas seemed truly unconcerned. He impressed me as a man of calculated moves but not huge ambition, and he did not waste time on that which he could not control. Julio, on the other hand, impressed me with just the opposite. Julio had great ambition but fairly poor plans for reaching his goals. While both these men were opportunists, they approached the opportunities from opposite ends of the spectrum. Most people of the town probably fell somewhere in between these two examples.

Individuals living in the indigenous towns around Leon Viejo no doubt responded to the new demands and opportunities with as much variation as I saw in the present. Choices about how to interact with the Spaniards -- whether to accept their religion, obey their laws, and adjust to new demands -- were probably largely individual. While communities may have offered an overall response, the actions of individuals ultimately determined the nature of interactions with the Spaniards. Equally as varied were probably the actions of the Spanish settlers of Leon Viejo. Quite clearly individuals came for their own motivations and not out of duty to the crown. By all accounts the Spaniards were opportunistic and had a sense of allegiance less to the town or the crown than to their own profits. Accordingly the actions of individuals represent individual choices and goals that may not have filled the goals or needs of the overall community.

IMPRESSIONS AND INTERPRETATION

These impressions of the past and present are not based upon the data that I recovered but on the observations and history I learned as I excavated at Leon Viejo.

While they are not formal interpretations of my field research, they very much influenced the way in which I viewed and contextualized my data. Therefore, as I presented my data here, I chose to incorporate the experiences that left the biggest impressions as I began to interpret the archaeological data I had recovered. I have no doubt that if I were presented with the same set of archaeological data absent the experiences and observations from my time in the field, my interpretations would be quite different.

BIBLIOGRAPHY

Abel-Vidor, Susan

1980 The Historical Sources for the Greater Nicoya Archaeological Sub-Area. *Vinculos* 6(1-2):155-186.

1986 Early Sixteenth-Century Evidence for the Settlement Archaeology of Greater Nicoya. *Journal of Steward Anthropological Society* 14:387-406.

Arellano, Jose E., ed.

1993 León Viejo: Pompeya de América. Managua, Nicaragua: Comisión Nacional de la UNESCO.

Arguello, Alfonso

1969 Historia de Leon Viejo. Leon, Nicaragua: Editorial Antorcha.

Ayon, Tomas

1993 [1852] Historia de Nicaragua, Tomo I. Managua, Nicaragua: Fondo de Promoción Cultural BANIC.

Bamforth, Douglas B.

1993 Stone Tools, Steel Tools: Contact Period Household Technology in Helo'. In *Ethnohistory and Archaeology, Approaches to Postcontact Change in the Americas*. J.D. Rogers and S.M. Wilson, eds. Pp. 49-72. New York: Plenum Press.

Barth, Frederick

1992 Towards Greater Naturalism in Conceptualizing Societies. In
Conceptualizing Society. A. Kuper, ed. Pp. 17-33. London: Routledge Press.

Baudez, Claude F.

1970 Central America. J. Hogarth, transl. Geneva: Nagel Publishers.

Binford, Lewis R.

1962 Archaeology as Anthropology. *American Antiquity* 28:217-225.

Blaisdell-Sloan, Kira

1999 A View from the Pacific: Archaeological Analysis of Materials from
Nicaragua's Sixteenth Century Spanish Town of Leon Viejo. Master of the Arts,
Louisiana State University.

Bloch, Maurice

1992 What Goes Without Saying: The Conceptualization of Zafimniry
Society. In *Conceptualizing Society*. A. Kuper, ed. Pp. 127-146. London: Routledge
Press.

Bolaños, A. Vega, ed.

1955 Colección Somoza: Documentos para la Historia de Nicaragua. Volume
1-11. Madrid: Juan Bravo.

Bransford, John Francis

1881 *Archaeological Researches in Nicaragua*. Washington D.C.: Smithsonian

Institution Publications No. 333.

Broom, L., B. J. Siegel, E. Z. Watson, J.B. Watson

1954 Acculturation: An Explanatory Formulation. *American Anthropologist*
56:973-1000.

Brown, Paula

1978 *Highland People of New Guinea*. Cambridge: Cambridge University
Press.

Burns, E. Bradford

1991 *Patriarch and Fold: The Emergence of Nicaragua 1798-1858*. Cambridge,
Massachusetts: Harvard University Press.

Carmack, Robert M.

1991 *The Spanish Conquest of Central America: Comparative Cases from
Guatemala and Costa Rica*. In *Columbian Consequences: The Spanish Borderlands
in Pan-American Perspective*. D.H. Thomas, ed. Pp. 389-409, Vol. 3. Washington
D.C.: Smithsonian Institution Press.

Champion, Timothy C., ed.

1989 *Centre and Periphery, Comparative Studies in Archaeology*. London:
Routledge Press.

Charlton, Thomas H., and Patricia Fournier G.

1993 *Urban and Rural Dimensions of the Contact Period: Central Mexico*,

1521-1620. In *Ethnohistory and Archaeology, Approaches to Postcontact Change in the Americas*. J.D. Rogers and S.M. Wilson, eds. Pp. 201-222. New York: Plenum Press.

Clifford, James, and George Marcus, eds.

1986 *Writing Culture: The Poetics and Politics of Ethnography*. Berkeley: University of California Press.

Cobb, Charles R.

1993 *Archaeological Approaches to the Political Economy of Nonstratified Societies*. In *Archaeological Method and Theory*. M.B. Schiffer, ed. Pp. 43-100, Vol. 5. Tuscon: The University of Arizona Press.

Cohn, Bernard S.

1996 *Colonialism and Its Forms of Knowledge: The British in India*. Princeton: Princeton University Press.

Creamer, Winifred, and J. Haas

1985 *Tribe Versus Chiefdom in Lower Central America*. *American Antiquity* 50:738-754.

Deagan, Kathleen

1983 *Spanish St. Augustine, the Archaeology of a Colonial Creole Community*. New York: Academic Press.

1985 *Spanish-Indian Interaction in Sixteenth Century Florida and Hispanola*. In

Cultures of Contact, The European Impact on Native Cultural Institutions in Eastern North America A.D. 1000-1800. W.W. Fitzhugh, ed. Pp. 281-318. Washington: Smithsonian Institution Press.

1986 Artifacts of the Spanish Colonies of Florida and the Caribbean. Washington D.C.: Smithsonian Institution Press.

1987 Artifacts of Spanish Colonies of Florida and the Caribbean, 1500-1800. Volume 1: Ceramics, Glassware, and Beads. Washington D.C.: Smithsonian Institution Press.

—, ed.

1995 Puerto Real, The Archaeology of a Sixteenth-Century Spanish Town in Hispanola. Gainesville: University Press of Florida.

—

1995 Historical Archaeology at Puerto Real. In Puerto Real, The Archaeology of a Sixteenth-Century Spanish Town in Hispanolsa. K. Deagan, ed. Pp. 33-50. Gainesville: University of Florida Press.

Deagan, Kathleen, and Elizabeth J. Reitz

1995 Merchants and Cattlemen: The Archaeology of a Commercial Structure at Puerto Real. In Puerto Real, The Archaeology of a Sixteenth-Century Spanish Town in Hispanola. K. Deagan, ed. Pp. 231-284. Gainesville: University of Florida Press.

Denevan, Wiliam M., ed.

1976 *The Native Population of the Americas in 1492*. Madison: University of Wisconsin Press.

Descola, Philippe

1992 *Societies of Nature and the Nature of Society*. In *Conceptualizing Society*. A. Kuper, ed. Pp. 107-126. London: Routledge Press.

Dickau, Ruth

1999 *Paleoethnobotany of the Lake Managua Region, Nicaragua*. Master of the Arts, University of Calgary.

Domínguez, Lourdes

1983 *Informe para la Comisión V Centenario - Prot. León Viejo*. Managua, Nicaragua: Dirección del Patrimonio.

Duncan, David Ewing

1996 *Hernando de Soto, A Savage Quest in the Americas*. Norman: University of Oklahoma Press.

Dunnell, Robert C.

1991 *Methodological Impacts of Catastrophic Depopulation on American Archaeology and Ethnology*. In *Columbian Consequences: The Spanish Borderlands in Pan-American Perspective*. D.H. Thomas, ed. Pp. 561-580, Vol. 3. Washington D.C.: Smithsonian Institution Press.

Edgerton, Robert B.

1992 *Sick Societies, Challenging the Myth of Primitive Harmony*. New York: The Free Press.

Elliott, J.H.

1989 *Spain and Its World, 1500 - 1700 Selected Essays*. New Haven: Yale University Press.

Ewen, Charles, and Maurice Williams

1991 *Puerto Real: The Archaeology of an early Spanish town*. In *First Encounters: Spanish Explorations in the Caribbean and the United States, 1492-1570*. J.T. Milanich and S. Milbrath, eds. Pp. 66-76. Gainesville: University of Florida Press.

Farnsworth, Paul

1989 *Native American acculturation in the Spanish colonial Empire: the Franciscan missions of Alta California*. In *Centre and Periphery*. T. Champion, ed. Pp. 186-206. London: Routledge.

Fitzhugh, William W.

1985 *Commentary on Part IV*. In *Cultures in Contact: The European Impact on Native Cultural Institutions in Eastern North America, A.D. 1000 -1800*. W.W. Fitzhugh, ed. Pp. 271-279. Washington D.C.: Smithsonian Institution Press.

—, ed.

1985 *Cultures in Contact: The European Impact on Native Cultural Institutions in Eastern North America, A.D. 1000 -1800*. Washington D.C.: Smithsonian

Institution Press.

Fowler, William R.

1989 *The Cultural Evolution of Ancient Nahua Civilizations, The Pipil-Nicarao of Central America*. Norman: The University of Oklahoma Press.

—

1991 *The Political Economy of Indian Survival in Sixteenth-Century Izalco, El Salvador*. In *Columbian Consequences: The Spanish Borderlands in Pan-American Perspective*. D.H. Thomas, ed. Pp. 187-204, Vol. 3. Washington D.C.: Smithsonian Institution Press.

—

1993 *The Living Pay for the Dead: Trade, Exploitation, and Social Change in the Early Colonial Izalco, El Salvador*. In *Ethnohistory and Archaeology, Approaches to Postcontact Change in the Americas*. J.D. Rogers and S.M. Wilson, eds. Pp. 181-200. New York: Plenum Press.

Galloway, Patricia

1991 *The Archaeology of Ethnohistorical Narrative*. In *Columbian Consequences: The Spanish Borderlands in Pan-American Perspective*. D.H. Thomas, ed, Vol. 3. Washington D.C.: Smithsonian Institution Press.

Gasco, Janine

1991 *Indian Survival and Ladinoization in Cultural Soconusco*. In *Columbian Consequences: The Spanish Borderlands in Pan-American Perspective*. D.H. Thomas, ed. Pp. 301-318, Vol. 3. Washington D.C.: Smithsonian Institution Press.

—
1993 Socioeconomic Change within Native Society in Colonial Soconusco, New Spain. In *Ethnohistory and Archaeology, Approaches to Postcontact Change in the Americas*. J.D. Rogers and S.M. Wilson, eds. Pp. 163-180. New York: Plenum Press.

Geertz, Clifford

1973 *The Interpretations of Culture*. New York: Basic Books-Harper Collins Publishers.

—
1980 *Negara: The Theatre State in Nineteenth-Century Bali*. Princeton: Princeton University Press.

—
1983 *Local Knowledge*. New York: Basic Books.

Gledhill, John, Barbara Bender, and Mogens Trolle Larsen, eds.

1988 *State and Society, The Emergence and Development of Social Stratification and Political Centralization*. London: Routledge Press.

Gledhill, John

1988 Legacies of empire: Political Centralization and Class Formation in the Hispanic-American World. In *State and Society, The Emergence and Development of Social Hierarchy and Political Centralization*. J. Gledhill, B. Bender, and M.T. Larsen, eds. Pp. 302-319. London: Routledge Press.

Graham, Mark Miller, ed.

1993 *Reinterpreting Prehistory of Central America*. Niwot: University of Colorado Press.

—

1993 *Displacing the Center: Constructing Prehistory in Central America*. In *Reinterpreting Prehistory of Central America*. M.M. Graham, ed. Pp. 1-38. Niwot: University of Colorado Press.

Haberland, Wolfgang

1978 *Lower Central America*. In *Chronologies in New World Archaeology*. R.E. Taylor and C.W. Meighan, eds. Pp. 395-430. New York: Academic Press.

Hamilton, Jennifer M., and William H. Hodges

1995 *The Aftermath of Puerto Real: Archaeology at Bayahá*. In *Puerto Real, The Archaeology of a Sixteenth-Century Spanish Town in Hispanola*. K. Deagan, ed. Pp. 377-418. Gainesville: University of Florida Press.

Healy, Paul F.

1980 *Archaeology of the Rivas Region, Nicaragua*. Waterloo, Ontario: Wilfrid Laurier University Press.

Helms, Mary W.

1979 *Ancient Panama, Chiefs in Search of Power*. Austin: University of Texas Press.

—

1991 *Survivors of Conquest: A Survey of Indigenous Cultures of Lower Central America during the Sixteenth and Seventeenth Centuries*. In *Columbian*

Consequences: The Spanish Borderlands in Pan-American Perspective. D.H. Thomas, ed. Pp. 411-430, Vol. 3. Washington D.C.: Smithsonian Institution Press.

—

1993 Cosmological Chromatics: Color-Related Symbolism in the Ceramic Art of Ancient Panama. In Reinterpreting Prehistory of Central America. M.M. Graham, ed. Pp. 209-252. Niwot: University of Colorado Press.

Hodder, Ian

1986 Reading the Past: Current Approaches to Interpretation in Archaeology. Cambridge: Cambridge University Press.

Hodder, Ian

1992 Theory and Practice in Archaeology. London: Routledge Press.

Hodges, William H.

1995 How We Found Puerto Real. In Puerto Real, The Archaeology of a Sixteenth-Century Spanish Town in Hispanola. K. Deagan, ed. Pp. 9-32. Gainesville: University of Florida Press.

Hodges, William H., and Eugene Lyon

1995 A General History of Puerto Real. In Puerto Real, The Archaeology of a Sixteenth-Century Spanish Town in Hispanola. K. Deagan, ed. Pp. 83-112. Gainesville: University of Florida Press.

Jones, Grant D., and David M. Pendergast

1991 The Native Context of Colonialism in Southern Mesoamerica and Central

America: An Overview. In *Columbian Consequences: The Spanish Borderlands in Pan-American Perspective*. D.H. Thomas, ed. Pp. 161-185, Vol. 3. Washington D.C.: Smithsonian Institution Press.

Kaplan, Susan A.

1985 European Goods and Socio-Economic Change in Early Labrador Inuit Society. In *Cultures in Contact, The European Impact on Native Cultural Institutions in Eastern North America, A.D. 1000-1800*. W.W. Fitzhugh, ed. Pp. 45-70. Washington D.C.: Smithsonian Institution Press.

Kroeber, A.

1930 Cultural Relations between North and South America. 23rd International Congress of Americanists, New York, 1930, pp. 5-22.

Kuhn, Thomas

1970 *The Structure of Scientific Revolutions*. Chicago: The University of Chicago Press.

Kuper, Adam, ed.

1992 *Conceptualizing Society*. London: Routledge Press.

Lange, Frederick W., and Doris Z. Stone, eds.

1984 *The Archaeology of Lower Central America*. Albuquerque, New Mexico: University of New Mexico Press.

Lange, Frederick W., et al.

1992 *The Archaeology of Pacific Nicaragua*. Albuquerque: University of New Mexico Press.

Lange, Frederick W.

1993 *The Conceptual Structure in Lower Central America Studies: A Central American View*. In *Reinterpreting Prehistory of Central America*. M.M. Graham, ed. Pp. 277-324. Niwot: University of Colorado Press.

Lederman, Rita

1986 *What Gifts Engender: Social Relations and Politics in Mendi Highland Papua New Guinea*. Cambridge: Cambridge University Press.

Leonard, Robert D.

1993 *The Persistence of an Explanatory Dilemma in Contact Period Studies*. In *Ethnohistory and Archaeology, Approaches to Postcontact Change in the Americas*. J.D. Rogers and S.M. Wilson, eds. Pp. 31-48. New York: Plenum Press.

Leone, Mark P., and Jr. Parker B. Potter, eds.

1988 *The Recovery of Meaning, Historical Archaeology in the Eastern United States*. Washington D.C.: Smithsonian Institution Press.

1988 *Issues in Historical Archaeology*. In *The Recovery of Meaning, Historical Archaeology in the Eastern United States*. M.P. Leone and J. Parker B. Potter, eds. Pp. 1-22. Washington D.C.: Smithsonian Institution Press.

Lister, Florence C., and Robert H. Lister

1987 *Andalusian Ceramics in Spain and New Spain*. Tuscon: The University of Arizona Press.

Lothrop, Samuel K.

1926 *Pottery of Costa Rica and Nicaragua*. 2 vols. New York: Heyes Foundation, Museum of American Indian.

MacLeod, Murdo J.

1973 *Spanish Central America: A Socioeconomic History, 1520-1720*. Berkeley: University of California Press.

Marcus, George, and Michael M. Fischer

1986 *Anthropology as Cultural Critique, An Experimental Moment in the Human Sciences*. Chicago: University of Chicago Press.

Mauncy, Albert

1992 *The Houses of St. Augustine*. Gainsville: University of Florida Press.

Mauncy, Albert

1997 *Sixteenth Century St. Augustine, the People and their Homes*. Gainsville: University of Florida Press.

McEwan, Bonnie G.

1995 *Spanish Precedents and Domestic Life at Puerto Real: The Archaeology of Two Spanish Homesites*. In *Puerto Real, The Archaeology of a Sixteenth-Century Spanish Town in Hispanola*. K. Deagan, ed. Pp. 197-230. Gainsville: University of

Florida Press.

McGuire, Randall H.

1989 The greater Southwest as a periphery of Mesoamerica. In Centre and Periphery. T.C. Champion, ed. Pp. 40-66. London: Routledge Press.

Milanich, Jerald T., and Susan Milbrath, eds.

1991 First Encounters, Spanish Explorations in the Caribbean and the United States, 1492-1570. Gainesville: University of Florida Press.

Navarro, Rogoberto Genie, and et. al.

1985 Informe Preliminar: Prospección Arqueologica de León Viejo. Managua, Nicaragua: Ministerio de Cultura.

Newson, Linda A.

1987 Indian Survival in Colonial Nicaragua. Norman: University of Oklahoma Press.

Norweb, Albert H.

1964 Ceramic Stratigraphy in southwest Nicaragua. Proceedings, 35th International Congress of Americanists, Mexico, 1964. Vol. 1, pp. 551-61.

Ortega, Elpidio

1988 Informe de las Excavaciones Arqueologicas del Sitio Historico de Leon Viejo, Mayo 24-Junio 24 1988. Managua, Nicaragua: Museo Nacional.

Perez-Brignoli

1989 *A Brief History of Central America*. R.B.S. A. and S.S.d. Sawrey, transl. Berkeley: University of California Press.

Pinto, Gloria Lara

1991 *Change for Survival: The Case of the Sixteenth-Century Indigenous Populations of Northeast and Mideast Honduras*. In *Columbian Consequences: The Spanish Borderlands in Pan-American Perspective*. D.H. Thomas, ed. Pp. 227-244, Vol. 3. Washington D.C.: Smithsonian Institution Press.

Radell, David R.

1976 *The Indian Slave Trade and Population of Nicaragua During the Sixteenth Century*. In *The Native Population of the Americas in 1492*. W.M. Denevan, ed. Pp. 67-76. Madison: University of Wisconsin Press.

Ramenofsky, Ann F.

1991 *Beyond Disciplinary Bias: Future Directions in Contact Period Studies*. In *Columbian Consequences: The Spanish Borderlands in Pan-American Perspective*. D.H. Thomas, ed. Pp. 431-436, Vol. 3. Washington D.C.: Smithsonian Institution Press.

Rogers, J. Daniel

1990 *Objects of Change: The Archaeology and History of Arikara Contact with Europeans*. Washington D.C.: Smithsonian Institution Press.

Rogers, J. Daniel, and Samuel M. Wilson, eds.

1993 *Ethnohistory and Archaeology, Approaches to Postcontact Change in the Americas*. New York: Plenum Press.

Rogers, J. Daniel

1993 *The Social and Material Implications of Culture Contact on the Northern Plains*. In *Ethnohistory and Archaeology, Approaches to Postcontact Change in the Americas*. J.D. Rogers and S.M. Wilson, eds. Pp. 73-88. New York: Plenum Press.

Schieffelin, Edward L., and Robert Crittenden

1991 *Like People You See in a Dream: First Contact in Six Papuan Societies*. Stanford: Stanford University Press.

Schiffer, Michael B., ed.

1993 *Archaeological Method and Theory. Volume 5*. Tuscon: The University of Arizona Press.

Sherman, William L.

1979 *Forced Native Labor in Sixteenth-Century Central America*. Lincoln: University of Nebraska Press.

Smith, Cyril Stanley, and Martha Teach Gnudi, eds.

1990 *The Protechnia of Vannoccio Biringuccio*. New York: Dover Publications.

Smith, Greg

1995 *Indians and Africans at Puerto Real: The Ceramic Evidence*. In *Puerto*

Real, The Archaeology of a Sixteenth-Century Spanish Town in Hispanola. K. Deagan, ed. Pp. 335-374. Gainesville: University of Florida Press.

South, Stanley

1988 Santa Elena: Threshold of Contact. In *The Recovery of Meaning, Historical Archaeology in the Eastern United States*. M.P. Leone and J. Parker B. Potter, eds. Pp. 27-72. Washington D.C.: Smithsonian Institution Press.

Sperber, Dan

1974 *Rethinking Symbolism*. A.L. Morton, transl. Cambridge: Cambridge University Press.

Squier, Ephraim George

1852 *Nicaragua: Its People, Scenery, Monuments, and the Proposed Inter-Oceanic Canal*. 2 vols. New York: D. Appleton.

Stanislowski, Dan

1983 *The Transformation of Nicaragua: 1519-1548*. Volume 54. Berkeley: University of California Press.

Stone, Dorothy

1977 *Pre-Columbian Man in Costa Rica*. Cambridge, Massachusetts: Peabody Museum Press.

Strathern, Andrew, ed.

1982 *Inequality in New Guinea Highland Societies*. Cambridge: Cambridge

University Press.

Taylor, R. E., and Clement W. Meighan, eds.

1978 *Chronologies in New World Archaeology*. New York: Academic Press.

Thagard, Paul

1992 *Conceptual Revolutions*. Princeton: Princeton University Press.

Thomas, David Hurst

1988 *Saints and Soldiers at Santa Catalina: Hispanic Designs for Colonial America*. In *The Recovery of Meaning, Historical Archaeology in the Eastern United States*. M.P. Leone and J. Parker B. Potter, eds. Pp. 73-140. Washington D.C.: Smithsonian Institution Press.

Thomas, Nicholas

1991 *Entangled Objects: Exchange, Material Culture, and Colonialism in the Pacific*. Cambridge, Massachusetts: Harvard University Press.

Thomas, David Hurst, ed.

1991 *Columbian Consequences: The Spanish Borderlands in Pan-American Perspective*. Volume 3. Washington D.C.: Smithsonian Institution Press.

Trigger, Bruce G.

1980 *Archaeology and the Image of the American Indian*. *American Antiquity* 45(4):662-676.

Turnbaugh, William A.

1993 Assessing the Significance of European Goods in Seventeenth-Century Narragansett Society. In *Ethnohistory and Archaeology, Approaches to Postcontact Change in the Americas*. J.D. Rogers and S.M. Wilson, eds. Pp. 133-162. New York: Plenum Press.

Valdés, Gonzalo Fernández de Oviedo y

1851-55 *Historia general y natural de las Indias, islas y tierra firma del mar océano*. Volume 4 vols. Madrid: Real Academis de Historia.

Vargas, L. Bonilla, et al.

1987 La Cerámics de la Gran Nicoya. *Vinculos* 13(1-2):1-327.

Willey, Gordon R.

1959 The 'Intermediate Area' of Nuclear America: Its Prehistoric Relationships to Middle and Peru. *Proceedings, 33rd International Congress of Americanists, San Jose, 1959*. Vol. 1, pp. 184-194.

1966 *An Introduction to American Archaeology*. In *North and Middle America*, Vol. 1. Englewood Cliffs, N.J.: Prentice-Hall.

1971 *An Introduction to American Archaeology*. In *South America*. Englewood Cliffs, N.J.: Prentice-Hall.

Willey, Gordon R., and Jeremy A. Sabloff

1980 A History of American Archaeology. San Francisco: W.H. Freeman and Co.

Willey, Gordon

1990 New World Archaeology and Culture History, Collected Essays and Articles. Albuquerque: University of New Mexico Press.

Williams, Maurice

1995 Spatial Patterning and Community Organization at Puerto Real. In Puerto Real, The Archaeology of a Sixteenth-Century Spanish Town in Hispanola. K. Deagan, ed. Pp. 115-140. Gainesville: University of Florida Press.

Wilson, Samuel M., and J. Daniel Rogers

1993 Historical Dynamics in the Contact Era. In Ethnohistory and Archaeology, Approaches to Postcontact Change in the Americas. J.D. Rogers and S.M. Wilson, eds. Pp. 3-18. New York: Plenum Press.

Wilson, Samuel M.

1993 Structure and History: Combining Archaeology and Ethnohistory in the Contact Period Caribbean. In Ethnohistory and Archaeology, Approaches to Postcontact Change in the Americas. J.D. Rogers and S.M. Wilson, eds. Pp. 19-30. New York: Plenum Press.