Households, Landscapes, and Post-Collapse Continuity in Postclassic Jalieza, Valley of Oaxaca, Mexico

Elise Marie Maragliano

Graduate Center, City University of New York

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Households, Landscapes, and Post-Collapse Continuity in Postclassic Jalieza, Valley of Oaxaca, Mexico

by

Elise Marie Maragliano

A dissertation submitted to the Graduate Faculty in Anthropology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2014
This manuscript has been read and accepted for the Graduate Faculty in Anthropology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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THE CITY UNIVERSITY OF NEW YORK
Abstract

Households, Landscapes, and Post-Collapse Continuity at Postclassic Jalieza, Valley of Oaxaca, Mexico

By Elise Marie Maragliano

Adviser: Professor William J. Parry

Through the lens of household and landscape archaeology, this dissertation will examine an Early Postclassic archaeological site located in Jalieza in the Valley of Oaxaca, Mexico. The analysis will examine data collected during an intensive archaeological field survey consisting of mapping and systematic surface collection. The site of Postclassic Jalieza is compared with other Postclassic sites in the Valley, as well as with the Early Classic and Late Classic settlements at Jalieza. The Postclassic component at Jalieza is a single time-period occupation restricted to the Early Postclassic, thus presenting a rare glimpse into this turbulent and little understood episode in the history of the Valley of Oaxaca. The central argument of this dissertation will focus on understanding the relationship between the elite and commoner elements of this settlement and how their use of space within the landscape represents an important ideological continuity with the past. The deliberate recreation of key elements of traditional Zapotec architecture, site organization, and religious practice at Postclassic Jalieza indicate a strong connection with earlier settlements and practices. My contention is that Postclassic Jalieza represents a conservative community intentionally preserving and perpetuating traditional beliefs and practices during a period of social and political upheaval throughout the Valley of Oaxaca.
Acknowledgements

This dissertation would not have been possible without the support of the American Museum of Natural History, the Graduate Center at the City University of New York, the town of Santo Tomas Jalieza, and my wonderful family.

At the American Museum of Natural History, New York, NY: In the Division of Anthropology, special thanks to Charles S. Spencer and Elsa Redmond, to Luca Casparis and Christina Elson, and to Jennifer Steffey and Anita Caltabiano. Thank you for the generous funding provided by the Anthropology division which allowed this fieldwork to be undertaken. Thank you to Barbara Green in the Office of Grants and Fellowships. In the Division of Education, I would like to extend a special thanks to Jude Maraglino and Acacia Berry.

At The Graduate Center, The City University of New York: Special thanks to all my committee members, to Ellen DeRiso, to Thomas McGovern, and to Marjorie Gorsline. Additional funding for fieldwork was provided by the Graduate Center at CUNY.

Thank you to the Instituto Nacional de Antropología e Historia and to the Centro INAH Oaxaca.

Thank you to the townspeople of Santo Tomas Jalieza, and particularly to Eric Antonio Chavez and Eli Vasquez Chavez who worked diligently on the field survey.

And special thanks to my family, particularly Jude Maraglino for support and patience, Mary Ann Alexander for proofreading, and Andrew Maraglino for babysitting.
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Chapter One:
An Introduction
To Postclassic Jalieza

Overview

The political climate that followed the decline of the Zapotec state in the Early Postclassic remains an unanswered question in the cultural history of the Valley of Oaxaca. The site of Postclassic Jalieza appears to date to this uncertain time and may offer a window on how one particular community restructured itself during this turbulent period. This dissertation will examine the Early Postclassic community located in Jalieza, Oaxaca, Mexico, through the lens of household and landscape archaeology. Through the analysis of data collected during systematic survey and surface collection conducted by the author in 2010, a picture of a post-collapse community based on the continuation of traditional Zapotec beliefs and organizational strategies emerges. This chapter will present an overview of this research project, including research goals and topics, an introduction to the archaeology of the Valley of Oaxaca and the site of Jalieza, an overview of the theoretical approaches underlying the analysis, a summary of each chapter, and a summation of its findings. Ultimately this project seeks to connect the small-scale, 1.5-square kilometer site of Postclassic Jalieza, composed of household terraces along a hill, with a broader understanding of the political and social patterns of the Valley of Oaxaca during this important transitional period.
Overview of Research Project

The Greater Jalieza archaeological site is located in the Valley of Oaxaca in the state of Oaxaca, Mexico. Named after the modern town of Santo Tomas Jalieza, the site lies about 35 kilometers south of the present day capital of Oaxaca de Juarez. The entire archaeological site consists of three mostly discrete temporal components that correspond with the Early Classic, Late Classic, and Postclassic time periods (see Figure 4 page 25 and Figures 26 and 27 page 132 for a chronology of the Valley of Oaxaca). The primary research for this dissertation focused entirely on the Postclassic component, a site that covers 149 hectares, nearly 1.5 square kilometers (km$^2$). The population estimate for this site during the Postclassic suggests an inhabitation of approximately 6600 people (Kowalewski et al. 1989). As with most of the Valley of Oaxaca, the site is believed to have been inhabited by the Zapotec people. There are many aspects to the settlement at Postclassic Jalieza that are unusual for its time period, including its large size, its hillside and hilltop location, and its limited timeframe of occupation. These characteristics make Postclassic Jalieza an ideal site for research directed at understanding how one community responded to the socio-political upheaval of the Late Classic to Early Postclassic transition. This research at Postclassic Jalieza complements and builds upon previous work conducted at the site. With the addition of data from this project, there is now a complete and up-to-date record of intensive survey data for nearly 1000 years of settlement at the Greater Jalieza archaeological site. This aids in developing a view of diachronic change and continuity at this important sub-regional center, following Jalieza’s transition from a secondary center during the height of Monte Alban’s state power during the Early Classic through the waning of that imperial power and the site’s
emerging independence during the Late Classic to the site’s reorganization into a smaller-scale settlement during the Early Postclassic. This survey project has generated an important base of data for any future research within the Postclassic component Jalieza, in addition to providing a significant amount of data for immediate analysis within the body of this dissertation.

**Research Goals**

The field research component of this dissertation entailed a full-coverage survey and mapping with controlled surface collection of the Postclassic component at Jalieza, as well as laboratory analysis and documentation of all collected artifacts. The primary goals of the field research aspect of this project were to

1) Develop a current and accurate map of the Postclassic component at Jalieza that includes a record of surface finds and the locations of residential terraces, household structures, public architecture and plazas;

2) Conduct laboratory analysis, including coding, drawing, and imaging of the artifacts recovered from collection squares;

3) Identify potential locations for future excavation.

These goals were accomplished during the field research phase of this project conducted in April and May of 2010. “Chapter Three: Survey, Mapping, and Surface Collection” presents digitized versions of the complete site map created during the field survey and mapping portion of this project. These maps are also reproduced in Appendix D. “Chapter Five: Surface Data from Postclassic Jalieza: Ceramic Finds” and “Chapter Six: Surface Data from Postclassic Jalieza: Non-Ceramic Finds” present the results of
laboratory analysis on the artifacts recovered from collection squares placed during the systematic surface collection conducted as part of this project. These chapters include examples of the images and drawings used to document these collected artifacts. Areas for future excavation and questions for future research are discussed in “Chapter Ten: Conclusions.”

**Research Topics**

This project addresses four essential research topics pertaining to the Postclassic period within the Valley of Oaxaca, Mexico.

1) Household and Landscape: Household and landscape organization within the community of Early Postclassic Jalieza are examined through the analysis of the structures and remains associated with household terraces and the organizational layout of the site. The remains of household goods found on the surface at the site indicate minor distinctions between the material holdings of elite and commoner households. See “Chapter Five: Surface Data from Postclassic Jalieza: Ceramic Finds” and “Chapter Six: Surface Data from Postclassic Jalieza: Non-Ceramic Finds” for an analysis of the artifacts recovered during surface collection. However, the organizational layout of the site, particularly with respect to the landscape features of the hillside and hilltop, indicate some degree of stratification within the settlement. These topics are explored in detail in “Chapter Eight: Landscape and Household in Early Postclassic Jalieza.”

2) Post-Collapse Continuity: The socio-political climate that followed the decline of the Zapotec state in the Early Postclassic remains obscure in the cultural history of the Valley of Oaxaca. The site of Postclassic Jalieza appears to date to this uncertain time
and may offer a window on how one particular community restructured itself during this turbulent period. Like many other Classic period sites, Jalieza lost a significant amount of population during the transition to the Early Postclassic. However a large portion of the population not only remained at Jalieza, but invested a substantial amount of labor and resources into relocating the settlement to a new hilltop and hillside in close proximity to the Late Classic site. This newly established Early Postclassic component at Jalieza appears to have been modeled on the earlier site layouts found at the Classic period settlements. This high degree of continuity likely reflects a conservative recreation of traditional community, political and religious structures. This topic is explored in detail in “Chapter Nine: Post-Collapse Continuity at Postclassic Jalieza.”

3) Trade: The role of trade as a unifying element of Postclassic Oaxaca is evaluated through the presence and distribution of ceramic finds, exotic items, and trade goods. Trade has been proposed as an important organizing aspect of the Valley in the wake of the demise of the Monte Alban-centered Zapotec state. While this may be true for the Late Postclassic, a paucity of exotic material goods recovered from Postclassic Jalieza may indicate that trade played a weaker role in inter-Valley integration and cooperation during the Early Postclassic, or that Jalieza’s role within the market was very weak during the Early Postclassic. This subject is explored in “Chapter Five: Surface Date from Postclassic Jalieza: Ceramic Finds,” and “Chapter Six: Surface Date from Postclassic Jalieza: Non-Ceramic Finds.”

4) Ceramics: Recent research has sought to refine the ceramic sequence for the Postclassic Valley of Oaxaca. The analysis of the ceramic assemblage from the surface collections at Jalieza is placed within the context of these recent efforts. Due to the
limited temporal occupation of Postclassic Jalieza, this site provides an opportunity to test the correspondence of these proposed Postclassic sub-phases with surface data from a particular Postclassic site. The ceramic assemblage recovered during surface collections from Postclassic Jalieza corresponds quite well with the proposed subdivisions of the Postclassic ceramic sequence and thus offers a valuable example of an exclusively Early Postclassic/ Early V/ Liobaa site. The specific features of Early V/ Liobaa ceramics, and their correspondence with the ceramics finds from Jalieza, are described in “Chapter Four: Interpreting Ceramics” and “Chapter Five: Surface Date from Postclassic Jalieza: Ceramic Finds.”

**Methodology**

The primary research of this project entailed a full-coverage, intensive archaeological survey with systematic surface collection of the 149.1-hectare (roughly 370 acres) site of Postclassic Jalieza. Survey included topographic mapping and the identification of all man-made structures including terraces, walls, house structures, and mounds, along with important landscape features such as springs, barrancas, bedrock outcrops, and modern-day roads and cultivated fields. The program of systematic survey produced a hand-drawn 1:1000 scale map with 1 meter contour lines using a Brunton pocket compass and 50 meter tape measures. 70 controlled collection squares, each covering 100 m², were placed throughout the site for the collection of surface artifacts. All artifacts within the square were collected for laboratory analysis and for quantitative assessments of artifact types throughout the site. The location of each collection square was plotted on the map, as were important physical features of the landscape such as
barrancas, bedrock outcroppings, water springs, creek beds, and modern day roads and cultivated fields. This field survey was followed by laboratory analysis of all collected artifacts. Laboratory analysis of artifacts was conducted in Oaxaca and included the imaging and coding of ceramics, chipped stone, shell, plaster, and ground stone. Hand-drawn maps and sherd drawings were digitized using Adobe Illustrator for permanent archiving at the American Museum of Natural History. A detailed description of the methods employed in this project can be found in “Chapter Three: Survey, Mapping, and Surface Collection.”

**Introduction to the Valley of Oaxaca, Mexico**

In the southern highlands of Mexico lies the contemporary state of Oaxaca. The state is composed of several regions, each with its own particular climate, landforms, and cultural histories. These regions include the Sierra Madre Mountains, the Mixteca Alta and Baja, the Pacific coastal areas, and the Cañada de Cuicatlan. In the center of the state is a Y-shaped valley known as the Valley of Oaxaca. This high elevation (around 1555 meters or 5100 feet), relatively arid valley was the location of my field research. Thanks to a very rich tradition of archaeology within Oaxaca, much is known about the cultural sequences for many regions within the state. This is particularly true for the Valley of Oaxaca. The Valley of Oaxaca is home to the site of many “firsts” in the cultural development of pre-Hispanic Mexico. These include the site of Guila Naquitz where the earliest evidence for the domestication of maize in the Americas has been found; the site of San Jose Mogote where the earliest identified writing in the Americas has been found; and the site of Monte Alban where evidence for the earliest state-level society in the
The territorial reach of the Zapotec state centered at Monte Alban appears to have been most powerful during the later portions of the Formative period (c. 100 B.C. - A.D. 200) and the earlier part of the Classic period (c. A.D. 200-800). At some point in the Late Classic period, the dominance of Monte Alban faded, the Zapotec empire collapsed, and the primate center of Monte Alban itself became vastly depopulated as the site’s main plaza was abandoned. The reasons for the dissolution of the Zapotec state are unknown, as is the exact timeline for this decline, though many theories abound (see “Chapter Two: A Brief Overview of the Archaeology of Oaxaca” for a lengthier discussion). The political climate that followed the decline of this Zapotec state in the
Early Postclassic remains a murky phase in our understanding of the history of the Valley of Oaxaca. The site of Postclassic Jalieza appears to date to this uncertain time and offers an opportunity to explore one community’s experience of this transition.

The Postclassic period in Oaxaca (c. A.D. 800-1521) is most prominently known through information provided in the codices (written and pictoral documents from the Late Postclassic and Early Colonial periods) and from Spanish accounts at the time of conquest. These sources describe a political structure within the Valley of Oaxaca in which the elite of small city-states competed against each other through violent clashes, but in which no one group or settlement exerted greater power over the Valley than any other. During the Late Postclassic, trade functioned as an important element in unifying not only these disparate city-states, but in connecting the Valley of Oaxaca to other regions within Oaxaca and Mesoamerica in general.

As it is currently understood, the Postclassic period in Oaxaca is a large, broadly defined time period, covering a span of over 600 years. The cultural sequence for the Valley of Oaxaca is defined primarily through the ceramic sequence. The Mexican archaeologists Caso, Bernal and Acosta published a landmark book defining the ceramic sequence for the Valley of Oaxaca in 1967, entitled La Cerámica de Monte Alban. This detailed book was based on the ceramic assemblage found at Monte Alban, the main site in the Valley. However, Monte Alban was mostly abandoned by the Postclassic period, though some earlier tombs and mounds were reused for burials and rituals during the Postclassic. Monte Alban V pottery, the category Caso, Bernal, and Acosta created for the Postclassic, covers a time period of 600+ years. This makes it difficult to date a site to
a more specific range within the Monte Alban V period using Caso, Bernal, and Acostas’s ceramic sequence alone.

Markens, Lind, and Martinez Lopez have re-evaluated the ceramic sequence for the Valley of Oaxaca for the Early Classic, Late Classic, and Postclassic time periods and proposed a more refined chronological sequence (Lind 1992; Markens 2004, 2008; Martinez Lopez et al. 2000). In particular, Markens divides the Period V ceramic assemblage into three smaller phases. The limited occupation time frame for Postclassic Jalieza makes this site particularly pertinent for assessing these attempts at refining the ceramic sequence. I will discuss the details and implications of the ceramic sequence in more detail in “Chapter Four: Interpreting Ceramics” and “Chapter Five: Surface Data from Postclassic Jalieza: Ceramic Finds.” The difficulty in identifying sites belonging to the Early Postclassic as opposed to the Late Postclassic has limited the amount of research that has been conducted on this time period. That Postclassic Jalieza fits well into the subcategories of the Postclassic proposed by Markens is an important contribution to moving our ability to define these periods forward.

The Early Postclassic within the Valley of Oaxaca in particular has been an often-overlooked time period. The difficulty in researching this period has been compounded by the temporal issues raised in the above paragraph—identifying sites that date to this sub-phase of the Postclassic has historically been difficult or impossible. Likewise the dominance of written and pictoral documentation corresponding with the Late Postclassic has tended to over-represent this picture of the Postclassic period within our understanding of the history of settlement in Oaxaca. The view of Postclassic Jalieza
presented within this dissertation can contribute to developing an understanding of this transitional and little understood Early Postclassic period.

**Introduction to Jalieza**

The modern day town of Santo Tomas Jalieza is located about 35 kilometers southeast of Oaxaca de Juarez, in the state of Oaxaca, Mexico. The town is now known for its cotton-weaving artisans and is a popular stop for tourists visiting craft villages around the city of Oaxaca. The archaeological site of Jalieza is composed of three major settlements surrounding the modern town located on the alluvial plain. These settlements date to the Early Classic, Late Classic, and Postclassic time periods.

Figure 2: Jalieza Overview Map

These settlements are single component and for the most part discrete or non-overlapping. They were identified via surface survey as part of the Valley of Oaxaca.
Settlement Pattern Project in the 1970s (Kowalewski et al. 1989). Figure 2 above is a map showing the location of Jalieza and other important Classic and Postclassic sites within the Valley of Oaxaca.

Previous archaeological research at Jalieza has included regional survey of the entire site as part of the Valley of Oaxaca Settlement Pattern Project (Kowalewski et al. 1989); intensive surface collection on 16 Early and Late Classic terrace groups by Laura Finsten (Finsten 1995); analysis of the urns and figurines recovered during Finsten’s surface collection (Young 1993); full-coverage survey, surface collection, and excavation at the Early Classic component by Luca Casparis (Casparis 2006); and survey, surface collection, and excavation at the Late Classic site (Elson et al. 2010). The only previous research that has been specifically conducted on the Postclassic component of Jalieza was as part of the regional survey for the Valley of Oaxaca Settlement Pattern Project in the late 1970s (Kowalewski et al. 1989).

The Postclassic component of Jalieza is a unique and important representative of Postclassic Oaxaca for a number of reasons. The site seems to date only to the early centuries of the Postclassic period, possibly A.D. 800-1200. Its estimated population of approximately 6,600 persons ranks it among the larger Postclassic settlements in the Valley of Oaxaca, though still half the size of the largest sites such as Mitla (Kowalewski et al. 1989). The site itself is composed of hillside household terraces and a hilltop civic-ceremonial center, an unusual site organization pattern for the Postclassic period. The extent of the archaeological record of settlement for Postclassic Jalieza covers the hilltop and hillsides represented in Figure 3 below. Settlement along the hillside is restricted to the area facing the camera. The backside of the hill does not show evidence of
The Valley of Oaxaca Settlement Pattern Project suggested that due to the absence of polychrome pottery or metal from surface collections, the settlement appeared to date entirely to the early years of the Postclassic period (c. A.D. 800-1200) (Kowalweski et al. 1989). This early portion of the Postclassic encompasses the few murky centuries after the decline of Monte Alban but before the recorded prominence of the Late Postclassic cacicazgos, the competing city-states that controlled small areas of the Valley at the time of the Spanish arrival. This period has historically received little focused research. The Early Postclassic tends to lack large cities, monumental architecture, or carved stones with writing—the hallmarks of the Classic period—but instead is characterized by small-scale settlements scattered throughout the Valley. The dearth of research on the Early Postclassic is partly due to dating problems—the inability to distinguish the Early Postclassic from the Late Postclassic through ceramics has hampered our collective understanding of the distinctions in political and social occupation. The hillside on the far right of the image is part of the Late Classic settlement only.
organization during these periods. As a single component settlement, Postclassic Jalieza presents a somewhat unique opportunity to develop a better view of life and community within the Valley of Oaxaca during the little-known Early Postclassic.

By the time of the establishment of Postclassic Jalieza, the city of Monte Alban had become massively depopulated and the Zapotec state centered there had ceased to exist. Around this time, many other Classic period sites also experienced a large loss of population. There appears to be a general trend of population dispersal, abandonment of hilltop settlements, and reuse of earlier settlements during the early period of the Postclassic following the decline of the Monte Alban-based Zapotec state. At Jalieza, occupation moved from the Late Classic area to a new site during the Postclassic. Each of these occupations inhabited separate and distinct hills surrounding the same alluvial plain. Jalieza lost a large percentage of its Classic period population. But a sizable population deliberately relocated the settlement to the hilltop and hillside just to the west of the Late Classic settlement core. This new hill, called Tecolote by contemporary inhabitants of Jalieza, is steeper, higher in elevation, and more difficult to access than the Late Classic site. It is located close to the pre-Hispanic road to Tlacolula, overlooking this ancient mountain pass between subvalleys. But unlike the Late Classic settlement, the Postclassic site was no longer located directly along the road. The Postclassic settlement was modeled on the site layouts found associated with the Classic period sites at Jalieza. There are elite residences adjacent to a public mound and plaza located in a very restricted area situated on top of a hill, with household terraces cascading down the hillside. Why was this model of site organization repeated at the Postclassic site? There are potential defensive reasons. This could be seen as a retreat to a more defensible,
more isolated spot indicating potential turmoil in the Valley. But the evidence presented in this dissertation will argue that there were ideological reasons for the re-creation of this site organization as well. Postclassic Jalieza seems to incorporate a clear reproduction of earlier spatial patterns that perhaps represent the continuation of attempts to propitiate ancestors by reproducing the socio-political and religious organization of traditional Zapotec culture.

**Theoretical framework**

The theoretical approach used within this dissertation is a combination of influences, the most prominent of which are household archaeology and landscape theory. It is through household studies that one can understand the unit of the household—that unit which is being encountered most directly through the archaeological site of Postclassic Jalieza—and connect that analysis with broader patterns and social relations. My interest in landscape theory resides in the interaction between people and the environment, both natural and built. These two theoretical approaches serve as my overarching framework for understanding the site of Jalieza. Added to this perspective is a concern with agency and structuration, as articulated first by Bourdieu and Giddens. This approach concerns itself with the importance of understanding the impact of individual action and decision making, both by commoners and elites. The theoretical concerns associated with understanding the collapse of state-level society and the reorganization of post-collapse societies are addressed within the body of this dissertation as well. I also discuss ceramic theory at length as much of my data is in the form of ceramics. I will give a brief introduction to each of these theoretical perspectives
below, but they are explored in greater detail in “Chapter Seven: Interpreting Landscapes and Households,” “Chapter Nine: Post-Collapse Continuity at Postclassic Jalieza,” and “Chapter Four: Interpreting Ceramics.”

HOUSEHOLD AND COMMUNITY: In the course of archaeological field survey what is often directly encountered by the researcher are the footprints of houses and household terraces, along with their associated remains. The goal of this research is to build a view of the site literally from the ground up. The first step is to develop an understanding of the types and range of households found at Jalieza. Thus household archaeological theory will be heavily relied on. Because this survey and surface collection covered the entirety of the site, analysis will include an interpretation of the community structure of Jalieza. Households do not exist within a vacuum, but are grouped together into larger structures, forming communities of households. Comparing individual households and terraces with one another can help develop a picture of this community structure within Jalieza. Differences within and between groups of households found within Jalieza can offer some insight into the political and economic structures of the site.

LANDSCAPE: The interaction between human settlement and the physical aspects of the environment is one aspect of landscape analysis. Human settlement impacts the landscape as the landscape impacts human settlement establishing a dynamic and dialectical relationship between the two. There are also socio-dynamic and symbolic aspects of landscape analysis that can aid in understanding and interpreting a site. The physical setting of the community at Jalieza would have had a significant impact on the lives of those inhabiting such space. Likewise I believe that particular aspects of the
landscape were crucial elements in the decision of community members to establish the site of Postclassic Jalieza where they did.

AGENCY: It is important to remember that archaeological sites represent the daily spaces inhabited by once-living individuals and groups. Recognizing the importance of choice and action, both on the individual and group level, is crucial in any attempt to understand the past. I will discuss the importance of agency, by both commoners and elites, in interpreting the establishment and organization of the Postclassic settlement at Jalieza.

POST-COLLAPSE CONTINUITY: The Early Postclassic was a period of social, political, and demographic upheaval and change within the Valley of Oaxaca. By examining this period, and the data collected from the site of Postclassic Jalieza, within the context of a post-collapse perspective, the seeming reproduction of traditional spatial relationships within the newly established site of Postclassic Jalieza takes on significant ideological importance. By looking at other examples of social reorganization in the wake of the disappearance of state-level government, one can better form an understanding of Postclassic Jalieza.

CERAMIC ANALYSIS: The bulk of the data from this surface collection is in the form of ceramic sherds. “Chapter Four: Interpreting Ceramics” explores the methodological and theoretical implications of ceramic analysis within archaeology and how these considerations shaped my interpretation of the ceramic finds presented in “Chapter Five: Surface Data from Jalieza: Ceramic Finds.”
Chapter Summaries

Below is a summary of the chapters in this dissertation. It is intended to give a broad overview of the content and purpose of each chapter.

Chapter One: An Introduction to Postclassic Jalieza—This chapter presents an overview of this research project, including research goals and questions, an introduction to the archaeology of the Valley of Oaxaca and the site of Jalieza, an overview of the theoretical approaches underlying the analysis, a summary of chapter topics, and a summation of its findings.

Chapter Two: A Brief Overview of the Archaeology of Oaxaca—This chapter presents a basic overview of the history of settlement within the Valley of Oaxaca. It is intended to provide sufficient background knowledge on the archaeology of Oaxaca in order to understand the particularities of Postclassic Jalieza.

Chapter Three: Survey, Mapping, and Surface Collection—This chapter provides the methodological basis for the dissertation. The chapter first explores surveying and mapping techniques and theory. The chapter then details the methodology I employed in the course of data collection and analysis at Postclassic Jalieza.

Chapter Four: Interpreting Ceramics—This chapter offers an overview of ceramic theory, exploring the ways that ceramics have been used to interpret archaeological sites. This theory provides the basis for my interpretation of the ceramic finds from Postclassic Jalieza.

Chapter Five: Surface Data from Jalieza: Ceramic Finds—This chapter presents and interprets the ceramic data from the surface collection at Postclassic Jalieza.
Chapter Six: Surface Data from Jalieza: Non-Ceramic Finds—This chapter presents and interprets the non-ceramic data from the surface collection at Postclassic Jalieza. The majority of non-ceramic finds were chipped stone, but small amounts of shell, plaster, and ground stone were found at the site as well.

Chapter Seven: Interpreting Landscapes and Households—This chapter explores the theoretical approaches of landscape archaeology and household archaeology. The goal of this chapter is to lay the theoretical foundation for my interpretation of Postclassic Jalieza.

Chapter Eight: Landscape and Household at Early Postclassic Jalieza—This chapter presents my interpretation of the site of Postclassic Jalieza, based on the household remains and landscape aspects of the site.

Chapter Nine: Post-Collapse Continuity in Postclassic Jalieza—Through a comparison of the Early Classic, Late Classic, and Postclassic components of Jalieza, this chapter will show how certain central features of site organization that are connected to ideological aspects of Zapotec tradition are reproduced and perpetuated in Postclassic Jalieza.

Chapter Ten: Conclusions—This chapter presents my overall conclusions for the site. I will address each research topic individually and reiterate the important points garnered from the data. I will then suggest future avenues of research at the site. Lastly, I will reiterate my overall conclusions and interpretation of the site.

Appendices—Included among the appendices are Appendix A: a description of collection square finds per collection square; Appendix B: copies of collection square
field documentation forms; Appendix C: examples of coding forms for ceramic and chipped stone finds; and Appendix D: digitized survey maps of Postclassic Jalieza.

**Preliminary conclusions**

I contend that the Postclassic settlement at Jalieza represents a conservative element of Zapotec society—a deliberate reconstruction and continuation of the traditions of political and social organization that existed within the Valley in the centuries leading up to the Postclassic. At a time when centralized power and elite power seem to have waned significantly, the people of Postclassic Jalieza moved their village and recreated a traditional site organization. This is remarkably different from many other Postclassic sites around the Valley. The Postclassic period within Oaxaca in general saw a dispersion of population. This movement away from concentrated settlements was particularly true for most hillside/hilltop communities. However, in the case of Postclassic Jalieza, the settlement was intentionally moved to a new hilltop site—one located on an even more remote and steeper hilltop ridgeline than the Late Classic settlement. The earlier site organization pattern of a hilltop civic-ceremonial center containing a plaza and mound adjacent to restricted-access elite residences was recreated atop this hill. This move required a very significant amount of labor input and organization, and likely represents a deliberate effort on the part of both elite and commoners to maintain the traditions of their ancestors and to reproduce the practices and orientations of previous generations. At the same time, there appears to be somewhat minor material differentiation between elite and commoner households during the Early Postclassic.
The site of Postclassic Jalieza presents an interesting opportunity to understand what may happen after the decline and disappearance of a state-level society. The limited temporal occupation for the site, which corresponds with the period after the disappearance of the Monte Alban state but before the emergence of Late Postclassic cacicazgos, offers a unique window on this little known time period. The view we have of Postclassic Jalieza reveals an interesting case study of continuity in the face of change, of a deliberate remaking of society modeled on the traditions of the past.
Chapter Two:  
A Brief Overview of the Archaeology of Oaxaca

Overview

This chapter will establish the historical context within which the site of Postclassic Jalieza is situated. I will present a general history of settlement in the Valley of Oaxaca by providing an overview of the relevant literature on the subject. I've chosen to focus on a number of key elements that compose the 'big picture' of the development of life within the Valley of Oaxaca prior to the Spanish Conquest. These key elements are 1) settlement patterns, 2) political and social organization, and 3) household organization.

I will begin by providing a short explanation of why I believe each of these three elements is important. Then I will present a broad chronological overview of these developments within the Valley of Oaxaca. While the time period of my research at Jalieza encompasses the early part of the Postclassic, I believe it is important to understand the political and demographic development of life within the Valley of Oaxaca as a whole. The early sections of this chapter focus on understanding the early development of settlements within Oaxaca, leading to the establishment and spread of the Zapotec State centered at Monte Alban. Understanding the structures that composed the state and allowed it to expand and conquer territory informs one's ability to conceptualize how the state dissolved during the Late Classic and how new forms of political and social
organization emerged during the transition to the Postclassic. This latter historical moment is of particular relevance to contextualizing and interpreting the data presented in the following chapters. The last section in this chapter examines the literature that has been produced from previous research at the site of Jalieza itself.

**Settlement Patterns in Oaxaca**

Settlement patterns help us understand the macro-view of social development within a region—the panoramic picture of the Valley, rather than the close-up microcosm of a particular point that we get through excavation. Oaxaca in general, and the Valley of Oaxaca in particular, is a unique area within which to work because so much large-scale survey work has been done in the region that we have a very good image of the broad-scale settlement patterns for a time span covering thousands of years. Understanding settlement patterns in Oaxaca has been a critical part in developing a view of life within the region at specific points in time and developing an understanding of change over time. It is through understanding the broad patterns of settlements and demographic shifts that views have emerged about the political development of social organizations within Oaxaca. Intensive excavations of individual sites fill in the details of daily existence that can only be grasped through that finer scale, but it is thanks to settlement pattern studies that we can develop the big picture.

**Political and Social Organization**

The development of political structures and social hierarchies is another area that has received a great deal of scholarship in Oaxacan archaeology. Rich Formative period
sites have been discovered and excavated, revealing a remarkable amount of information and surprising level of detail on the evolution of political and social organization within the Valley of Oaxaca, from the emergence of rank and stratification to the development and expansion of the first state-level society within Mesoamerica. An important interpretive goal of archaeology is to glean an understanding of greater social structures from the material found in the ground. A brief examination in this chapter of some of the landmark studies that have made these connections will help lay a foundation for examining the data from Postclassic Jalieza.

**Household Organization**

In the course of archaeological research, what is often encountered directly by the researcher is the remains of households—in the form of house footprints, household terraces, and their associated domestic remains. Understanding the household and how it is organized is an essential building block to understanding the broader social setting within which that household is found. In many ways this is the opposite nesting scale of settlement pattern studies—instead of developing the big picture in order to zoom into the local, we start with the local, the archaeological equivalent of street view in Google maps, and from there build outward. For households do not exist alone, but are situated among neighbors who are grouped together into communities, which provide the foundations for hamlets, villages, and cities. My focus throughout this dissertation on the importance of the household is partly practical—the site of Postclassic Jalieza is composed primarily of households and household terraces. But it is theoretical as well. In order to understand the big, we must first understand the small. Matter is made up of
atoms—and understanding the behavior of those atoms is essential to understanding how they can combine to create elements. The same is true for connecting household organization with broader patterns of social organization. The remainder of this chapter will examine these three elements throughout the broad time periods outlined below.

Figure 4: Broad Chronology for the Valley of Oaxaca

<table>
<thead>
<tr>
<th>Broad Period</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paleoindian</td>
<td>c. 15,000 – 8000 B.C.</td>
</tr>
<tr>
<td>Archaic</td>
<td>c. 8000 – 2000 B.C.</td>
</tr>
<tr>
<td>Formative</td>
<td>c. 2000 B.C. – A.D. 200</td>
</tr>
<tr>
<td>Classic</td>
<td>c. A.D. 200 – 800</td>
</tr>
<tr>
<td>Postclassic</td>
<td>c. A.D. 800 – 1521</td>
</tr>
</tbody>
</table>

Further refinement of this chronology will be included in subsequent chapters

Paleoindian Period: c. 15,000 – 8000 B.C.

Human inhabitation of the Valley of Oaxaca dates as far back as the Paleoindian period, estimated at 15,000 – 8000 B.C. This was during the last Ice Age and a good portion of North America was still covered by ice sheets. Climate in the Mexican Plateau, a geographic region that includes the Valley of Oaxaca and the Basin of Mexico to its north, was somewhat cooler and drier than current conditions. The range of species that could be exploited by Paleoindian foragers was somewhat narrow, due to technological skills as well as environmental constraints, but included succulent plants such as yucca and agave, and wild game including pronghorns, jackrabbits, tortoise, and
the occasional mammoth. Evidence from this period of human life within the Valley of Oaxaca is very sparse and generally limited to occasional finds of stone spear points. Much of what we infer about life in Oaxaca during the Paleoindian is gleaned through sites found in the Basin of Mexico, including the mammoth kill site at Santa Isabel Iztapan (de Anda and Maldonado-Koerdell 1953) and Coxcatlan Cave in Tehuacan (MacNeish et al. 1967). There is some indication that there was human activity in the Valley of Oaxaca during the Paleoindian from the lowest levels of deposits found at the site of Cueva Blanca outside of Mitla (Flannery 1983b; Marcus and Flannery 1996: 45). The animal assemblage found at this site closely matches that found at Coxcatlan Cave, and the burn marks and deliberate fractures indicate human processing of the bones for food. It is likely that bands of nomadic foragers came into the Valley from the north. The population would have been small and sparsely dispersed across the landscape. These groups probably migrated over large areas of terrain, following seasonally abundant resources (Marcus and Flannery 1996).

**Archaic Period: c. 8000—2000 B.C.**

The last Ice Age came to an end around 10,000 years ago as the climate of North America shifted to a seasonal pattern quite similar to that found today. The available plant and animal species changed as their habitats changed: with the gradual shift to warmer, wetter conditions the pronghorns, tortoise, and jackrabbits retreated further north, as white-tailed deer, mud turtles, and cottontail rabbits replaced them within the Mexican Plateau. It’s during this time that the environmental zones found in Oaxaca today became established. These can be described as mountain, piedmont, and alluvial
plain. The mountain top zone is cold and moist. Pine trees dominate vegetation. Areas such as the Sierra Madres in northeastern Oaxaca are described as cloud forests due to the high levels of moisture ever present in the air. Piedmont describes the slopes of hillsides, usually covered in short, hearty vegetation including copal trees, huisache bushes, and cacti (organ and nopal). Piedmont can be exploited agriculturally but it is not the most fertile or productive land. The alluvial plain is the flat valley bottom. Before the domestication of plants, the alluvial plain was covered with mesquite and acacia trees. These trees were gradually cleared for farming as sedentary, agriculturally-based villages spread throughout the Valley. The Valley of Oaxaca is often described as a y-shaped valley surrounded by high mountains. Much of the Valley is alluvial plain, which is by far the best agricultural soil in addition to being the most easily accessible land. However the piedmont was strategically exploited at various points in the history of inhabitation in the valley.

The predominant resources available during the Archaic included: pods from mesquite trees, cactus fruit, bottle gourd, maguey—which provided sap, pulp and the heart as food sources, and fibers for making objects—squash seeds, wild avocado, nuts, acorns, and various tree fruit. Small game was also hunted, including jackrabbits, white-tailed deer, and collared peccary. It is quite likely that Archaic peoples exploited insects and small reptiles as well. Many of these resources continued to play an important role in the foodways of the peoples of Oaxaca throughout the pre-Hispanic period and even to the present day.

Hunting during the Archaic was communal, centered around drives that employed every member of the band including women and children to flush jackrabbits or
pronghorns out of their hiding places and into the direction of waiting hunters. The shift in species availability would have also required a shift in hunting strategies, as smaller hunting parties would have become more effective. The changes in plant resource availability would also have required some adaptation on the part of these foragers. With warmer temperatures and greater amounts of rainfall, a wider variety of plants became available for exploitation and would have required new strategies, some of which likely led to the eventual domestication of certain species. Developments in technology allowed for greater resource exploitation and would require greater levels of internal organization within the group in order to produce and maintain a larger, more complex and more specialized toolkit (Marcus and Flannery 1996).

Domestication of plants started as early as 10,000 years ago with bottle gourds. As the name indicates, these squash were likely domesticated for their use as a container rather than as a foodstuff. Other plants were slowly added to the list of cultigens. During the Archaic, people were still nomadic foragers, but likely stayed in one spot for longer periods of time during growing seasons and thus cultivated plant resources more intensely, slowly building an array of domesticates. The earliest evidence for the domestication of maize has been found at Guila Naquitz cave outside Mitla. The AMS date of c. 4250 B.C. suggests a possible southwest Mexico origin for maize domestication (Piperno and Flannery 2001). The domestication of plants and the appearance of sedentary village life are intertwined, and are the two most important features that mark the transition from the Archaic period to the Formative period (Flannery 1986). Like our knowledge of the Paleoindian period, reconstructions of lifeways during the Archaic
draw a good deal upon research conducted in the Basin of Mexico as well (MacNeish et al. 1967).

**Settlement Patterns during the Archaic**

Estimates of the entire population for the Valley during the Early Archaic are as low as 75-150 people (Flannery 1986: 39; Marcus and Flannery 1996: 53). This population was organized into small nomadic bands that traveled across the landscape exploiting resources as they became seasonally available. The encampment of these bands left little impact upon the landscape, and thus little in the way of material remains for future archaeologists to find. Sites from this period are mostly limited to scatters of stone tool debris and projectile points. However, the use of caves and rock shelters allowed for the preservation of food remains and activity areas. Two of the most prolific sites in terms of data are Cueva Blanca and Guila Naquitz, both located in the hills outside Mitla and both excavated by Kent Flannery in the 1960s. Much of what we know about the diet of Archaic peoples in Oaxaca comes from these cave sites. From the variety of remains found at these sites as well as their location, it is clear that Archaic peoples in the Valley of Oaxaca exploited a variety of environmental zones in their foraging and collecting strategies (Flannery 1983c; Flannery and Spores 1983). However, the difficulty of locating open-air camps through general survey means we have a blurry picture of settlement patterns for the Archaic. This picture begins to come into sharper focus as settlement shifts to a more sedentary pattern toward the end of the Archaic period and into the Formative period.
Political and Social Organization during the Archaic

Dispersed small microbands, generally composed of individual families of 4-6 people, practiced subsistence foraging during the leaner dry seasons, but likely came together into macro-bands during the wet summer when resources were most plentiful. These macroband encampments that may have numbered from 15 – 25 persons served important social purposes beyond simply pooling communal labor to harvest an abundant resource. These macroband camps allowed an interactive space for the development of ritual, exchange and gift giving, and probably for courtship and initiation rites as well (Flannery 1983c; Marcus and Flannery 1996).

Gheo-Shih is an example of one such macro-camp summer gathering site located on the alluvial plain outside Mitla. This Middle Archaic site appears to have been a precursor to the villages that appeared in the Late Archaic. The evidence indicates that the site was used several times during successive wet seasons. Excavation identified two parallel rows of boulders. There were artifacts and debris found on the area outside the stones, but the space between the two rows was devoid of artifacts or debris, possibly indicating the area was kept clear for use in some sort of ritual activity. There are differing theories on what the space was used for, a dancing ground perhaps, or maybe an early precursor to the ball court. But there is general agreement that these boulders delineate a ritual space. There is evidence for activity areas within the site of Gheo-Shih that were dedicated to producing different tools and an area dedicated to the production of personal ornaments. Small, drilled stream pebbles were found in one section of the site and are believed to have been jewelry. These production activities are the first examples of craft production within the Valley of Oaxaca, a topic that will be discussed at greater
length in a subsequent chapter. Though these bands were almost certainly egalitarian, Gheo-Shih provides evidence for the development of a more complex social structure beyond small bands based on individual families. It also provides evidence for the engagement in activities beyond mere subsistence, the basis for more complex forms of political and social organization as played out through ritual activities (Flannery and Spores 1983; Marcus and Flannery 1996).

**Household Organization during the Archaic**

Archaic households were nomadic households based around temporary camps. The ephemeral nature of these camps made little impact upon the landscape, and thus make them difficult to recognize archaeologically. However caves and rock shelters have provided some insight into how productive activities may have been organized on a household level. In the most basic sense, all productive activity in the Archaic was centered around the household since microband structure generally consisted of an individual family unit. The site of Cueva Blanca provided evidence for gendered tool kits, suggesting household production was likely divided along gender lines. Throughout most of the Archaic the household was a mobile camp not a sedentary unit. But as the reliance on domesticated plants became more extensive, sedentism became a necessity. The later levels of occupation at Cueva Blanca suggest a shift to larger, more sedentary camps. In the earlier levels at Cueva Blanca gendered tool kits representing both genders were present. The later levels at the cave contained only male tool kits, suggesting the site had become a temporary male hunting camp, likely for the hunting and processing of deer. The interpretation is that this small group of men would have broken off from a main camp for a short hunting trip. Rather than moving the entire household in the
pursuit of wild game and plants, a small group of males would venture out to hunt game, while the majority of the household remained in the main camp likely collecting resources in that immediate area. This kind of intensive local exploitation of plant resources is seen as a necessary step in the process of domestication (Flannery and Spores 1983; Marcus and Flannery 1996). As households became fixed to one spot and thus more permanent, they left a more lasting impact on the landscape, and thus appear more frequently in the archaeological record. In this way, we know much more about Formative period households than Archaic.

**Formative Period: c. 2000 B.C. – A.D. 200**

The Formative Period is one of intense change and development within Mesoamerica in general and the Valley of Oaxaca in particular. During this period we see the growth from small agricultural hamlets during the Initial Formative to the establishment of Monte Alban by 500 B.C. and its imperial expansion in the Terminal Formative (100 B.C. – A. D. 200). Other developments during the Formative Period include the production of pottery, ritual burial with grave goods, long distance trade, the development of regionalism, distinctions between public architecture versus domestic architecture, and the development of writing. Below I will give a brief overview of what I see as the most relevant developments in the cultural evolution of the Valley during this period, highlighting patterns within the archaeological record that may be informative when it comes to interpreting the structures of the Postclassic.
Settlement Patterns during the Formative

One of the most significant developments to come out of the early Formative was the emergence of village life. Sedentary villages based on agricultural yields developed during the early years of the Formative. Settlements tended to be located on the low piedmont spurs that surrounded the alluvial land used for agricultural production. The lower piedmont offered land for houses that didn’t flood with seasonal fluctuations in river and stream levels, but they still provided easy access to rich agricultural soils. It is during the Formative period that archaeologists see the emergence of regionalism within the material culture record, particularly when it comes to ceramics. The majority of Early Formative villages are found in the Etla branch of Valley. This area of the Valley has been identified as containing the best agricultural land. Extensive research has been conducted at the important Formative village of San Jose Mogote, in the Etla branch of the Valley. During the Early Formative, San Jose Mogote developed into a somewhat large village, surrounded by hamlets with a few dozen residents (Evans 2008: 145-149; Flannery and Marcus 1983b). Over the course of the Formative period San Jose Mogote grew to be much larger than surrounding villages. Analysis of settlement patterns indicates a hierarchy of settlements with San Jose Mogote at its head. During the Formative period a Valley-wide settlement pattern emerged in which each subvalley (Etla, Tlacolula, and Valle Grande) had one settlement larger than the rest. Each of these major settlements is believed to have fulfilled a leadership role within that arm of the Valley. Around 500 B.C. the site of Monte Alban was established and quickly grew to be the most populous site in the Valley (Marcus 2008).
Political and Social Organization during the Formative

The Formative period sees the emergence of social inequality, first as rank then as stratification. Linked to this burgeoning social hierarchy is the emergence of status goods within the archaeological record. San Jose Mogote provides evidence for the transition from an egalitarian village to one with social stratification, as public architecture transforms into elite residences (Marcus and Flannery 1996; Flannery and Marcus 2005). Politically, the Formative period sees the rise of the chiefdom and the eventual establishment of a state at Monte Alban. During the Late Formative, Monte Alban begins a program of expansion within the Valley and beyond. By the Terminal Formative, Monte Alban appears to control most of the Valley, as well as some outposts beyond the limits of the Valley such as Loma de la Coyotera in the Cañada de Cuicatlan (Marcus 2008; Redmond 1983; Spencer 1982; Spencer and Redmond 1997). Resistance to this imperial expansion is found at the sites of El Mogote and El Palenque at Tilcajete. Spencer and Redmond have uncovered considerable evidence from these two sites to indicate that this area was able to remain outside of the control of Monte Alban through the Late Formative, until the establishment of Cerro Tilcajete during the Terminal Formative (Elson 2006, 2007; Marcus and Flannery 1996; Spencer and Redmond 2001; 2003; Spencer, Redmond, and Elson 2008).

Household Organization during the Formative

Houses during the Formative period were occupied by individual families. They were made of pine posts and thatched roofs, with walls of wattle and daub, a stamped-earth floor, and an exterior storage pit dug into the ground. In the Early Formative all houses look the same. This changes as time goes by with the eventual establishment of
different types of structures within a community including temples, palaces, ballcourts (Flannery and Marcus 2005). A distinction emerges within the Formative between elite versus commoner households (Winter 1976). It is during the Formative as well that evidence for craft production within the household and specialization of households emerged (Flannery and Marcus 2005). From San Jose Mogote comes evidence for the household production of long distance trade goods, particularly magnetite mirrors that are traded with San Lorenzo along the Gulf Coast (Marcus and Flannery 1996). Over the course of the Formative, bell-shaped storage pits associated with individual household units disappear. There is no evidence for the emergence of large-scale storage facilities to replace them. This has been interpreted as an indication of the emergence of a market system (Appel 1986).

**Classic Period: c. A.D. 200 – 800**

If you imagine the rise and fall of Monte Alban (or any major state for that matter) as a bell curve—which is a problematic assumption to begin with, but let’s imagine it anyway for the sake of visualization—then the Classic Period begins at the peak of the curve. Around A.D. 200 Monte Alban is likely at the height of its power. Its territory spreads beyond the borders of the Valley, north into the Cañada, south toward the coast, seeping to the east and west into the surrounding mountains and valleys. As the Classic period proceeds, the Monte Alban state careers down the downward slope of the bell curve. While this analogy is an oversimplification, it is not all that far off the mark. There are differing interpretations of when the “Golden Age” of Monte Alban may have been, some arguing that Monte Alban was already on the decline by the end of the
Terminal Formative, others that the Early Classic was the peak of its power and influence, and still others that the Late Classic represents Monte Alban at its strongest point. It all depends on which criteria of evidence you choose to support your argument. By the end of the Terminal Formative, Monte Alban was losing its grip on the territories beyond the borders of the Valley. The Cuicatlan Cañada, the Sola Valley, and the Coast were all asserting their independence by the Early Classic after years of domination by Monte Alban. The frontiers of Zapotec control shrank as outposts from outside the valley were abandoned (Balkansky 1997; Feinman and Nicholas 1990; Redmond 1983; Spencer and Redmond 1997). However, monumental construction on the Main Plaza at Monte Alban itself continued through the Late Classic—building bigger and better, more elaborate and embellished. I guess it depends on your perspective on what constitutes a peak of a state’s power—is it territorial control, or material embellishment, or the development of multi-tiered elite with complex interrelationships amongst themselves and with elites from outside their region? Perhaps part of the problem is that as erroneous as the bell curve analogy is for the rise and fall of the state, it exists out there silently in the recesses of our collective brains, so we are working on the assumption that a state will have a peak and only one peak. Perhaps attempting to decide when Monte Alban was at its height and when it began its decline is not only fruitless, but beside the point. For the purposes of this dissertation, identifying a specific point for the peak and slope downward is not important. We only really need to know that at one time Monte Alban was the dominant political and social force within the Valley of Oaxaca. And then, at some point by the end of the Late Classic, it wasn’t.
Settlement Patterns during the Classic

During both the Early Classic and the Late Classic, Monte Alban was the primate center for the Valley, a true metropolis. Monte Alban was significantly larger than any other settlement within the Valley—a demographic truth from the Late Formative through the Late Classic. The regional settlement pattern for the Valley continued as it was during the later part of the Formative, with each sub-valley containing one large regional or secondary center, surrounded by smaller settlements (Blanton et al. 1982; Kowalewski et al. 1989). In the southern arm of the Valley, Jalieza was the most prominent settlement with a population of approximately 13,000 in the Early Classic and 16,000 in the Late Classic. In the Tlacolula branch, the complex known as Dainzu-Macuilxóchitl-Tlacochahuaya-Guadalupe (DMTG) rivaled Jalieza in size. These two sites represented the largest secondary settlements beneath the primate center of Monte Alban. The Etla branch remained sleepy throughout the Classic period. San Jose Mogote was likely a secondary center but without as significant of a population size as either Jalieza or DMTG. There is a distinct shift during the Classic period, particularly the Early Classic, from valley-floor settlements to more defensive hilltop and hillside locations, both within the Valley of Oaxaca and on its edges (Balkansky 2002; Elam 1989; Feinman and Nicholas 1990). According to Elam, by the Early Classic, nearly two-thirds of the population lived in such defensive settlements (Elam 1989).
Political and Social Organization during the Classic

A number of researchers have sought to understand the relationship between Monte Alban and the largest sites within the arms of the Valley. There is clear elite versus commoner stratification within the Valley during the Classic period, with a hierarchy of elites between primary, secondary and tertiary centers within the Valley (Blanton et al. 1982; Joyce and Winter 1996; Kowalewski et al. 1989; Steere and Kowalewski 2012). The Classic period sees an expansion in the construction of monumental architecture at a number of sites throughout the Valley. Interestingly there is very little monumental architecture at Jalieza despite its large population. It is believed that secondary centers likely controlled the surrounding settlements, administering the
will of Monte Alban. A number of new studies question this assumption, and see the emergence of independence from Monte Alban at a number of large settlements with the Valley and beyond (Casparis 2006; Elson et al. 2010).

*Household Organization during the Classic*

There is a clear distinction between elite versus commoner households during the Classic period (Feinman et al. 2002; Finsten 1995; Haines et al. 2004; Lind and Urcid 2010). Many sites are designed with a hilltop ceremonial center that also houses an elite residential zone, with commoner housing along the lower slopes (Casparis 2006; Elson et al 2010; Faulseit 2012b; Feinman et al. 2002). The largest settlement organized like this is Monte Alban itself (Blanton 1978). While many sites demonstrate this pattern of household terracing along slopes, there are numerous sites located along the valley floor as well, including Cuilapan, Xoxocotlan, and Dainzu (part of DMTG). Many houses are designed as rooms surrounding an interior plastered patio. Most households practice ancestral burial under the floor of the patio or under a room floor. It is believed that many communities are organized into *barrios*, or neighborhoods. Evidence for this kind of spatial organization of the community has been found at Monte Alban (Winter 1974). There is clear evidence for craft production centered within the household at many sites (Balkansky et al. 1997; Feinman and Nicholas 1999; Haines et al. 2004; Middleton 1998).

*The Late Classic to Postclassic Transition: c. A.D. 700 – 800*

*A note on chronological confusion*— In other parts of Highland Mesoamerica this period is often referred to as the Epiclassic. In the Basin of Mexico, the Epiclassic is
now believed to encompass A.D. 650-900, the period after the fall of Teotihuacan but before the rise of Tula. Unfortunately, the sequence for the Valley of Oaxaca for the period from the Late Classic through the Early Postclassic is confused. The terminology to name this sequence is even more confused. This issue will be addressed in greater detail in Chapter Four, but here is a brief synopsis of the problem. Caso, Bernal, and Acosta based the distinction between the ceramics of Monte Alban IIIb and Monte Alban IV on the abandonment of Main Plaza at Monte Alban, not on differences within the ceramic complex itself. In Caso, Bernal, and Acosta’s work on ceramics of the Valley of Oaxaca, these two periods are combined and described within the same chapter (Caso et al. 1967). Paddock later identified an MA IV complex distinct from MA IIIb using the site of Lambityeco as a basis. This created what looks like a geographic distribution of IIIb versus IV ceramics, rather than a temporal one. MA V, as defined by Caso, Bernal, and Acosta, spans 600+ years encompassing all of the Postclassic with no distinction between early and late. Further work has been done in the recent decade by Markens and Lind to refine the sequence for the Classic and Postclassic. They’ve introduced new terminology for phases: Xoo for IIIb/IV, Liobaa for Early V A.D. 800-1200, and Chila for Late V A.D. 1200-1521. Unfortunately for the moment this has seemed to further complicate discussion rather than simplify it since there is no universal acceptance of usage of the new terminology.

This problem of chronology is huge. Perhaps it stems from our problems with conceptualizing change. Chronologies assume abrupt transitions, not the gradual evolution of processes. The conflation and separation of IIIb and IV make it difficult then to understand settlement patterns for these periods (or is it “this period”?). It makes it
impossible to come up with population estimates. How can you determine interaction between sites if you can’t decide if they are contemporaries? Even if the chronology can be resolved satisfactorily, then there needs to be a reevaluation of the literature that has been using IIIb and IV for the past 50 years. For the sake of simplicity in the remainder of this chapter, I will use the terminology Early Classic, Late Classic, and Postclassic periods with the understanding that they represent MA IIIa, IIIb-IV, and V respectively.

The Late Classic to Postclassic transition within Oaxaca saw the decline and disappearance of the Zapotec state and a subsequent political and demographic reordering of settlements throughout the Valley and surrounding areas. During the Classic period in the Valley of Oaxaca, there was a shift in the power and influence of the Zapotec state, centered at the massive capital of Monte Alban. Rather than a spectacular collapse followed by abandonment, the city of Monte Alban slowly depopulated, its Main Plaza falling into disrepair by A.D. 700-750. The one-time primate center was never entirely abandoned, but by the Early Postclassic, the Zapotec capital’s population had dramatically plummeted and its rulers no longer held political control over the Valley (Blanton 1978; Marcus 2008; Marcus and Flannery 1996). This transitional period from Late Classic to Postclassic saw a political fragmentation within the Valley of Oaxaca. This resulted in a restructuring of life in the Valley, as over the course of the Postclassic settlement shifted to numerous, small-scale chiefdom-like polities called cacicazgos (Kowalewski et al. 1989; Marcus and Flannery 1983; Marcus 1989). Evidence from archaeological excavations and from ethnohistorical sources dating to the time of Spanish contact indicates that these polities were involved in constant competition and frequent warfare with neighboring settlements (Appel 1982; Blomster 2008; Whitecotton 1977).
Settlement Patterns during the Classic—Postclassic Transition

As I’ve discussed above, the difficulty in distinguishing between the ceramic complexes of IIIb and IV, particularly as found in surface collections, makes interpreting settlement patterns changes complicated. There is without question a major change in the settlement patterns of the Valley with the decline of Monte Alban. The estimate for the population of Monte Alban during the Late Classic is 24,000 (Kowalewski et al. 1989).

By A.D. 700 or 750, the Main Plaza was in disrepair. This archaeologically observable event was used by Caso, Bernal, and Acosta to distinguish between IIIb and IV, between what they considered to be the Classic and Epiclassic periods. The entirety of Monte Alban was not abandoned. Population at the site continued mainly on the north slope, but the Main Plaza was no longer maintained. Tombs at Monte Alban were still reused for burial during MA IV (Blanton 1983: 186).

Where did people go when Monte Alban depopulated? What shifts in population can be observed after the decline of Monte Alban? There was a rise in population at regional centers that were likely absorbing the population leaving Monte Alban. Marcus and Flannery state that the largest growth during this period was in valley-floor settlements that had existed for many centuries already. These included Zaachila, Mitla, Cuilapan, and Lambityeco (Flannery and Marcus 1983: 184). However Feinman presents a slightly different picture, “Many of the head towns were situated in defendable locations above the Valley floor… a pattern different from that found for the majority of
large IIIb settlements. Generally, the spacing and location of IV centers suggest that both lack of integration and military competition may have characterized the valley system” (Feinman et al. 1985: 359). Perhaps this is a case where both are true? Allow me to point out again that describing a general pattern for the Valley is difficult in this period because of chronological issues.

Jalieza is considered the largest Period IV site, with an estimated population of 16,000. However, if you combine Periods IIIb and IV, Jalieza ranks behind Monte Alban in size. Jalieza is somewhat unusual in that its location is newly founded in the Late Classic, on a separate hillside than the Early Classic Jalieza settlement. It is predominantly a hilltop and piedmont settlement with limited valley floor occupation. While its size is considerable, and its location is strategically placed to control the mountain pass between the Valle Grande and Tlacolula branches of the Valley, there is a distinct lack of monumental architecture, particularly when compared to sites such as Zaachila, Xoxocotlan, or Lambityeco that seem to have had smaller populations but significant mounded architecture.

**Political and Social Organization during the Classic—Late Classic Transition**

The reasons for the decline of Monte Alban are unclear, but could include agricultural issues and conflict surrounding the difficulty of supporting the large population of Monte Alban. The decline of Monte Alban was thought to be contemporaneous with the fall of Teotihuacan. Blanton has suggested that Monte Alban’s power was an alliance that protected the Valley of Oaxaca against the potential expansion of Teotihuacan. With the fall of Teotihuacan there was no longer a need for Monte
Alban and so perhaps the elite alliance disbanded and returned to their ancestral locations in the subvalleys (Blanton 1983). Current estimates for the collapse of Teotihuacan place its abandonment closer to A.D. 650, or even as early as A.D. 550 (Cowgill 1997; 2008). It is possible that future research at Monte Alban may alter the dates for its decline, but at this point the relationship between the fall of Teotihuacan and the decline of Monte Alban is unclear. There seems to be general agreement that there was not a large scale, dramatic abandonment of Monte Alban, but instead a gradual decline over time (Marcus 2008; Paddock 1983). This likely complicates our ability to perceive these changes on an archaeological scale.

It can generally be agreed upon that this period is one marked by political decentralization. Glottochronological evidence indicates language in various areas of Zapotec speakers begins to diverge at this time, indicating lesser integration and contact between Valley Zapotec, mountain Sierra Zapotec and the Miahuatlan region (Flannery and Marcus 1983a; Marcus 1983b). In the wake of the Monte Alban state, a political system of small city-states emerges within the Valley. These localized polities are called cacicazgo, and are described as “one small urban center and a whole series of rural communities subject to one hereditary lord” (Marcus 1983b: 359). The best-known examples of cacicazgos come from the Mixteca, but they are documented as existing among Zapotec in the Valley of Oaxaca in the 16th century Spanish relaciones (Marcus 1989; Oudijk 2008; Whitecotton 1977). It is unclear when this political system develops within Valley of Oaxaca, but Marcus attributes the establishment of cacicazgos to A.D. 600 – 900 (Marcus 1989: 205-206). “We have seen that in both the Old and New Worlds, there seem to be a number of instances in which the breakup of a major polity is
followed by the division of its former territory into a series of smaller city-states. Frequently these city-states are intensely competitive with one another and are able to create ephemeral moments of peace only through marriage alliances” (Marcus 1989: 206). This form of political organization appears stable within the context of archaeological record, and could account for why the ceramic assemblage of the Postclassic (Monte Alban V) is unchanging for such a long period of time, but the lived experience for people at the time would likely be one of conflict and instability.

The rise in the importance of local elites during the Late Classic can be seen through the emergence of a new form of inscribed sculpture called genealogical registers. These carved stones emphasized marriage alliances with particular attention focused on demonstrating lines of royal descent. These genealogical registers are believed to represent the ruling elite’s increasing focus on descent and alliance as their actual hold on power and territory within the Valley weakened (Marcus 1980; 1983a). These genealogical registers, along with all other carved Zapotec writing, disappear by the Postclassic.

**The Postclassic Period: c. A.D. 800 – 1521**

The Postclassic period throughout Mesoamerica is marked by extraordinary change. The Valley of Oaxaca again is no different. The widespread demographic, social, and political reordering of populations that followed the Late Classic decline and collapse has often been seen as something of a Mesoamerican “Dark Ages”. The “advances” of state-level society such as urbanism and monumental sculpture with writing were largely lost as populations redistributed themselves across the landscape into smaller, less centralized enclaves. The early years of the Postclassic have typically
received less research interest as archaeologists have focused either of the rise and fall of the great Classic period civilizations or directed their attention to the historically documented cultures of the Late Postclassic era. But the momentous shifts in population and settlement that mark the early years of the Postclassic are deserving of more detailed investigation. The Postclassic archaeological site at Jalieza, the subject of this dissertation, dates to this early part of the Postclassic (see Chapter Five for a discussion of dating the site based on the ceramic assemblage).

The Postclassic period within Oaxaca—defined mainly by MA V ceramic styles from the Valley of Oaxaca ceramic sequence described by Caso, Bernal and Acosta—covers 600+ years and extends up to the point of contact with the invading Spanish. The presence of metal and polychrome ceramics within the later portion of this period does allow for a somewhat better refinement of this chronology, but for the most part the period covers a large swath of time that likely contains a great deal of internal variation. Defining overall patterns for the time period remains a tricky business. The subsequent chapter on ceramics will delve deeper into this issue, but it is important to keep in mind this lack of refinement of scale when discussing “The Postclassic.”

One advantage in studying the Postclassic is the availability of ethnohistoric documents. These documents date to the later parts of the Late Postclassic, as well as into the Contact and Early Colonial periods. Because of the continuity of many cultural practices and patterns among the Zapotec throughout their history, there is a wealth of information that can be gleaned from these sources using the direct historical approach.

The Postclassic period sees the presence and rise of importance of the Mixtec in the Valley of Oaxaca. One of the persistent questions within the archaeology of Oaxaca
has been the nature of the relationship between the Mixtec and the Valley Zapotec. The interpretation of this relationship has changed remarkably over the past 30-40 years. Early studies of the Postclassic in Oaxaca focused on the idea of a Mixtec invasion and control of the Valley. Subsequent research has reevaluated the extent of Mixtec control within the Valley of Oaxaca and the degree of Mixtec influence on the ceramic and material culture of the Zapotec during the Postclassic (Marcus and Flannery 1983). A paradigm shift away from the tradition of culture-history brought into question the ability of archaeologists to read “ethnicity” through ceramic styles and architectural traits. Research projects now tend to focus their attention on settlement patterns and political structures within the Valley of Oaxaca and beyond, finding alliances and trade networks between Mixtec and Zapotec rather than imperial domination or control.

According to Appel, Period V, or the Late Postclassic, is marked by intensified commercial activity, intraregional economic competition, and political decentralization (Appel 1982). While these are observable within the Valley of Oaxaca, and Mesoamerica in general, at the time of the Spanish arrival, the date of their origin and the trajectory of their development remain unclear. It is likely that all of these processes start in the Early Postclassic period, but to assume either a bell curve-like rise, interrupted by Spanish conquest, or an instant consolidation of the importance and influence of these factors immediately after the fall of Monte Alban is simplistic. Comparison of the data from Postclassic Jalieza with other Postclassic sites within the Valley may offer some insights into the existence of these phenomena within the context of an individual site, particularly due to the circumscribed time period of Postclassic Jalieza.
Settlement Patterns during the Postclassic

The settlement patterns of the Postclassic period are remarkably different from the Classic period. One of the greatest difficulties in developing a picture of settlement patterns within the Valley of Oaxaca during the Postclassic is the lack of refinement within the chronology of this time period. The Valley of Oaxaca Settlement Survey Project identified Postclassic sites as those containing MA V ceramics, as classification that covers 600+ years. It is entirely possible that not all Postclassic V sites identified by the Settlement Pattern Project were contemporaneous with each other or inhabited for this entire 600-year time frame. However, we have to work with the data we have, not the data we wish we had, so here are some general observations about settlement patterns during the Postclassic.

The Postclassic in Oaxaca is, in many ways, a period of contradictions. One of these contradictions can be seen within settlement patterns. According to data from the Valley of Oaxaca Settlement Pattern Project, it is the period with the most number of settlements and with the highest population, but these settlements and population are far more dispersed across the landscape than in previous times. Population estimates for the Valley at time of contact are 160,000 persons based on archaeology and 350,000-367,000 persons based on historical documents (Feinman 2000: 370). First-tier settlements within the Valley of Oaxaca for the Postclassic included Dainzu-Macuilxochitl (DMTG), with a population of 13,000, Sa’a Yucu (Cuilapan) with a similarly sized population, and Mitla with a population of 10,500 (Kowalewski et al. 1989). Even the largest of these sites is only about a third of the size of Monte Alban during its Classic Period population peak. This decrease in population living within urban or concentrated settings can be seen in
the demographic trend found at Jalieza. During the Postclassic, Jalieza has been identified as a second tier center with a population of 6,600 persons—but that population represents less than half of the population estimates for either the Early Classic at 13,000 people or the Late Classic at 16,000 people (Casparis 2006; Finsten 1995; Kowalewski et al. 1989). The more common Postclassic settlement pattern is for settlements to be quite small and spread out across the landscape. There are many more single-phase, short-term settlements during the Postclassic than during earlier periods (Kowalewski et al. 1989). This is seen as evidence of population dispersal and resettlement in the wake of the Classic period collapse and represents a Postclassic political world marked by decentralized power (Kowalewski 1983, Kowalewski et al. 1989).

There is some variation in the settlement patterns of each sub-valley during the Postclassic. The Etla branch is very quiet during the Postclassic, populated mainly by small, dispersed settlements. The Tlacolula branch is heavily populated during the Postclassic, despite the fact that it contains the least agriculturally productive land in the Valley of Oaxaca. The site of Mitla dominated the Tlacolula arm of the Valley at the time of the Spanish conquest. The central part of Valle Grande was the location of a number of important sites described in ethnohistorical sources. These sites, such as Zaachila and Cuilapan, contained elaborate public architecture that housed important elite families. The southern part of the Valle Grande does not see much on the scale of large, densely populated sites or elaborate public architecture. Jalieza, with its population estimate of just over 6600, ranks as a second-tier settlement, but lacks any significant monumental architecture.
There is no single dominant population center in the Valley of Oaxaca during the Postclassic. “The nature of the settlement distributions… suggest that production and exchange, rather than administration, were among the most outstanding activities carried on at these sites.” (Kowalewski 1983: 287). There is no clear settlement hierarchy like that found during Formative or Classic—individual sites are built up, but no one site is demographically dominant over any of the sub-valleys.

**Political and Social Organization during the Postclassic**

During the Postclassic period there was no centralized political structure equivalent to Classic period Monte Alban within the Valley of Oaxaca or its surrounding regions. Instead there were a series of small petty kingdoms, often referred to as cacicazgos, competing with each other throughout Oaxaca. It is unclear exactly when these cacicazgos develop within the Valley, but they are well documented in the ethnohistorical sources by the Late Postclassic. The cacicazgo system appears to have been relatively stable and seems to have existed as the main political structure within the Valley of Oaxaca for potentially 500-800 years. “The relative absence of change in the Late Postclassic ceramics… is strong evidence that this period was comparatively stable” (Blanton et al. 1982: 115).

Despite this level of Balkanization, as Marcus and Flannery describe it (Marcus and Flannery 1983), the Postclassic period has the smallest proportion of defensive settlements along hillsides or ridges (Kowalewski et al. 1989: 308). This is of particular interest because Postclassic Jalieza is entirely along the hilltop and hillside. In fact, the Postclassic component of Jalieza is the most remote and inaccessible of the Greater Jalieza archaeological site. While both the Early and Late Classic components of Jalieza
have hilltop and hillside features, there is a great lower piedmont and alluvial plain occupation. Additionally, the hilltop and hillside features are at a lesser elevation than the Postclassic settlement and are easier to access. However there are a number of other important Postclassic sites that show indications of defensive measures. The walls of the Mitla fortress were likely built during the Postclassic (Feinman 2000: 375), as was the defensive hilltop wall found at Yagul (Flannery 1983: 292).

There is a marked decline in monumental construction during the Postclassic, as the following authors have noted: “The paucity of Period V monumental construction would seem to signal a shift in civic-ceremonial activities or a possible change in the abilities of the elite to mobilize labor” (Feinman et al. 1985: 361). “In the Postclassic generally there was much less construction of mounded buildings—of all types—compared with the Monte Alban periods. Apparently, the governmental systems of the Postclassic did not have as much access to labor for the construction of buildings as they had in prior periods” (Blanton et al. 1982: 115). However there are a number of important sites (including Mitla, Yagul, and Zaachila) that do have a large investment in Postclassic monumental architecture, including large palaces, ballcourts, and temples. Jalieza follows the general pattern for the Postclassic and has remarkably little public architecture, even less than during the Early or Late Classic components. The Valley of Oaxaca Settlement Survey Project did not identify any mounds during their survey of Period V Jalieza. My survey did identify one small mound on the hilltop component of the site. However, the movement of the entire settlement from the Late Classic area to a new location during the Early Postclassic represents a remarkable investment of time and labor. The importance of this will be explored in greater detail in Chapter Eight.
Analysis of the settlement hierarchy of the Valley of Oaxaca indicates a lack of strong political integration, yet the degree of interaction and connectivity between individual sites is believed to be greatest during the Postclassic (Appel 1986; Kowalewski et al. 1989). The material culture record of the Postclassic reflects widespread networks of contact and trade not only within regions and sub-regions, but also throughout all of Mesoamerica (Bloomster 2008; Flannery and Marcus 1983a; Kowalewski et al. 1989; Whitecotton 1992). There may have been a decentralization of power during the Postclassic but that may not have meant a decline in the interconnectivity of trade. Some authors have postulated that trade seems to have been independent of state control even during the Classic period, and thus may not have been significantly impacted by the decline of the Monte Alban state (Feinman and Nicholas 2012; Feinman et al. 2004; Smith and Berdan 2000). The paucity of trade goods recovered from Postclassic Jalieza would suggest that either these trade networks were not well established in the Early Postclassic, or that Jalieza was not well integrated into them.

There is abundant evidence for the reuse of mounds during the Postclassic (Middleton et al. 1998). Examples can be found throughout the Valley, including at San Jose Mogote (Flannery and Marcus 1983: 290; Parry 1990), Huitzo (Moser 1969; Flannery 1983d), Cerro Tilcajete (Elson 2007), Jalieza (Casparis 2006; Elson et al. 2010), and Monte Alban (Blanton 1978; Marcus 2008). There is evidence for ritual reuse of the Main Plaza at Monte Alban during the Postclassic including Mixtec burials and Tomb 7 at Monte Alban (Marcus 2008). At San Jose Mogote, Mound 1 was reused during Postclassic times. Buried offerings included “two pottery Tlaloc effigies, several caches of miniature vessels, a number of greenstone beads and greenstone necklaces, isolated
projectile points, and several lancet-like obsidian blades of the type used for ritual bloodletting at the time of the Conquest” (Flannery and Marcus 1983: 290). This indicates a cultural continuity in religious beliefs. Those beliefs likely centered around the importance of the cloud ancestors and the enactment of particular rituals used to honor them (Flannery and Marcus 1976; Marcus 1978; Marcus and Flannery 1978).

Faulseit found evidence of Postclassic café ware incense burners, known as sahumadores, and G3M composite silhouette bowls on individual terraces at Cerro Danush, as well as on the abandoned Classic period hilltop ceremonial center (Faulseit 2012a). He interprets this as evidence for the ritual reuse of earlier construction during the Postclassic period.

**Household Organization during the Postclassic**

While there may be significant changes in the political structure of the Valley of Oaxaca during the Postclassic, there seems to have been a high degree of continuity within household organization. Houses tend to be arranged in terraces and terrace groups, often reproducing the patio/room complexes of earlier house structure. Ancestral burial under the house or patio floor continues in the Postclassic, likely indicating a continuation of religious beliefs of ancestor veneration (Faulseit 2012b). There is continued evidence for craft production at the household level, as well as a continued distinction between elite and commoner households (Feinman et al. 2006; Haines et al. 2004). While most Postclassic settlements seemed to have been located along the valley floor, there are also some sites located along hilltops and hillside (Blanton et al. 1982; Kowalewski et al. 1989). As Feinman notes, “During the Postclassic, settlements with a distinctive residential plan were often situated in high piedmont and mountain locations.
Public structures at these large hilltop sites were arranged largely on the ridgetops, and domestic habitations were situated on residential terraces (small flattened areas defined by a retaining wall) that were constructed down the steep slopes of these elevated hills” (Feinman 2000: 362). There is ample evidence throughout the Valley for the reuse of earlier sites during the Postclassic—including the reuse of earlier housing structures for Postclassic houses and terraces, and the reuse of ceremonial sites for ceremonial purposes (Casparis 2006; Elson et al. 2010; Faulseit 2012a, 2012b).

**The Site of Jalieza**

The Greater Jalieza archaeological site is located in the fields, piedmont, and hills surrounding the present day town of Santo Tomas Jalieza, about 35 kilometers southeast of Oaxaca de Juarez and the site of Monte Alban. The entire area was surveyed as part of the Valley of Oaxaca Settlement Pattern Project in the 1970s (Blanton et al. 1982; Kowalewski et al. 1989). The survey identified three separate phases of settlement at Jalieza that corresponded with Monte Alban IIIa (the Early Classic period c. A.D. 200-600), Monte Alban IV (now understood as the Late Classic period c. A.D. 600-800, sometimes referred to as MA IIIb-IV), and Period V (c. A.D. 800-1521). While there is a small amount of overlap at the edges of these occupations, for the most part they are single-phase occupations. The geographic location of Jalieza is somewhat distinctive and complex. The region of Jalieza was categorized by the Settlement Pattern Project as an area separate from the surrounding regions of Ocotlan alluvium and piedmont because of its unique geographical and agricultural features, that include poor agricultural potential
and steeply sloped hillsides, and due to its history as a contested corridor between the Ocotlan and Tlacolula arms of the Valley (Kowalewski et al. 1989).

Figure 6: Map of the Valley of Oaxaca with inset of Jalieza

The first significant settlement at Jalieza occurred during the Early Classic period. Prior to this period, settlement in the region centered around a succession of sites near the modern town of San Martin Tilcajete, located a few kilometers to the northwest of Jalieza. Several seasons of excavation at the Early and Late Formative sites of El Mogote and El Palenque (Redmond and Spencer 2008, 2013; Spencer and Redmond 2001, 2003, 2004, 2005) and at the Terminal Formative site of Cerro Tilcajete (Elson 2003, 2006) have augmented our understanding of the imperial expansion and regional control of the Monte Alban-based Zapotec State (see also Spencer, Redmond, and Elson 2008).
Toward the end of the Terminal Formative, the Cerro Tilcajete site was largely depopulated. During the Early Classic, the hilltop center of Jalieza was established and settlement in the Jalieza area reached an estimated 13,000 people (Casparis 2006; Kowalewski et al. 1989). It is unclear whether the population from Cerro Tilcajete migrated across the valley and formed the core of Early Classic Jalieza site, or if Jalieza was founded by a different group. It is also unclear at this point if there was a significant time lag between the abandonment of Cerro Tilcajete and the establishment of Early Classic Jalieza. By the end of the Early Classic, the site was largely depopulated, and settlement shifted a few kilometers to the south. This Late Classic settlement at Jalieza grew to an estimated 16,000 people during the Late Classic, with extensive hillside household terraces and a hilltop ceremonial center that flanked the mountain pass road connecting the Ocotlan and Tlacolula Valleys (Kowalewski et al. 1989). There also seems to be Late Classic settlement at Cerro Tilcajete, perhaps related to the settlement at Jalieza (Elson et al. 2010). Settlement again shifted at the end of the Late Classic, with depopulation of the Late Classic areas of the site and settlement of the Postclassic component of the site, located on a hill known as Tecolote. While an estimated population of 6,600 for the Postclassic portion of the site ranks Jalieza as one of the larger Postclassic settlements in the Valley, it represents a significant decrease in overall population in the region during the Late Classic to Postclassic transition (Kowalewski et al. 1989). It is not known when the Postclassic settlement at Jalieza was abandoned, but there was no inhabitation at the site at the time of the arrival of the Spanish in the Valley.
**Previous research at Jalieza**

Below are descriptions of research projects that have been conducted at the archaeological site of Greater Jalieza. At this point, a brief overview of the project will be presented. Specific findings will be discussed in detail in subsequent chapters. A reminder on chronological confusion: the Late Classic site at Jalieza is referred to by Finsten as a Period IV, Early Postclassic site. It is referred to by Elson et al. as a Period IIIb-IV, Late Classic site. I will use the terminology below corresponding with the most recent assessment of the site by Elson (Elson et al. 2010).

In 1988, Laura Finsten conducted an intensive surface collection of selected terraces from both the IIIa and IIIb-IV sites at Jalieza. Working from the map created by the Settlement Survey Project, her research targeted 16 terrace groups, 8 from each time period. Within these terrace groups Finsten identified a total of 226 individual household terraces, as well as civic-ceremonial spaces and activity areas. She collected diagnostic ceramics, lithics, and shell, and took field recordings of large or heavy artifacts (such as manos and metates) and non-diagnostic ceramics. Her research explored site functions and activities centered on these terraces. Her study looks at the refinement of the ceramic chronology (IIIb-IV controversy); the relationship between decentralization of power and the increasing importance of trade and markets; craft production and activity specialization; obsidian and local chipped stone production; and the relationship between terrace size, community organization, and wealth and status. Finsten did not include any of the Period V site in her collection (Finsten 1995).

Penelope Young addressed questions of community organization during the Early Classic (IIIa) and IIIb-IV periods through the analysis of urns found at the site of Jalieza.
Her analysis focuses on the importance of religious ideology in community organization using a contextual approach to understanding the symbolic meanings represented through the urns. Because urns are thought to represent ancestors, their availability and distribution across the landscape of Jalieza can provide an insight into community structures and organization. By selecting urns from both the IIIa and IIIb-IV components of the site, Young was able to draw distinctions between these two temporally and spatially distinct parts of the site. Young was a student of Finsten’s and this thesis was based on the 562 urn and figurine fragments collected by Finsten during her 1988 intensive surface collection of the site (Young 1993).

Luca Casparis conducted an intensive survey of the Early Classic IIIa site, coupled with excavation of two key areas, in 2002-2003. The data from the excavation sites, consisting of the hilltop ceremonial center and a residential area at the base of the hill, contribute to our understanding of the decline and fragmentation of the Monte Alban state. This project provides crucial data from a secondary, provincial site to expand our view of the political and social organization of the Valley of Oaxaca as the dominance of the Monte Alban state waned. A light presence of Period V pottery was found on the IIIa site during survey, including a Period V burial eroding from the lower portions of the slope. (Casparis 2002, 2003, 2006, personal communication).

Christina Elson and Luca Casparis conducted an intensive survey of the majority of the Period IIIb-IV site in 2006, followed in 2007 by excavation of a civic-ceremonial mound group and residence surrounding a plaza, and excavation of a hillside household terrace in 2008. Their research expands on Finsten’s preliminary work at the site and enhances our understanding of the political impact of Monte Alban’s Late Classic decline.
within the important Valle Grande (Ocotlan-Zimatlan) sub-region of the Valley of Oaxaca (Elson and Casparis 2006, 2007). Elson and Casparis’ survey of the Period IIIb-IV site discovered Period V G3M pottery atop the ceremonial mounds in the northern part of the Late Classic site, as well as evidence of dispersed Postclassic occupation throughout both sites, including reuse of ceremonial architecture (Elson and Casparis 2006; Elson et al. 2010).

Prior to my project, the only research that had been conducted on the Postclassic component of Jalieza was conducted as part of the Valley of Oaxaca Settlement Pattern Project. The Period V settlement covers 149.1 hectares (Kowalewski et al. 1989). The survey identified 640 terraces within this area (Elam 1989). The authors note that Jalieza is an unusual Postclassic site for a number of reasons. One is its size. The population for Jalieza during the Postclassic presented by the Valley of Oaxaca Settlement Survey Project is 6649 persons (Kowalewski et al. 1989). Very few Postclassic sites in the Valley of Oaxaca exceed 1000 in population size with the mean site population at 66 persons (Kowalewski et al: 310). With this population of 6600, Jalieza is identified as a second-tier site within the Valley of Oaxaca during the Postclassic. The Postclassic settlement at Jalieza is also unusual in that the settlement is composed of numerous hillside residential terraces and a hilltop center. Most Postclassic sites do not follow the hilltop defensive model of earlier time periods. Only 1% of Period V sites contained more than 10 terraces (Kowalewski et al. 1989: 310), while the Valley of Oaxaca Settlement Pattern Project identified 640 terraces at Jalieza. The only other major site with populations residing in hillside terraces during the Postclassic is Monte Alban (Kowalewski et al. 1989: 317). The Valley of Oaxaca Settlement Pattern Project
identified Jalieza as a site from the early part of the Postclassic period because of the lack of polychrome pottery and the lack of metal found during the survey. When the site was abandoned is unknown, but at the time of the Spanish conquest of the Valley of Oaxaca, there was no inhabitation of the archaeological zones of Jalieza. Settlement at the time of the conquest was limited to within the village of Santo Tomas Jalieza itself, which at the time was subject to Chichicapan (Kowalewski et al. 1989: 347).

Chapter Summary

The goal of this chapter was to establish what is known, in broad terms, about the development of life in the Valley of Oaxaca, particularly through the framework of settlement patterns, political and social organization, and household organization. This overview lays the foundation upon which an understanding of Postclassic Jalieza may be constructed. I will return in subsequent chapters to these themes of settlement, political organization, and household, and will address them as they apply to the site of Postclassic Jalieza. With this framework of the development of life within the Oaxaca Valley as a backdrop, I will now move on to some of the methodological and theoretical issues that shaped my research at Jalieza.
Chapter Three: Survey, Mapping, and Surface Collection

Overview

This chapter will examine the phenomenon of surface archaeology as experienced through field survey. Archaeological survey can mean many things—from informal, unsystematic scouting for sites to mapping a region from a plane using LIDAR technology. There is no single definition for what an archaeological survey is and no standardized set of methods for conducting survey. In this chapter, I will focus on the survey techniques I used during in my fieldwork at Jalieza. These include field walking, mapping, and surface collection. Conducting survey through field walking is precisely how it sounds; walking the field and making observations of features within the landscape. Mapping is systematically recording these features on a 2-dimensional plan. Surface collection is the systematic collection of artifacts found on the surface. Data gathered through these techniques give us a glimpse into the lives of the former inhabitants of a site.

This chapter will reflect on the importance of survey work in the creation of archaeological knowledge. I will review the methodological basics of survey, mapping, and surface collection, as well as the theoretical positions behind these research methods. Of particular emphasis are the importance of research design and the need to match the techniques and tools used in survey with the purpose and goals of each particular survey.
project. I will then provide some examples of survey projects that have informed my work at Postclassic Jalieza. Lastly I will discuss the research design and methods for my project at Postclassic Jalieza and present the map I created of the Postclassic site at Jalieza.

**Importance of survey data**

When people find out that you do archaeology, they often ask, “how do you know where to dig?” In some instances there are historical records that can tell us where you might find something—in the case of New York City examples of this include Seneca Village (Wall and Rothschild 2012) and the African Burial Ground (Mack and Blakey 2004). Sometimes, as in the case of the New York African Burial Ground, you think there’s probably nothing there and then are surprised when you start digging and find something. Other times, as in the case of Seneca Village, you expect to find more than you do. The point is that historical records can only tell you so much about where to dig. And they are only useful in the case of historical archaeology. For the vast majority of archaeological sites out there, historical documents are of no help. Ground penetrating radar and other sub-surface detection technology can give us a glimpse below the surface and can direct where to dig. An example of this is David Hurst Thomas’s work in locating the Spanish mission on St. Catherine’s Island (Thomas 2011). He was able to recognize the footprint of the mission through the use of various ground penetrating radar techniques and then plan his excavation units accordingly. However, this can be expensive technology and is not always accessible, due either to funding constraints or to landscape features that may prohibit its use or limit its effectiveness. For the vast
majority of sites you only know where to dig based on data collected through surface survey. In this way, survey is often a crucial first step in a research project that involves excavation. Up until the 1960s, survey was primarily used as a tool to locate sites for excavation. Survey data was considered unreliable, unrepresentative, and a poor substitute for excavation data.

This view has changed dramatically in the past 50 years. The value of surface data have been reevaluated and championed by a number of researchers (Banning 2002; Collins and Molyneaux 2003; Howard 2007; Redman 1987). Survey data are now not only recognized as valid data in their own right, but many projects are designed with survey as their sole means of data collection. There are a number of reasons why survey is considered valuable and at times even desirable over excavation. Excavation itself is a destructive process. By digging through a site in order to understand it, you are destroying the original context of the deposits. Once a site is excavated, it can never be reencountered in its original state. Survey is non-destructive and non-invasive. It makes little impact on the site. Future researchers can revisit a surveyed site and conduct their own survey, gleaning additional information about the site that can inform a new interpretation of the site, or develop greater detail and resolution to previous research conducted there.

Surveys can provide a data set that you cannot get through excavation alone. Large-scale surveys allow researchers to look at entire regions as a whole, to see patterns in the connections between sites within a particular geographical region. This provides a scale of data that is impossible to understand through the excavation of sections of individual sites alone. Regional survey projects will be discussed in more detail below,
but it is through these large-scale regional surveys, not through excavations, that we have a view of the historical sequence of occupation in Mesoamerica prior to the Spanish conquest. Survey projects, even large-scale ones, can be completed within a shorter time frame than excavation projects. In this way, survey, mapping, and surface collection are relatively cheap when compared with excavation and require a lower labor investment. Survey provides more bang for your archaeological buck than excavation. There are some questions that survey can’t answer and survey doesn’t replace the need for excavation. However it does play an important role in the overall construction of archaeological knowledge.

Survey coupled with the practice of surface collection does alter a site by removing the artifacts that are on the surface. In this way, survey with surface collection is not entirely non-invasive, though its impact on the site is significantly less than excavation. However, it is important to note that surface collection can have an important role in documenting sites in advance of their destruction and disappearance. Collecting and recording of surface data are extremely important because of their ephemeral nature. The surface is constantly changing and, as it does, new information comes to light, while existing information may be lost. Documenting surface sites is important because that information may not be there in 10 years. “Time is always against you. As soil accumulates or erodes with the seasons, it changes the amount of cultural material exposed on the surface. Even if you plan to walk every square meter of land, there will always be more to find. There is a never a final survey” (Collins and Molyneaux 2003: 19). Erosion and development are by far the two largest threats to archaeological sites around the globe and Oaxaca is no exception. Finsten notes the
disappearance of terraces between the time of the Settlement Pattern Project Survey in the 1970s and her 1988 survey at Jalieza (Finsten 1995). Casparis notes the disappearance of even more features at the Early Classic site by the time of his survey in 2002 (Casparis 2006). The value of documenting sites before they disappear outweighs the potential damage caused by survey work.

A last example of the importance of survey work is more interpretive and less practical, but a valuable element to consider nonetheless. Field walking allows the researcher to experience the site. These ideas will be explored further in the discussion of landscape archaeology in Chapter Seven, but this phenomenological experience of the site has an impact on the eventual interpretation of the site. Your experience of the site as a researcher is different during survey than it is during an excavation. During excavation you stay in one section of the site, usually staring into the dirt. At lunch perhaps you get to sit and observe the landscape from the spot where you are (if you don’t have too much paperwork to catch up on), but you don’t move through the site in the same way you do when conducting a survey. You don’t experience all parts of the site when participating in an excavation. Survey gives you these opportunities. You experience inhabiting each section of the site, and how you move from one section to another. You learn the physical connections between different parts of the site. You see what could be seen or not seen from different vantage points within the site. You have to use your imagination in a different way during field walking. You often try to view the site as it would have been when inhabited. This experience is important because in many ways what a survey project ultimately does is create a visualization of the landscape. Through mapping you are trying to convey the shape of the ground; you’re trying to
reconstruct what was on the surface, how parts of the site were connected to each other, or separated from each other. You’re not uncovering buried landscapes as in excavation, but interpreting buried landscapes through surface configurations.

Theory and methodology of survey, surface collection and mapping

The change in attitude in the 1960s and 70s toward the importance of survey and the validity of the data it produces is concurrent with the rise of Cultural Resource Management (CRM) (King 1978, Redman 1987, White and King 2007). As CRM work in advance of new construction in the United States required more surveys to be conducted, traditional methods were refined and new methods and techniques were developed. The number of survey projects within academic archaeology grew as well as part of the processual approach of the New Archaeology. As survey became viewed as a more legitimate archaeological undertaking, survey techniques expanded, becoming more scientific and more specialized. The surveyor’s toolkit expanded in concert. New and improved technologies have developed over the past 50 years that have greatly expanded on the quantity and quality of data that can be acquired through archaeological survey. Despite these advances in technology, surveys can still use low-tech methods to produce solid data.

Survey Techniques

Archaeological survey can mean a lot of things; there is not one standard set of techniques within the field. Survey methods tend to vary by region as well — the influence of CRM in North American Archaeology has developed a set of procedures that
tends to differ from the procedures used in Mesoamerica, which in turn are slightly
different than those practiced in Europe. What is standard across every survey is the need
to tailor the methods of a project to the research objectives: “Archaeologists should
control their methods, not the other way around.” (White and King 2007: 69)

Field walking: At its most basic, surveying a site involves walking the ground and
making observations of surface features. Often called field walking, this technique can
range from very informal and loosely organized to rigidly structured in practice. Some
field walking is simple reconnaissance: walking the land to see what can be noticed, such
as obvious surface features like walls or large artifact scatters. The purpose of this may
simply be to identify where to direct further research. More structured field walking may
involve teams of researchers walking evenly spaced transects in search of surface
features. This again is often directed at site identification. Some field walking is like that
described earlier in this chapter and is directed specifically at experiencing the site in a
phenomenological way.

Mapping: Most survey projects involve mapping to some extent. The detail and
accuracy of the map created is dependent on the goals and objectives of the survey
project. Some maps may be general overviews with little time and manpower
investment. Other projects may have the goal of creating an accurate and detailed map,
and thus may invest a great deal of time and effort into creating this document. Maps are
an important method for understanding a site. A map is a visualization of the space that
usually forms the basis for further interpretation of the site. “We all carry a map in our
heads, a vague but important aspect of our thinking about what we know as meaningful
space” (Collins and Molyneaux 2003: 99). How a site is mapped depends on a number of
factors, including available technology, landscape features of the site, quality and availability of existing maps, and, most importantly, your project goals. Maps can be created from the simple technology of a compass and measuring tapes, from a helicopter fly-over using LIDAR to determine differences in surface elevation (Chase et al. 2011), or from a wide variety of technologies located somewhere in between these extremes. I will again stress the importance of tailoring the techniques and technologies used to the goals and scope of your research design. “Greater precision does not necessarily produce better understanding of the phenomena you are studying. Archaeology will always be a subtle intertwining of science and imagination. You need to produce a map that will bring life to both your analysis and your interpretation” (Collins and Molyneaux 2003: 104).

Surface collection: Not all survey projects include surface collection which entails the collection of artifacts located on the current ground surface. Some projects record finds in the field, but many survey projects do incorporate some program of surface collection. It is crucial to include a strategy for surface collection as part of the initial research design in order to proceed in a systematic way. You want the squares to be the same size throughout the site. You want a representative sample of the site—which may mean a random scatter for some sites, or a selected sample for others, but you likely want a somewhat even distribution across the site. This allows not only for an organized procedure for artifact collection in the field, but for comparison of finds at a later point, both within the site and with other sites. Data from surface collection is used to determine factors such as artifact densities that can help identify activity areas within a site and develop views of site organization. Some surveys include shovel test pits, coring
or auguring, and even small, exploratory excavation squares, in order to assess buried deposits.

Survey Tools

There are many different possibilities in terms of equipment used for surveying. These come with differing levels of accuracy, cost, and ease in use and transport. Some of these tools include measuring tapes, rangefinders, theodolites, magnetic compasses, total stations, and a wide variety of GPS-enabled devices. Remote sensing methods include much more sophisticated and expensive technology ranging from aerial and satellite imagery to a variety of geophysical survey methods including resistivity, magnetometer, electromagnetic, seismic, sonar, and ground-penetrating radar. However, technology is only as good as the operator—any of these devices can create accurate enough measurements for an archaeological survey as long as used properly. You must determine your desired level of scale, acceptable parameters for accuracy, budgetary constraints, geographic conditions, and labor availability when deciding which measurement tools are appropriate for your survey.

Research Design

There are many different purposes for archaeological survey—the methods and tools used during survey should be specific to the purposes for the survey. “Insistence that surveys should all employ the same strategies and methods can only ensure mediocre results” (Banning 2002: 36). This is where a solid research design comes in handy. Developing a strong, well thought-out research design prior to going into the field will
guide the researcher in choosing the proper survey tools and techniques for their particular project. A research design should explicitly state the goal or question the project seeks to examine. It then lays out the data necessary to achieve these goals. From here you can choose the appropriate survey methods and tools to acquire this data. Redman lays out six elements that should be considered when developing your research design. I find them quite helpful and so will repeat them here. These are: 1) define interpretive goals, 2) specify minimal data requirements, 3) understand the problems of data recognition, 4) structure the flow of research and evaluation, 5) choose appropriate tools for each stage of research, and 6) maintain cost effectiveness (Redman 1987). Simply put, “A research design is nothing more than a systematically organized project plan, explaining what we intend to do, why we intend to do it that way, and how we plan to carry out our intent” (White and King 2007: 79). It is also important to describe your research design and the methods used for survey—i.e. how the survey was conducted—when survey results are described and interpreted. This allows other researchers to understand how your data were generated.

*Types of Survey*

There is a diversity of purposes for archaeological survey. These include, but are not limited to: site discovery, assessment of site destruction in advance of construction, extent of site occupation or site boundaries, determination of dates for site occupation, exploration of regional settlement patterns, pinpointing the location of particular features, and understanding internal variability within a site.
There are many varieties of classifications for archaeological survey. I will review a few of the more salient types below. In his book, *Archaeological Survey*, Banning describes three categories of survey: 1) prospection, “to find archaeological materials of a particular type or age, or that can be used to test very specific hypotheses” 2) statistical surveys, “estimating parameters of some archaeological population or populations, testing some statistical hypothesis, or generating some predictive model” and 3) structural survey, “aim to identify spatial structure in the distribution of archaeological materials. The kinds of patterns they seek can include the way settlements are arranged relative to their nearest neighbors, or relative to roads and waterways, as well as whether archaeological materials are clustered or evenly dispersed or how the probability of cultural remains being present varies over space” (Banning 2002: 27-28).

Prospection requires good background research to try to pinpoint where to look, rather than utilizing random samples. Statistical survey requires a sampling strategy. The goal of the survey is to see the whole, but you can’t always survey the whole, thus a well-designed sampling strategy is a necessity. Structural surveys seek to understand the patterns within the whole. For this type of survey you need a sample that includes data from all sites, not a random sample of sites. If you’re seeking to develop an understanding of trade routes or settlement hierarchy, you can’t have sites that are missing, you need a complete picture, a continuous distribution. It is possible, and frequently occurs, that survey goals will be a combination of these three types.

There are different scales to archaeological survey: intensive versus extensive. An example of an extensive survey project is a regional survey, such as the Valley of Oaxaca Settlement Pattern Survey (Blanton et al. 1982; Kowalewski et al. 1989). In this case,
researchers were looking for broad, valley-wide settlement patterns. It was a multi-year project that covered hundreds of square kilometers. Thus researchers spent only a few days at individual sites such as Jalieza. The survey I conducted was intensive. The scale of the survey was much smaller, and thus the resolution was much finer. To develop a more detailed map of the site with more accurate measurements of site features required a higher investment of time at the site of Jalieza. I spent 5 weeks walking the site as opposed to a few days. However the scale of my data is much smaller, restricted only to the Postclassic component of Jalieza.

Regional surveys provide us with a level of information that we just don’t have and can’t really get through excavation, specifically a view of large-scale settlement patterns. “The time-consuming, expensive, and destructive nature of excavation rules it out as an effective means of hypothesis testing on a regional scale. For this task, archaeology must turn to non-destructive techniques of measurement such as remote sensing, geophysical prospecting, soil testing, test pitting, and both intensive and extensive systematic surface survey” (Dancey 1998: 8).

Methods should be tailored to goals of each individual survey, however this can make it difficult to compare or combine survey results. You have to be careful in how you compare data for not all survey data are created equally—“Although it is not meaningful to compare demographic estimates based on densities of sites with ones based on artifact densities in quadrats, for example, it is entirely reasonable to compare artifact densities in a survey by square units with those in a survey that used hexagonal ones. Both survey frames will yield statistics of artifacts per square meter and statistical errors on those statistics that allow good estimates of artifact density in the population”
(Banning 2002: 37). This is one of the reasons why it’s so important to document how survey was conducted so that other researchers can use your data appropriately.

Considerations

Survey data are a very specific form of data. You have to be careful with the assumptions you make about what is found on the surface. They have their limitations. This of course is true of excavation data as well. However, surface evidence does have a great deal of merit if put in the proper context. There are a number of factors to consider when dealing with surface archaeology. Some of these factors have to do with the physical composition and landscape features of the site, some have to do with design of the survey, and some have to do with taphonomic processes that have occurred between site abandonment and the time of survey. Examples from the first category, physical composition and landscape features, include visibility and obtrusiveness. A basic, but extremely important, factor to consider is the visibility of surface finds. Seasonal variation in ground cover can affect survey results, such as wet versus dry season ground coverage. Erosion can increase artifact visibility on slopes, but bury surface finds on alluvial plains. Plowing can expose artifacts buried within the plow zone that would otherwise go undetected. Even variations in light quality, morning sun versus afternoon sun for example, could affect a field walker’s ability to detect artifacts or features. It is difficult to quantify “visibility” but some of these factors that influence it should be considered and addressed when designing and describing a survey project. Obtrusiveness is another factor that influences observation and recording of site features. This could be described as how easily artifacts and features can be detected. For example, stone
masonry is quite obtrusive and makes it likely that it will be observed and recorded. Small chips of obsidian or chipped stone are more likely to blend into the ground cover and thus be missed during surface collection. This is also difficult to quantify, but an important element to keep in mind when describing survey results. It seems like an obvious statement though worth making nonetheless, but obtrusiveness, as well as clustering of artifacts, will make them more visible and thus more likely to be observed and recorded during archaeological survey (Wandsnider and Camili 1992). There is also a phenomenon known as the “size effect.” Essentially, surface artifacts tend to be larger in size; this is likely due to a confluence of natural and cultural influences. “The principal implication of the size effect is that surface artifact collections are not representative of a site’s total artifact inventory. This would certainly call into question the practice of designating site functions solely using surface materials… In order to insure the soundness of inferences based only on surface collections, the consideration of the size effect and other phenomena that may have altered the original archaeological context of artifacts is required” (Baker 1978: 292). Larger objects tend to work their way to the surface as smaller bits fill in the spaces below them. This is known as the Brazil Nut Effect in geology and explains why you have to remove rocks from your garden every spring. The above are all factors that may influence the assemblage one gets through surface collection and thus must be considered when making inferences based on such an assemblage.

Examples from survey design, the second category of considerations, include intensity, which Banning describes as “density of effort.” This can be thought of as how much manpower goes into observing a circumscribed area, such as the number of person...
hours per hectare of site. A more intensive survey will likely produce a greater number of surface finds or detail of surface observation. Resolution is another factor that varies depending on survey design. Resolution can be seen as a measure of the density of data points, a finer resolution would likely result from a more intensive survey, again producing greater detail. Coverage can be defined as the proportion of the site that the survey examined or recorded. This proportion will change depending on the survey’s goals and design. The accessibility of the site will vary from project to project. Some portions of the site may not be accessible either due to landscape features or to anthropogenic reasons.

The third category of considerations described above, taphonomic processes, includes a number of post-depositional factors that will influence what the survey crew may find. Erosion is an important process to consider when analyzing surface finds. Erosion can cause artifact displacement, artifact sorting, and even artifact removal and secondary deposition. Bioturbation may cause artifact displacement or removal as well. Chemical processes may destroy artifacts, particularly bone or wooden items. Mechanical processes, such as plowing or road construction, may destroy artifacts, features, and sites, either portions of them or their entirety. As Banning states, “What archaeologists survey are the products of processes” (Banning 2002: 12). Schiffer has written extensively about site formation processes (Schiffer 1976) and Lewarch and O’Brien (1981) provide an excellent summary of post-depositional site formation processes. It’s important to remember that some of these processes may have occurred recently, others may have occurred centuries ago, and some may occur on a repeated or cyclical basis over long periods of time.
Perhaps one of the biggest pitfalls to avoid in interpreting surface finds is to steer clear of assuming that a surface assemblage is wholly representative of subsurface deposits (Downum and Brown 1998; Redman and Watson 1970). While there is clearly some kind of relationship between what is found on the surface and that area of the site, to automatically assume that the subsurface deposits will be the same as surface finds is problematic. Redman and Watson designed a research project to test the relationship between surface and subsurface deposits using two prehistoric mounds in southeastern Turkey. They determined that at their site the first 50 centimeters of subsurface deposit corresponded to surface finds (Redman and Watson 1970). To assume beyond that depth would be considered problematic. However, the correspondence between the findings at the site on which this study was conducted and its application to sites in other time periods or parts of the world is unclear.

The overarching goal of all survey is to develop a general picture of what’s going on. Surveys aim to be complete, to provide a reasonable facsimile of human occupation of the area that the survey covers. However no survey can be 100% complete. There must be concessions made based on time, labor, and budgets. Usually these limitations come in the scope of the coverage and/or the intensity of the coverage. But as has been noted, “this is a difficult problem because both sacrifices appear to be inevitable, while neither is acceptable. Which is the ‘better’ way to not find artifacts: to not look in enough places, or to not look closely enough?” (Burger et al. 2004: 420). This challenge is not particular to survey. The same could be said about excavation data, or about historical data, or about astronomical data for that matter. It is important to remember that you can say something without knowing everything.
Site v. Non-site

The last issue I will address is the question of what is a site? In many ways a site is an arbitrary line drawn around a high density of artifact scatter. What constitutes the edge of a site? What is out of bounds? It is important to understand each site within its particular context. Part of this context includes the features surrounding the location. People didn’t just live within the boundaries of artifact scatters. Even in the example of a walled town, residents ventured outside the walls to get food and resources, to interact with their surroundings. It is important to recognize a site’s surroundings, to recognize the places in between artifact concentrations. This theme will also be explored in more detail in my discussion of landscape archaeology in Chapter Seven.

Regional Survey versus Intensive Survey

Interest in the archaeology of regional settlement patterns began with Gordon Willey’s Prehistoric Settlement Patterns of the Virú Valley published in 1953. The increased interest in regional settlement patterns reflected a change in theory within archaeology that included an incorporation of a world systems paradigm into archaeological thought. This approach included a newfound interest in the macroregion and in examining the connections between sites rather than viewing sites as individual, bounded enclaves (Blanton and Feinman 1984; Blanton et al. 1993; Smith and Berdan 2000).

There were a series of large-scale regional survey projects in the 1960s and 70s throughout Mesoamerica, which are largely responsible for creating the view of cultural
development that we now have. The first of these projects was conducted in the Basin of Mexico with the survey of the Teotihuacan Valley from 1960-1965. This project sought to understand the agricultural, settlement, and population history of Teotihuacan and its environs (Sanders et al. 1979). The Valley of Oaxaca Settlement Pattern Project was largely based on this work in Central Mexico. Started at Monte Alban in 1971, this project eventually included extensive survey of all three branches of the Valley of Oaxaca (Blanton 1978; Blanton et al. 1982; Kowalewski et al, 1989). Settlement surveys were conducted in other regions within Oaxaca as well. In the Mixteca Alta, Ronald Spores began the Nochixtlan Valley project in 1966 (Spores 1972). This was followed by surveys of the Cuicatlan Cañada (Redmond 1983), the Isthmus of Tehuantepec (Zeitlin 1978), Ejutla (Feinman and Nicholas 1990), and the Sola Valley (Balkansky 2002).

These regional surveys have created views of the overarching patterns within Oaxaca. These patterns form the background illustration to the close-up view of individual sites. Intensive surveys are on a different scale than regional surveys and are designed with different goals in mind. With this different scale and focus come different techniques. Rather than looking for broad patterns, intensive surveys are looking for the details within the history of a particular site. They often are full-coverage surveys, rather than examining only a sample of the site. Often the goals are to determine site function and activities in order to develop a picture of the internal structure of a site. Mapping and surface collection that accompany intensive survey are generally on a finer scale as well, creating a more precise map of a site as well as more intensive surface collections. My research at Postclassic Jalieza follows this model of intensive survey. There are a number of examples of intensive surveys that have been conducted at individual sites that provide
models for my research at Postclassic Jalieza. In order to design and interpret my research at Jalieza, I’ve looked to examples of other intensive surveys at individual sites.

There are intensive surveys of sites within the Valley of Oaxaca that will provide comparative data for Postclassic Jalieza. These include Feinman and Nicholas’ work at Guirun, El Palmillo, and the Mitla Fortress (Feinman and Nicholas 2004). In the mid-1990s, they conducted survey, mapping, and surface collection at these three sites located in the Tlacolula branch of the Valley. This survey project was followed by excavations of a number of terraces at these sites. Their work provides important information about domestic household terraces within the Valley of Oaxaca. These three sites all have multi-period occupations, including some Postclassic occupation. Their findings will be discussed in greater detail in subsequent chapters.

Ronald Faulseit conducted a survey project at Cerro Danush, part of the greater Dainzu-Macuilxóchitl (DMTG) site in the Tlacolula branch of Valley of Oaxaca in 2007. He incorporated mapping and surface collection into his project. The survey focused on the Late Classic component of the site, which is largely comprised of hillside terraces and a large terrace complex on the summit, but includes a smaller Early Postclassic component as well. He has interpreted this summit complex as the civic-ceremonial center of the site. Faulseit uses a behavioral archaeology approach to interpret the surface artifact assemblage. Cerro Danush was occupied as early as the Rosario phase with some habitation continuing through European contact. DMTG was a dispersed valley floor settlement, surrounded by three hills, Cerro Danush, Cerro Dainzu, and Cerro Danez. There was an expansion of settlement at DMTG during the Early Classic, including the construction of the civic-ceremonial center at Cerro Dainzu. The Late Classic saw big
changes at DMTG, with a substantial increase in population, site size, and monumental construction. During this time, the civic-ceremonial center shifts to Cerro Danush.

Faulseit sees DMTG during the Late Classic as a district center, administered by an official from Monte Alban. Faulseit argues “that the Late Classic shift in civic-ceremonial focus away from Cerro Dainzu to Cerro Danush implies direct involvement at the site from the nearby urban center of Monte Alban” (Faulseit 2008: 2). Alternatively, this transition could be seen as evidence for a shift away from Monte Alban control in this region.

Intensive survey, mapping, and surface collection were conducted on the Early Classic and Late Classic components at Jalieza. In 1988, Laura Finsten conducted controlled surface collections on 16 terrace groups throughout the Early Classic and Late Classic components of the site (Finsten 1995). Her results and interpretations will be useful in understanding the survey data from the Postclassic component of the site. Luca Casparis surveyed the Early Classic site as part of his dissertation research in 2002-2003 (Casparis 2006). Christina Elson and Luca Casparis surveyed the Late Classic component in 2006 (Elson and Casparis 2006; Elson et al. 2010). Both survey projects by Casparis and Elson used compass and tape mapping techniques and 100 m² surface collection squares. Their survey data was used to identify general areas of these sites, including civic-ceremonial cores and domestic areas. In both cases, survey data was also used to identify locations for excavation. My project was modeled on their methods and design in order to allow maximum comparability of surface data from all three temporal components of Jalieza.
Research Design and Methods at Postclassic Jalieza

In the remaining pages of this chapter I will describe the research design and methods used in my survey at Postclassic Jalieza. Data collected from this survey forms the bulk of the subject of this dissertation. These data will be presented and analyzed in subsequent chapters.

Research Design

This project addresses four important research topics pertaining to the Postclassic
1) Household and landscape organization will be examined through the analysis of the structures and remains associated with household terraces and the organizational layout of the site.
2) The degree of continuity within the social and political organization of Jalieza between the Classic period settlements and the Postclassic settlement will be examined through a comparison of the household and landscape elements at each of these sites.
3) The role of trade as a unifying element of Postclassic Oaxaca will be evaluated through the presence and distribution of ceramic types, exotic items, and trade goods.
4) The analysis of the ceramic assemblage from surface collections at Jalieza will be compared with efforts to refine the chronology of Period V pottery.
In April and May of 2010, I conducted an intensive, full-coverage field survey with controlled surface collection on the settlement area of Postclassic Jalieza. The primary goals of this field research were

1) To develop a current and accurate map of the Period V component at Jalieza that includes a record of surface finds and the locations of residential terraces, household structures, public architecture and plazas

2) To conduct laboratory analysis, including coding, drawing, and imaging, of the artifacts recovered from collection squares

3) To identify potential locations for future excavation.

This research compliments previous work conducted at both the Early Classic and Late Classic components of Jalieza. With the addition of data from this project, there is a complete and up-to-date record of intensive survey data for nearly 1000 years of settlement at the Greater Jalieza site. This allows for a better understanding of diachronic change at this important sub-regional center, following Jalieza’s transition from a secondary center during the height of Monte Alban’s state power through the waning of that imperial power and the site’s emerging independence to the site’s reorganization into a smaller scale settlement during the Postclassic.

Methods

This project involved an intensive, full-coverage field survey with controlled surface collection on the settlement area of Postclassic Jalieza. This survey project was intensive, meaning that there was a large investment in time and labor dedicated to
understanding the Period V component of the site. My crew and I spent 5 weeks, Monday to Friday, 8 am – 5 pm, walking the 149.1-hectare site. Full coverage means that the survey covered the entire site, not a sample of site. Survey techniques included field walking, mapping, and surface collection. Field walking was used to identify terraces and features for documentation, as well as allowed for an experiential understanding of the site. Mapping was conducted using a Brunton International Pocket Transit Compass and 50-meter tapes. A map was hand-drawn in the field onto millimeter graph paper at a 1:1000 scale. Surface collection resulted in the collection of all surface artifacts from 70 collection squares, each square measuring 100 m². Each of these components will be described in further detail below.

This survey was conducted during the dry season in Oaxaca, specifically during the months of April and May. Ground vegetation cover was at a minimum, which increased visibility for identifying terraces and architectural remains, as well as surface artifacts within collection squares. During the dry season there is also generally little to no cloud cover. The bright, direct sun may have made recognition of certain features more difficult, but this was likely outweighed by the increased visibility from lighter vegetation.

For the majority of the project we worked as a 4-person crew. I did the mapping. My field assistant, Acacia Berry, set up collection squares, and 2 hired workers, Eli Vasquez Chavez and Eric Antonio Chavez, held tapes and helped collect artifacts. The general pattern was that Acacia and I would scout the landscape in a particular area, using the Settlement Pattern Project map as our guide. We would flag terraces as we encountered them with fluorescent post-it notes. We would then go back to the terrace
where we started and lay out a collection square. After taking a photo of the square and
the GPS coordinates from the southwest corner of the square, Acacia and Eli would
collect artifacts, and Eric and I would move ahead of them mapping terraces and features.
When that square was done, we’d proceed further through the site in this same way.
Because we weren’t trying to identify new sites or terraces, we didn’t field walk
transects. Postclassic Jalieza is a terraced site and there is a certain natural flow to it.
Pedestrian survey reflected that, and Acacia and I allowed our field walking to follow the
site’s flow.

This pattern was only established after the first two weeks of survey. During the
first week of survey, Luca Casparis worked with me to teach me mapping techniques
using the compass and tapes, as well as how to set up collection squares using the
Brunton. After a few days of working with me, Luca spent some time at the Early
Classic component of the site, while I worked alone with Ely and Eric. I followed the
pattern described above, scouting the site first by field walking and identifying terraces,
then mapping and establishing collection squares. Once Acacia joined me during the
third week, the survey moved much quicker.

We had two rainy days at the beginning of survey, including one major
thunderstorm on the second day of survey. This storm could have caused a certain
amount of erosion on the hilltop and hillsides. Erosion on the site is quite evident,
particularly on the hilltop areas. This survey did not include any plowed areas. The lower
sections of the site did abut cultivated areas, but I did not enter the fields to make any
collections. In two sections of the site a shallow road cut exposed surface artifacts.
**Mapping:** With a very limited budget, a small crew, and a steeply sloped site, I relied mostly on measuring tapes and a Brunton Pocket Transit to execute the map of the site, with supplemental data points taken using a handheld GPS. These GPS coordinates allow the map to be anchored in real space. I used the Brunton International Pocket Transit in order to measure the azimuth, the angle of elevation increase. This angle is used to calculate vertical distance on a slope using the Pythagorean theorem. I did not use a transit or total station to take measurements. Working on a sloped hillside with a transit is not very effective, in addition to the difficult of transporting a transit across this particular site. The eastern hilltop section of the site is a 2 and a half hour hike from the base, so carrying a transit up to the hilltop for survey was not practical. In a few areas of the site, vegetation was so thick and tangled that, along with the steepness of the slope, pulling tape was impossible. In these cases, a rangefinder was used to cite distances. The accuracy of such a method is not as desirable as tape and compass, but this was used so infrequently that the overall impact on the accuracy of the final map is likely minimal.

I used the map created by the Valley of Oaxaca Settlement Pattern Project (Blanton et al. 1982) as a guide to the site boundaries. We did not seek to extend or redefine these boundaries, as that was not part of my research goals. We worked on the assumption that these site boundaries encompass the Period V settlement. Instead the goal of the map was to identify all cultural features, including mounds, terraces, walls, and structures, in addition to important landscape features, such as water springs, large outcroppings, arroyos, barrancas, and steepness of slopes.

**Collection Squares:** 70 controlled collection squares were set up throughout the site for the systematic collection of artifacts. Collection squares were laid out in both
public and residential areas of the site. Squares were placed using the Brunton compass along a North – South alignment. The vast majority of squares were 10m x 10m, though a few measured 5m x 20m due to topography and landscape features. The total square meters for each collection square are the same to allow for comparisons to be made among squares throughout entire site. The sampling strategy for these squares was opportunistic. Square locations were chosen based on the presence of either terrace walls or sherd scatters. An attempt was made to evenly distribute squares throughout the site, but the placement of squares was often dependent on the surface conditions and topographic details of the site.

Figure 7: Photo of a Collection Square

All artifacts within the square were collected for laboratory analysis and for quantitative assessments of artifacts types throughout the site. It was decided that
separating diagnostic from non-diagnostic ceramics in the field would be too time consuming, so all ceramics were collected and later separated in the lab. Large ground stone, such as manos and metates, were photographed and recorded in the field, but most were not collected due to their size. The location of each collection square was plotted on the map, as were important physical features of the landscape such as barrancas, bedrock outcroppings, water springs, creek beds, and modern day roads and cultivated fields. GPS coordinates were taken in the southwest corner of each collection square. A collection square survey card and survey form were filled out on the site for each collection squares. Examples of these forms are provided below. They are also reproduced in Appendix B.

Figure 8: Sample Collection Square Field Documentation: Survey Card

Post Classic Jalieza Project SURVEY

LOT #: _______________  AREA: ___ m. X ___ m. = ___ m²

LOCATION OF SQUARE (MAP #): ________________________________

MATERIAL COLLECTED:
SHERDS ___ BAG(S):  ᶦ rims and dec. bodies, ᶦ all sherds
CHIPPED STONE ___ BAG(S)  FIGURINES ___ PIECES
POLISHED STONE ___ PIECES  OTHER ____________

MATERIAL NOTED:
BODY SHERDS ________________________________________________
GROUND STONE _____________________________________________
OTHER _____________________________________________________

DATE (d/m/y): ___ / ___ / ___.  NAME: __________________________

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POST CLASSIC JALIEZA PROJECT SURVEY

1. Lot #: __________________
2. Location: Map # ______________
3. General location: ________________________________
4. Sample area:
   1. 100 m² (___ meters X ___ meters)
   2. other (specify) ______________________
5. General topographic location of sample square:
   1. Alluvium
   2. Piedmont slope
   3. Hill-top
   4. Steep ridge-top
   5. other (specify) ______________
6. Topographic slope:
   1. Gentle (0-10°)
   2. Gentle to moderate (10-25°)
   3. Moderate (25-35°)
   4. Moderate to steep (35-45°)
   5. Steep (> 45°)
7. Erosion:
   1. Light
   2. Light to moderate
   3. Moderate
   4. Moderate to heavy
   5. Heavy
8. Present land use:
   1. Cultivated
      a. Specify what is cultivated ______________________
      b. Specify what kind of irrigation ________________
      c. Specify what kind of erosion control ____________
   2. Fallow
   3. Uncultivated
      a. Type of vegetation
         1. “monte”
         2. xerophytic vegetation
         3. grass-land
         4. other (specify) ________________
      b. Density of vegetation
         1. none
         2. light
         3. light to moderate
         4. moderate
         5. moderate to dense
         6. dense
9. Nature of any additional disturbance found within sample square:
   1. Tree roots
   2. Animal burrows
   3. Looters pit(s)
   4. other (specify) __________________________

10. Give approximate area (m²) of square that has been disturbed, or sketch location of disturbance(s) in square.

11. Sector of site:
   1. Civic-ceremonial
   2. Residential
   3. other (specify) __________________________
   4. not applicable

12. Feature:
   1. Civic-ceremonial structure
   2. Plaza or platform
   3. Ball-court
   4. Residence
   5. Sherd scatter
   6. other (specify) __________

13. Architectural evidence:
   1. Mound or platform
   2. Mound or platform with masonry
   3. Mound or platform with plaster floor construction
   4. Mound or platform with both masonry and plaster floor construction
   5. Masonry
   6. Plaster floor construction
   7. other (specify) __________________________
   8. none

14. Location of sample square with respect to feature described above:
   1. on feature
   2. Adjacent to feature
   3. < 10 m downslope from feature
   4. < 10 m upslope from feature
   5. < 10 m on same level as feature
   6. other (specify) __________________________
   7. not applicable

15. Relative distribution of artifactual material within the sample square:
   1. Uniform
   2. Localized (specify)
      __________________________
   3. other (specify)
      __________________________
16. Material collected:
a. Sherds _____ bag(s)
   1. only rims and decorated body sherds (body sherd count below)
   2. all sherds
b. Chipped stone _____ bag(s)/envelope(s)
c. Figurines _____ pieces
d. Polished stone _____ pieces
e. other (specify) ___________________

17. Material noted and not saved:
a. Body sherds ________________________________
   b. Ground stone
      1. # of manos / mano fragments ______________________
      2. # of metates / metate fragments ______________________
      3. # of pestles / pestle fragments ______________________
      4. # of unidentifiable fragments ______________________
      5. other (specify) _____________________________
   c. other (specify – for example if daub, plaster fragments, etc.)
      ____________________________

18. Preliminary field observations
   (based on collected material):
   1. periods present: †Monte Albán II
      †Monte Albán IIIA
      †Monte Albán IIIB-IV
      †Monte Albán V
      †other (specify)

   2. possible craft production-related material present:
      †kiln wasters
      †figurine/urn molds
      †obsidian core(s)/core fragments/flakes/detritus
      †chipped stone core(s)/chipping debris
      †other (specify) ______________________

19. Other comments:

Date collected (d/m/y): _____ / _____ / _____

Name: ______________________________
Laboratory analysis: Laboratory analysis was conducted on the collected artifacts in May of 2010. Sherds were washed and separated into two categories: diagnostic and non-diagnostic. Diagnostic sherds include rims, bases, decorated sherds, reworked sherds, figurine or urn fragments, and sherds that due to their size or shape allow for an interpretation of vessel type. Non-diagnostic sherds are plain body sherds that give no indication as to what kind of vessel they were once a part of. Non-diagnostic sherds were separated by paste type (mostly café or gray), and then counted, weighed and recorded for each provenience (each collection square). 2388 diagnostic sherds were individually weighed and coded based on a series of criteria that included: provenience, sherd type, paste type, surface finish, surface decoration, vessel type, temper, CBA type, detail, wall thickness, and diameter. See Figure 10 for an example of the ceramic coding form used.

During coding, a number of sherds were selected for illustration, either drawing and imaging (280 sherds), or simply imaging (350 sherds). The selection of sherds was based primarily on their representativeness of particular types of vessels. An effort was made to select sherds that reflected the variety of vessels found throughout the site. Diagnostic sherds that were not selected for individual illustration were imaged as lots according to provenience. Examples of images and sherd drawings of diagnostic sherds are presented below in Figures 11, 12, and 13. See Chapter Five for a full description of the ceramic finds recovered from surface collection.
Figure 10: Example of Ceramic Coding Form

<table>
<thead>
<tr>
<th>Prov.</th>
<th>Sherd Type</th>
<th>Paste Type</th>
<th>Surface Finish</th>
<th>Vessel Type</th>
<th>Temper</th>
<th>CBA Type</th>
<th>Photo?</th>
<th>Draw?</th>
<th>Detail</th>
<th>Wall Thick.</th>
<th>Rim Diam.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCJ-1</td>
<td>Handle Base</td>
<td>Café</td>
<td>Rough</td>
<td>Sahumador</td>
<td>Fine with large white inclusions</td>
<td>K8?</td>
<td>Yes</td>
<td>Yes</td>
<td>21 mm</td>
<td>Handle diam. 2 cm.</td>
<td></td>
</tr>
<tr>
<td>PCJ-1</td>
<td>Miniature</td>
<td>Café</td>
<td>Rough</td>
<td>Min. comal</td>
<td>Fine</td>
<td>Yes</td>
<td>Yes</td>
<td>4 mm</td>
<td>2.7 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ-1</td>
<td>Handle frag.</td>
<td>Café</td>
<td>Rough</td>
<td>Sahumador</td>
<td>Gritty, coarse</td>
<td>Yes</td>
<td>No</td>
<td>Hollow handle</td>
<td>19 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ-1</td>
<td>Handle frag.</td>
<td>Café</td>
<td>Rough</td>
<td>Sahumador</td>
<td>Gritty, coarse</td>
<td>Yes</td>
<td>No</td>
<td>Hole for air shaft</td>
<td>17 mm</td>
<td>17 cm</td>
<td></td>
</tr>
<tr>
<td>PCJ-1</td>
<td>Handle</td>
<td>Café</td>
<td>Rough</td>
<td>Sahumador</td>
<td>Fine</td>
<td>Yes</td>
<td>Yes</td>
<td>Hole for air shaft</td>
<td>22 mm</td>
<td>2.2 cm</td>
<td></td>
</tr>
<tr>
<td>PCJ-1</td>
<td>Rim</td>
<td>Café</td>
<td>Rough</td>
<td>Olla</td>
<td>Fine with white inclusions</td>
<td>K8?</td>
<td>Yes</td>
<td>Yes</td>
<td>7 mm</td>
<td>12 cm</td>
<td></td>
</tr>
<tr>
<td>PCJ-1</td>
<td>Rim</td>
<td>Gris</td>
<td>Lightly burnished</td>
<td>Comp. silh.</td>
<td>Fine</td>
<td>No</td>
<td>No</td>
<td>6 mm</td>
<td>20 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ-1</td>
<td>Rim</td>
<td>Gris</td>
<td>Burnished</td>
<td>Comp. silh.</td>
<td>Fine</td>
<td>G3M</td>
<td>Yes</td>
<td>Yes</td>
<td>11 mm</td>
<td>30 cm</td>
<td></td>
</tr>
<tr>
<td>PCJ-1</td>
<td>Rim</td>
<td>Gris</td>
<td>Burnished</td>
<td>Comp. silh.</td>
<td>Fine.</td>
<td>No</td>
<td>No</td>
<td>7 mm</td>
<td>20 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ-1</td>
<td>Rim</td>
<td>Gris</td>
<td>Highly burnished</td>
<td>Comp. silh.</td>
<td>Fine</td>
<td>No</td>
<td>No</td>
<td>7 mm</td>
<td>18 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ-1</td>
<td>Rim</td>
<td>Gris</td>
<td>Highly burnished</td>
<td>Hemi. Bowl</td>
<td>Fine</td>
<td>No</td>
<td>No</td>
<td>5 mm</td>
<td>20 cm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 11: Example of Diagnostic Sherd Images

Figure 12: Example of Diagnostic Sherd Lot Images
Figure 13: Example of Sherd Drawings

PCJ-1

Hemi bowl rim
w/ incised lines on ext fine G3M
30 cm rim dia
6mm thickness

PCJ-3

Comp silh rim fine G3M
20 cm rim diam

PCJ-1

Comp Sim rim
fine G3M
30 cm rim diam

PCJ-8

Olla neck
fine G3M
5.5 mm
8 mm thickness

PCJ-8

body sherd
w/ incised line on exterior
fine G3M
6 mm thickness
Chipped stone artifacts were also coded and imaged. 389 chipped stone pieces were coded based on the following criteria: provenience, tool type, edge, stone, color, weight, and dimensions. Each chipped stone object was then imaged. The same procedure was followed for the small amounts of shell, plaster, and ground stone that were recovered as well. See Chapter Six for a full description of the non-ceramic finds recovered from surface collection.

Figure 14: Example of Chipped Stone Coding Form

<table>
<thead>
<tr>
<th>Prov.</th>
<th>Tool Type</th>
<th>Edge Retouched?</th>
<th>Stone</th>
<th>Color</th>
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<td>1.8 cm x .9 cm</td>
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</tr>
<tr>
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<td>quartzite</td>
<td>opaque white</td>
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<td>chert</td>
<td>grey-green</td>
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<tr>
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<td>yes</td>
<td>chert</td>
<td>grey</td>
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<td>yes</td>
<td>chert</td>
<td>grey</td>
<td>6.8 g</td>
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This program of systematic survey produced a hand-drawn 1:1000 scale map with 1m contour lines. The hand drawn map sections were digitized using Adobe Illustrator by Jennifer Steffey at the American Museum of Natural History. These sections were stitched together by myself to produce an overview map. I then divided the map into sections based on landscape features. A digital version of the entire map is presented here, including collection squares. Chapter Eight details the logic behind the site division into separate sections. Chapter Eight also provides a detailed discussion of the landscape features of the site, as well as the collection square finds associated with different site sections. Copies of the digitized versions of these maps are also included in Appendix D for easy reference.
Figure 16: Digitized Survey Map—Overview of Site

Overview Map of Postclassic Jalieza
Figure 17: Survey Map—Detail: Western Hilltop
Figure 18: Survey Map—Detail: Central Hilltop
Figure 19: Survey Map—Detail: Plaza and Mound, Hilltop

Plaza and Mound
Figure 20: Survey Map—Detail: Eastern Hilltop

Eastern Hilltop

continued on Plaza Map
Figure 21: Survey Map—Detail: Western Slopes
Figure 22: Survey Map—Detail: Central Slopes
Figure 23: Survey Map—Detail: Central Eastern Slopes

Central Eastern Slopes

continued on
Central Slopes Map

continued on
Eastern
Slopes Map

N

0m 200m
Figure 24: Survey Map—Detail: Eastern Slopes
There were a number of terraces that I was unable to include in my hand-drawn map. Located on the upper slopes of the site, these terraces were obscured by very dense vegetation cover. Pulling tape in these areas was impossible, so waypoint readings were taken on my handheld GPS. The other waypoints represented in the map below include all collection squares, other terraces around the site (which were included in the hand-drawn map), and occasional collections that were made of chipped stone, figurines, manos and metates, and other surface artifacts that were not found in collection squares, but represented interesting finds.

Figure 25: Google Earth Map of Postclassic Jalieza

In this map, you see that there was a connection between the hilltop area and the hillsides, through a series of terraces along the upper hillside. I believe this was the access to the
hilltop during the Postclassic. Now no longer used, this path has become very overgrown and difficult to pass through.

**Conclusion**

This dissertation is based on data collected during intensive survey and surface collection of Postclassic Jalieza. Surface archaeology provides an important source of information about the past in a less destructive manner than excavation. In areas such as Oaxaca that are subject to high degrees of erosion and in which land is being rapidly developed, surface archaeology is an effective means for recovering archaeological information that would otherwise be lost. While surface assemblages can present particular difficulties, they also present unique opportunities for understanding communities as a whole. This chapter has presented the overall methodological basis of my research at Postclassic Jalieza. Subsequent chapters will present the data recovered during this survey and surface collection, along with the theoretical approaches used to interpret these data.
Chapter Four:
Interpreting Ceramics

Overview

When clay is fired at high temperatures, it is transformed from a transient clump of earth into something much more permanent. Unlike artifacts made from wood, gourd, or animal products, pottery can endure quite well under the ground for centuries. It may break into smaller and smaller fragments, but it tends not to decompose like organic products. Thus ceramic finds often make up a very large part of archaeological assemblages in many parts of the world for many different time periods. This is true for the Valley of Oaxaca whose hillsides and valley floor are littered with ceramic sherds. Archaeologists have taken advantage of this artifactual abundance by developing multiple angles of interpretation for gleaning cultural information from these ceramic clues left behind. The analysis of ceramics forms a large part in determining chronological sequences within regions, but the interpretations from ceramic analysis can also extend to other realms of cultural understanding including broader patterns of social and political organization. This chapter will first discuss some of the ways that ceramic data are used to interpret archaeological sites. I will then examine the ceramic sequence within the Valley of Oaxaca, and the controversies surrounding its interpretation. Lastly, I will present the ceramic finds from my survey work at Postclassic Jalieza.
Ceramics and Archaeology

Artifacts have both a physical (material) and metaphysical (cultural) existence

(Skibo 1999: 2)

What we encounter through archaeological research is the physical record. The job of the archaeologist is to interpret the metaphysical—to extract whatever information we can from those material remains that we can encounter. Some archaeological regions and time periods don’t contain ceramic finds. And then there are sites with such abundant ceramics that it can be overwhelming without the proper approach. Archaeological sites in the Valley of Oaxaca tend to fall more toward the second category than the first. The plethora of ceramics provides a valuable source of information for interpreting many aspects of life—if examined through the proper lens. This requires searching for the relevant criteria, keeping in mind certain limitations, and framing the right questions.

Archaeological approaches to ceramics could be broadly described to fit into three categories (Orton et al. 1993). There is a general temporal order to these approaches, but each approach can be and still is practiced, depending on the region and/or research design of a project. Particular studies could also feature a combination of these approaches. These categories can be broadly described as 1) the art-historical approach, 2) the typological approach, and 3) the contextual approach. A brief description of each approach follows below. This dissertation will mostly be concerned with a contextual approach to ceramics, but I will address typological issues associated with the ceramic sequence for the Valley of Oaxaca.

1) The Art-Historical Approach: The earliest interest in archaeological ceramics has often been termed the art-historical phase. This entails looking at whole vessels and
emphasizes the artistic value of the vessel, the decorative and production techniques used to produce it, and the interpretation of designs or scenes on the surface of the vessel. Less emphasis is placed on the archaeological or cultural context of ceramics, or even on the function of particular vessels. Aesthetics are paramount and particular attention is paid to the characteristics and development of defined styles. This approach is still practiced today, not surprisingly most often within art history but to an extent within archaeology as well, particularly in areas where there is a strong tradition of elaborately decorated ceramics, such as the classical archaeology of Greece and Rome.

2) The Typological Approach—This approach is based on classification, particularly understanding the relationship of pottery to stratigraphic sequences. Typological studies gained prominence in the early part of the 20th century with a number of studies that focused on developing an understanding of the evolution of material culture attributes (see Childe 1929; Flinders Petrie 1899, 1904; Kidder 1924; and Pitt-Rivers 1906 for early seminal studies). Rather than focusing exclusively on whole vessels, typologies are developed by looking at sherds and sherd assemblages. Vertical and horizontal variation between assemblages is key: vertical variation is used to interpret temporal change, while horizontal variation is used to interpret cultural or ethnic change. The development of ceramic sequences and of ceramics seriations are important contributions of the typological approach, allowing archaeologists to date sites based on the ceramic assemblages found within them. Ceramic typologies are still used to understand developments within regions, but there has been a fundamental change in the ideological background to typology. While earlier archaeologists often saw changing ceramics as an automatic indication of invading cultures, researchers now often see
changes within ceramics as a reflection of broader changes within that culture. This aspect of ceramic research is still practiced today. There has been a good deal of recent work on the re-evaluation of ceramic sequences (see Lind 1992, Markens 2004, 2008 for the Valley of Oaxaca) as well as studies that seek finer-resolution to existing chronologies (see Garraty 2009 for attribute-based seriation and Spencer et al. 2008 for microtypology).

3) The Contextual Approach— In many ways this is a catch-all category. As the name indicates, this approach emphasizes the importance of context, both in the sense of archaeological context, and in terms of cultural context as well. As described by Orton et al., the contextual approach looks at “a whole range of scales, from the microscopic detail of fabric to the inter-comparison of whole assemblages, not just of ceramics but of all artefacts” (Orton et al. 1993: 4). Studies that use the contextual approach often consider ceramics as a proxy for other cultural factors and seek to use ceramics as a window into the culture that produced them.

*Ceramic Ecology*

One contextual approach of particular interest to me is known as “ceramic ecology.” The term was created by Matson in his 1965 publication *Ceramics and Man*. It takes into consideration the raw materials and technology available to the potter and the functions of ceramic products within a culture. Matson believes that one should consider both the cultural and the natural landscapes in which pottery is produced in order to understand the environmental and cultural patterns behind ceramic traditions (Matson 1965). This approach was revisited in the 1980s by a number of researchers (Kolb 1989;
Arnold 1985; Rice 1987). Arnold expanded upon it in *Ceramic Theory and Cultural Process*. Arnold argues that early theory saw ceramics shaped entirely by culture and expressed very little concern about the environment in which a culture was located. In this view, ceramics are fully an ideological product and thus can give cognitive insight into a culture. Arnold critiques this viewpoint as equating changes in ceramics with changes in populations. Instead he argues that because of the American tradition of archaeology within an anthropological view of culture—particularly a theoretical perspective that embraces the interrelatedness of culture—American anthropological archaeologists view ceramics as being connected with other aspects of culture. In this way a change in ceramics can mean a change in overall culture—not a replacement of one culture by another, but a significant shift in the organization of a culture. Key to developing this understanding, according to Arnold, is to focus not only on the relationship between social structure and ceramics but to also concern oneself with the environmental aspects of ceramics, which are inherently part of “the technological subsystem” (Arnold 1985: 12). Ceramic ecology has remained part of the current thread of research in recent years. Of particular note is the 2007 volume *Pottery Economics in Mesoamerica* by Pool and Bey. These authors offer an integration of “holistic ceramic ecology” with perspectives on political economies of ceramic production and trade in developing the particularities of ceramic assemblages (Pool and Bey 2007).

*Ethnographic and Ethnoarchaeological Ceramic Studies*

Our collective knowledge of ceramics exists in large part due to ethnographic and ethnoarchaeological studies. These studies have produced extraordinarily rich and
valuable first-hand information about the production, use, and discard of pottery. These data have been integrated into our understanding of archaeological ceramics.

These studies have given us a deeper understanding of production techniques, the organization of labor, innovation and change, selling and distribution, consumption of ceramics, disposal of ceramics, transmission of knowledge and skill, levels of specialization, as well as emic views of ceramics and ceramic production. Most research was conducted in 1970s, with Hendry’s work as early as 1955 (Hendry 1992), and Arnold’s work as late as the 1980s. Important studies in Mesoamerica include those from Puebla (Kaplan 1994, Lackey 1982), the Maya area (Deal 1998), Veracruz (Arnold 1990, 1991) and Oaxaca (Hendry 1992, Houston and Wainer 1971).

**Interpreting Ceramics**

Ceramics can provide information about three topics very important to archaeologists: 1) dating, 2) distribution, and 3) status. This is because each vessel was made at a particular time and place, used at a particular time and place, and served a particular function and meaning. The difficulty comes in discerning these details. Below is an exploration of how ceramics can provide archaeologists with information on these topics, and what pitfalls should be avoided. These three aspects of information embedded within ceramics are of particular concern for interpreting the ceramic assemblage from Postclassic Jalieza.
Dating: Ceramics for dating sites

The development of typologies, or ceramic sequences, for the purposes of dating is a technique developed fairly early on in the history of archaeology and is generally associated with the culture-history approach in archaeological theory. Culture-history archaeology tended to be very interested in the developmental sequences of archaeological sites, and the development of type-variety sequences for particular regions was a high priority. Typologies are based on the identification of artifact assemblages and the groupings of artifacts based on stylistic characteristics. For a typology to work for dating (or sequencing) purposes, there needs to be a relatively high degree of continuity and similarity in artifact type across space within a particular region, so that discrete sites may be linked together under the same typology. Likewise, there must be a relatively systematic variation in stylistic qualities across time, so that separate phases can be identified. In other words, there must be enough unity to link stylistic traits across sites of the same time period—in Oaxaca for example, Period IIIa pottery throughout all sites in the Valley is marked by the appearance of G23 vessels. But these stylistic traits must change through time—by Period IIIb-IV in Oaxaca, G23 is replaced by G35. So when one finds a site in Oaxaca, if there is G23 pottery it is most likely a Period IIIa site. If there is G35 pottery, it is most likely a Period IIIb-IV site. Ceramics and lithics are often used to create typologies for a region because of their durability and their stylistic variation. Constructed of hard materials, pottery and lithics tend to survive post-depositional conditions that destroy organic materials such as wood, leather, or plant fibers. In this way these materials often make up the majority of the archaeological assemblages for many areas around the world. Ceramics and lithics also tend to change
stylistically over time and between regions, so they are highly suitable for the construction of type-variety assemblages.

This kind of classification certainly has its limitations. There are a number of assumptions about what style represents and how knowledge and techniques are transmitted between individuals and across generations. There is a tendency within archaeology to assume that pots = people. That is to say that stylistic traits somehow represent bounded social entities, whether they be ethnic or political. Can we assume that shared ceramic style within the Valley of Oaxaca means political unity under a dominant state? Can we assume that a lack of unity in ceramic style means independence from that state? The construction of type-variety sequences also has a tendency to reify particular instances in time—was Period IIIa truly a unified period distinct politically and socially from Period II or Period IIIb-IV? These typological sequences tend to make it appear as though we have long static periods marked by shorter periods of rapid change. How else to explain the transition from one type-variety to another? A number of authors have attempted to deal with these difficulties in understanding and representing change by appealing to Darwinian notions of stylistic evolution or technique evolution, or by statistical methods for understanding variability and change (Dunnell 1978, 1980; O’Brien et al. 1994; Spencer 1997). These theoretical difficulties aside, ceramic typologies can provide an easy and cheap way to date sites once the chronology has been established. While it might not provide pinpoint accuracy, it does allow you to quickly place a particular site, or level within a site, into a general time frame.

The ceramic sequence for the Valley of Oaxaca has been revised and refined many times over the years. The original sequence was established by the seminal work
La Ceramica de Monte Alban by Caso, Bernal and Acosta in 1967. It has since been subject to further revision, particularly in the later parts of the sequence. The distinction between Late Classic, Early Postclassic, and Postclassic has been particularly confused. I will go into greater detail on the competing views and naming schemes later in this chapter.

Distribution: Ceramics as indicators of economy, trade, and markets

Ceramics have been used to explore the connections between sites and regions, based on establishing where pots were produced and where they ended up in the archaeological record. Studies of production scale and location can give us insight into the internal structure of communities and households, while evidence for export and trade can provide a broader understanding of the relations between villages and polities. Source analysis studies have contributed to our understanding of networks of exchange in recent years. There is a danger though in reading too much into one line of evidence alone when it comes to long distance trade networks. Each of these aspects of ceramic interpretation has particular bearing on Postclassic Jalieza.

Let me begin by addressing some ceramic studies that have looked at the role of household-based production of ceramics. Evidence from Ejutla, Oaxaca, indicates that household production of ceramics may have been on a larger scale for trade rather than for individual household consumption (Feinman 1999). This is in contrast to the models of van der Leeuw or Santley (van der Leeuw 1976; Santley et al. 1989) that suggest household-based craft production in Mesoamerica was small-scale and ultimately a supplemental activity. Instead, Feinman argues, “the Ejutla findings would appear to
document relatively high-intensity craft manufacture (for exchange) that was enacted at the domestic scale” (Feinman 1999). Elsewhere Feinman argues that ceramic production in the Tlacolula branch of the Valley of Oaxaca, particularly of G3M wares during the Postclassic, was largely for export to the other arms of the Valley (Feinman et al. 1989; Feinman et al. 1992), part of this argument being that the agricultural land in the Tlacolula branch was insufficient to support a large population.

In the case of Postclassic Jalieza, from the surface finds there is little evidence to suggest this level of production at Jalieza. Kowalewski suggests a weakening in market integration from the Early Classic Period IIIa to Period IV that is reflected in a lesser degree of uniformity in ceramic finds, measured in terms of rim diameters and vessel-wall thickness (Kowalewski 2003). The question is whether the ceramics found at Postclassic Jalieza represent an imported item from the Tlacolula branch, or are local productions from small-scale household workshops, which may indicate that the weakening suggested by Kowalewski likely continued into the early years of the Postclassic. This may be seen as further evidence for a lack of Valley integration during the Postclassic period and a retreat of Postclassic Jalieza from the rest of the Valley. Future research in instrumental neutron activation analysis (INAA) source analysis and petrographic analysis could be used to determine the likely origins of ceramics from Postclassic Jalieza.

In the same article, Kowalewski argues that viewing the Mesoamerican world within the framework of World Systems Theory, you can divide it into core and periphery. In the periphery, he argues, you would have a narrower range of goods that would be lower in quality, plainer in design, less standardized, less well made, and
produced on a non-intensive scale—what he refers to as “backcountry pots” (Kowalewski 2003). “People at the farthest reaches of the market system have few buying and selling choices and tend to be dependent on only one nearby market. Peripheries are market-sparse in terms of market choices: cores are market-rich” (Kowalewski 2003: 68). In this view, relying heavily on the data from Finsten’s surface collection of the Period IIIa and IIIb-IV sites at Jalieza (referred to by Kowalewski and Finsten as Early Postclassic, though it is now viewed as Late Classic), he posits Early Classic IIIa and IIIb-IV Jalieza as an example of the core. “Jalieza…might be a benchmark for ceramic standardization in the core Valley of Oaxaca. Jalieza should represent the more uniform end of the production range” (Kowalewski 2003: 73). Rim diameters and vessel wall thickness are used as gauges of standardization and uniformity. The belief is that core locations will reflect greater ceramic standardization while peripheral sites will show a greater degree of variation. “There is a tendency at Jalieza for the Early Classic pottery to be slightly more uniform than the Early Postclassic pottery… This is consistent with the greater market integration in the Early Classic than in the Early Postclassic.” (Kowalewski 2003: 73) This raises the question of how uniform and standard is the Period V assemblage from Jalieza? How does it compare with his data? How does this compare with Feinman and the idea of centralized control over craft production versus market driven craft production? Does Jalieza become peripheral in Early V? Can we see this through ceramics? I will return to these questions when I present the Jalieza data in Chapter Five.

Source analysis studies, in particular instrumental neutron activation analysis (INAA), have become very important in recent years and can provide indications of past trade networks. Essentially the way these studies work is that trace elements present in
the temper of clays may be analyzed and give an indication to the geographic sources of clays. Each particular region has a specific element signature, and it is basically a matter of matching these signatures with each other. For this type of analysis to be effective, the clay signatures must vary between locations in distinctive ways. There have been a number of effective studies in recent years that have shown networks of trade and importation (see Nichols et al. 2009 for Early and Late Postclassic Aztec ceramics; Nichols et al. 2002 for the Postclassic Basin of Mexico; Clayton 2005 and Crider et al. 2007 for Teotihuacan; Foias and Bishop 1997 for Classic Maya; Jamieson and Hancock 2004 for colonial ceramics from Southern Highland Ecuador).

Source analysis provides important data, but is only one line of evidence that needs to be combined with other types of evidence. INAA doesn’t find the source of pottery; it identifies chemical composition groups that match potential sources. In this way, INAA must be used in conjunction with petrographic studies of temper minerals as well as other lines of evidence. This is highlighted by the studies that have been done on Olmec ceramics (Blomster et al. 2005; Neff et al. 2006). There are similarities between the chemical composition groups in Oaxaca and San Lorenzo—INAA analysis alone has led to the idea of the importation from San Lorenzo of huge amounts of assemblages that are found within Oaxaca, but this is unlikely to be the case. Petrographic analysis indicates local Oaxacan production of these wares (Sharer et al. 2006). Because INAA source analysis is best used on excavated sherds rather than surface collections, it isn’t entirely appropriate for the assemblage from Postclassic Jalieza. However, future research on the site that would involve excavation of households could provide valuable
information through INAA source analysis and petrographic analysis to determine the likely origins of the ceramics found at Jalieza.

**Status: Ceramics as indicators of household wealth and status**

There is a long tradition within archaeology of using ceramic remains as indicators of household wealth and status. Comparisons between elite and commoner households often surround the ceramic assemblages associated with each type of household. Elite households tend to have greater access to imported goods and to better made vessels. There tend to be differences in vessel type between elite and commoner households, often related to the presence of feasting activities associated. However many studies remind us that these connections are not without variations or complications.

A number of studies from historical archaeology have established clear, numerous, and complex connections between ceramics, status, and identity. These connections include links between ceramic assemblages found in association with households and the socio-economic status of that household. Ceramics have also been shown to be used as markers of identity and to express household status through the display of ceramics to contemporaries. Deetz’s well-known work on Colonial America demonstrates how ceramics can be used as a proxy for broader cultural changes (Deetz 1996). These studies remind us that while archaeologist may use ceramics now to distinguish status, individuals in the past often employed them as status markers as well. These studies also reminds us that our assumptions about restrictions in access to higher valued ceramics may be in err—including assumptions that rural areas may not have access to imports and that lower ranked classes may not have access to more valuable
goods (Adam and Boling 1989; Baugher and Venables 1987; Deetz 1996; Ferguson 1992). While the particular circumstance of Colonial America and pre-Hispanic Mesoamerica differ dramatically, it is always useful to keep the limitations of our theory in mind.

Ceramic studies in Mesoamerica reflect on many of the same relationships between pottery and status, though without the benefit of written sources to provide ideological insights. Many studies focus on distinguishing between elite and commoner households, through ceramic remains found associated with each household type. Of particular importance in Mesoamerica, and an aspect of elite behavior that appears within the archaeological ceramic record, is feasting (see Garraty 2000 for Aztec; Turkon 2004 for Malpaso Valley; Fray 2003 and Jackson 2009 for Classic Maya; Costin and Earle 1989 for Peru). The connections between ceramics and expressions of identity or status are also seen in these studies. Elson and Sherman see the local production of imitation crema ware as a form of local elite resistance to the dominant Monte Alban state (Elson and Sherman 2007). On the other hand, Costin and Earle see a reduction in the distinction between elite and commoner assemblages as an imposition of state power on local elites (Costin and Earle 1989). The importance of understanding variation in time and place when making the connection between status and ceramics is underscored in many studies. Carballo emphasizes the importance in recognizing the similarities, not just differences, between elite and commoner residences, particularly in the case of peripheral sites (Carballo 2009). Turkon emphasizes the importance of recognizing variation among elite households themselves (Turkon 2004). Fry argues that feasting events were important to the elite in peripheral Tikal and connections can be made between larger feasting events,
reflected in higher frequencies of serving forms, and wealthier household, but that status was not marked by ceramics (Fry 2003). The connection between ceramic assemblages and status will be explored for Postclassic Jalieza in subsequent chapters.

**Challenges with relying on ceramics**

*Pots Don’t Equal People*

Too frequently in archaeological studies of ceramics, pottery types or styles have been equated with the cultural identity of the people producing them. It is faulty logic to assume such. A change in pottery does not mean an invasion by a foreign force. A change in pottery does not mean an important event or historical change has occurred. Conversely, a lack of change in pottery does not mean a lack of political or social change. Many authors have drawn attention to why we can’t subscribe to such simplistic equations. Shepard’s seminal work (1956) cautioned against viewing typologies as fixed entities rather than tentative models, and against assuming ceramic traditions represented cultural entities. DeVore (1968) emphasized that pottery doesn’t reproduce itself, doesn’t evolve by reproduction, and can’t be an invading force. Arnold (1985) argues that viewing ceramics as an entirely ideological product equates individual ceramic traditions with separate cultures. When viewed this way, variation in ceramics in time and space is equated to variation in “cultures” in time and space. This is a hazard to be avoided by understanding the place of ceramics within a culture and its environment. These kinds of flawed underlying assumptions have contributed to confusion in the ceramic sequence for the Valley of Oaxaca. One of the major issues with the ceramic sequence in the Valley of Oaxaca, as I will discuss in more detail below, is due to the
creation of two ceramic types based on a historical event (the fall of Monte Alban) rather than a clear change in ceramic styles. In a similar vein, the ceramic type that most distinguishes the Postclassic period in the Valley of Oaxaca, termed G3M, was initially assumed to be an indication of the invasion of Mixtec people into the Valley of Oaxaca and their subsequent domination of the Valley Zapotec. This has since been largely disproved, but provides a concrete example of the problems inherent in equating specific ceramic assemblages with ethnic groups or cultures.

*Life After the Death of a Pot*

What happens between the time that a ceramic vessel is created, is used, is discarded, and then is found as part of the archaeological record? A great many things. In order to understand archaeological ceramics, one must take into consideration the life history of ceramics. What has been called “pottery life-history” concerns itself with the different stages of manufacture and distribution, use, and discard of ceramics (Skibo 1999: 2). While discard is the stage most often represented within the archaeological record, one might encounter archaeological ceramics in any of these stages. We need to be cognizant of the differences between the life assemblage—a pot in use—versus the death assemblage—sherds found in the archaeological record. However, this is not always a straightforward relationship. Paramount to understanding these distinctions is considering site formation processes (Schiffer 1987). This is particularly true in the case of Postclassic Jalieza because all the ceramic data I collected from the site are surface data and not from an excavated context. I am encountering archaeological ceramics in a “death assemblage,” and thus not likely to be associated with primary contexts of use. At
the same time, there has been little post-abandonment activity on most of the site of Postclassic Jalieza. Because of its remote, hillside and hilltop location there has been no plowing, no construction of new residences or structures, and in general no improvements to the land. The most significant post-depositional force that has impacted the site is erosion. Thus it is mostly safe to assume that most ceramics were located relatively close to the original depositional contexts.

Quantification

Quantification of surface ceramics can also present a number of difficulties to be avoided. Sherd counts can provide a measure for comparison across collection squares, as long as those squares are equal in volume, as they were for my work at Postclassic Jalieza. However, sherd counts could potentially misrepresent vessel proportion frequencies if different vessels break in different ways—for example some vessel types regularly break into more numerous and smaller pieces while another vessel type might tend to break into larger, less numerous sherds. “If we compare two assemblages, and find a higher proportion of sherds of a certain type in the first assemblage, that does not mean that there were more pots of that type in the corresponding population: it may just reflect differences in the brokenness between that and other types” (Orton et al. 1993: 169). One strategy for getting around this obstacle would be to try comparison by weight, but some vessel types weigh more than others. “Weight could be used to compare proportions between assemblages, even though it cannot be used to measure proportions in any one assemblage” (Orton et al. 1993: 169). In the case of my site at Postclassic Jalieza, there was little significant variation in size of sherds found across the
site. Because of this overall uniformity in sherd size, I believe it is legitimate to compare sherd counts between collections squares, and vessel counts based on sherd counts within squares as well.

It is important to note that the percentage of vessels in a death assemblage will not be a one-to-one representation of the percentage of vessels in a life assemblage. A number of ethnoarchaeological studies that have examined the life expectancy of a vessel have made this clear. In Foster’s study in Tzintzuntzan, Mexico, cooking pots lasted about a year, while storage vessels lasted considerably longer (Foster 1960). Longacre’s work with the Kalinga in Phillipines (Longacre 1985), David’s work with the Fulani in Cameroon (David 1972), and Bedaux’s work with the Dogon of Mali (Bedaux 1987) have all examined the life spans of vessels. Generally, vessels that are used for cooking, and thus over a fire, and vessels that are frequently moved have the shortest life spans. Vessels that aren’t moved or heated have the longest life spans (Orton et al. 1993). This means that these types of vessels, those used for cooking and serving, are likely represented more frequently within the archaeological record than they would be within the life assemblage of that household or site. While large storage jars, which are not moved or heated, are likely under-represented. Orton et al. caution, “The assumption that seems occasionally to be made, that differences between assemblages are in some way a direct reflection of differences in the assemblages in use on the site, is too simplistic” (Orton et al. 1993: 209). These authors suggest a recognition of “the character of an assemblage in whose composition and size may reflect factors such as function and status” (Orton et al. 1993: 209) and a discard assemblage that shows the range of vessel
types used, taking into consideration the differing discard and replacement rates of individual vessel types.

_The Ceramic Sequence in the Valley of Oaxaca_

*Development of the sequence—Caso, Bernal, and Acosta*

The general ceramic sequence for the Valley of Oaxaca was first outlined by Alfonso Caso based on analysis of excavations at the site of Monte Alban, the capital of the Zapotec state that dominated the Valley (Caso 1935). A simple naming strategy was employed that used the name “Monte Alban” and a roman numeral. Thus the oldest assemblage was Monte Alban I, then Monte Alban II, etc, up to Monte Alban V. With noted Mexican archaeologists Ignacio Bernal and Jorge Acosta, Caso published a detailed description of this general ceramic sequence for the Valley of Oaxaca in the 1960s (Caso et al. 1967). However, over the years a number of issues have arisen with this chronology. The initial sequence has since been modified several times, even by its developers. Caso’s student Ignacio Bernal made the first refinement of this sequence as part of his Master’s thesis, subdividing Monte Alban I into subphases Ia, Ib, and Ic (Bernal 1946). Caso himself made a division within Monte Alban III between IIIa and IIIb (Marcus and Flannery 1990). The later stages of the sequence, from the Late Classic through the Postclassic, are the most problematic and are of particular importance for the site of Jalieza. I will discuss the issues with the sequence, and the challenges and proposed solutions that have been raised, in further detail below.
Issues with the sequence—Period IIIb-IV

The Monte Alban I subdivisions have been generally accepted. There is agreement on two clear categories, termed Ia and Ic or Early I and Late I. Research continues on refining these categories and definitions (Spencer et al. 2008). However, the issue of Monte Alban IIIb continues to prove thorny. Caso created the period IIIb by including ceramics originally classified as Monte Alban IV into a new category he termed IIIb on the basis that they were found associated with occupations prior to the collapse of the Monte Alban state, while category IV applied to the period after the collapse of Monte Alban (Marcus and Flannery 1990). He decided to base the categories of IIIb and IV on a socio-political event rather than an observable change in ceramics. This event was the fall of Monte Alban—or more specifically, the abandonment of the Main Plaza at Monte Alban. Caso, Bernal, and Acosta sought to emphasize the momentousness of this political shift by marking it within the temporal sequence for the Valley. This has created a good deal of confusion instead. One method of dealing with this confusion has been to conflate Period IIIb and Period IV into one period, named Period IIIb-IV, a strategy employed by Caso, Bernal, and Acosta themselves in their seminal work La Ceramica de Monte Alban (Caso et al. 1967). Others have spent lots of time and energy trying to establish criteria that would allow one to distinguish between IIIb and IV. When viewed as separate, non-overlapping time periods the proposed dates for these period are as follows: Monte Alban IIIb covers roughly A.D. 500-750 while Monte Alban IV is roughly A.D. 750-950 (Marcus and Flannery 1990; Paddock 1983). Based on the observation that IIIb sites mostly occur in the Etla branch and central parts of the Valley, while IV sites occur in the eastern Tlacolula and southern Valle Grande
(Ocotlan-Zimatlan) valleys, it has been suggested that perhaps there is geographic variation at play in these assemblages rather than purely temporal change (Marcus and Flannery 1990). The convention in the literature is to consider these two periods together, referring to them as Monte Alban IIIb-IV.

**Monte Alban V**

Period V pottery is marked by the presence of a ceramic type termed G3M by Caso, Bernal and Acosta. G3M is a fine gray paste, nicely finished and burnished. It is very different from the G35 paste type prominent during Monte Alban IIIb-IV in how delicate, fine, well-made, and well-finished it is. G3M is the most abundant pottery during Period V and the key ceramic marker that indicates a Period V site. The “M” in G3M stands for Mixtec. In their 1965 publication, Caso and Bernal state that MA IV and MA V were contemporaneous, IV was a Zapotec product and existed up to time of the Spanish, while V was seen as Mixtec (Caso and Bernal 1965). This view seems to have changed by their 1967 publication, *La Ceramica de Monte Alban*, in which they state that because of the abundance of this pottery within the Valley of Oaxaca, they believe G3M vessels were not imports, but local copies of Mixtec forms (Caso et al. 1967). Caso, Bernal, and Acosta identified that the clay used in G3M was the same clay now used by potters in San Bartolo Coyotepec to produce Oaxacan Black Pottery (Caso et al. 1967). In addition to G3M, new pottery types for Monte Alban V identified by Caso, Bernal, and Acosta included K1M and K8M made from cafe paste, as well as polychromes. The main difference between these and earlier forms was mostly that they were thinner and the paste was finer ground. Common V forms include: bowls with serpent or conical feet,
composite silhouette bowls, hemispherical bowls, conical bowls, miniatures, ollas, patojos, vasos, and sahumadores (Caso et al. 1967). As with G3M, the “M” in the brown pottery types (K1M and K8M) also stands for Mixtec. These pottery forms were seen as evidence for the theory that the Postclassic in the Valley of Oaxaca was a period dominated by Mixtec cultural influence and political control. This theory was based largely on the prominence of Mixtec elites in certain sites within the Valley at the time of the Spanish conquest and remained popular well into the 1970s. The general consensus has since changed as evidence has mounted that G3M was clearly produced in the Valley and developed out of earlier Zapotec pottery forms. There are a number of sites that indicate an in-situ transition from IV pottery to V pottery, including San Sebastian Abasolo which showed evidence of an Early V assemblage that include fine G3M without the presence of either polychrome or Yanhuitlan Red-on-cream (Flannery 1983: 295; Marcus and Flannery 1990: 200). Marcus and Flannery suggest that, “Bernal himself found a similar transition at Cuilapan de Guerrero in the Zaachila Valley” (Marcus and Flannery 1990: 200). Marcus and Flannery further cite work by Drennan on Mound 5-W at Yagul (Marcus and Flannery 1990 citing Drennan 1983: 367), and river bank excavations conducted by themselves in Mitla at Balah Bisye, Balah Gui Wap, and Balah Gubesh as additional sites indicating an in-situ transition from MA IV to MA V. The last bit of evidence I will mention comes from Gary Feinman, who points out that, “G3M types have been found to be far more abundant and variable in the Valley of Oaxaca than in the Mixteca Alta” (Feinman et al. 1989: 333).

*Issues with the sequence—Period V*
Another issue with the ceramic sequence developed by Caso, Bernal, and Acosta is that the last period, Monte Alban V, covers at least 600 years, possibly more. Again because they were working with the ceramic collections from Monte Alban, and Monte Alban was largely abandoned at the end of Period IIIb, there was a lesser quantity of material for them to work from in developing the ceramic signature of this later time period. And so a lesser degree of refinement in this period exists within their sequence. There have been calls over the years to refine and subdivide Period V—even from Bernal himself (Marcus and Flannery 1990; Winter 1989). These divisions have been described by Winter as “a division between Va (which I will call Early V) with estimated dates from A.D. 1250-1400 and Vb (Late V) from A.D. 1400-1521” (Winter 1989:123). Marcus and Flannery suggest a tripartite division of Early V, Middle V, and Late V (Marcus and Flannery 1990). Key in these distinctions is the presence or absence of polychromes, and the presence or absence of metals: Early V has no polychrome, no metal; Middle V has polychrome but no metal; Late V has polychrome and metal (Marcus and Flannery 1990). Marcus and Flannery suggest the following dates: Early A.D. 950-1100, Middle A.D. 1100-1300, Late A.D. 1300-1500 (Marcus and Flannery 1990: 201). Polychrome pottery very clearly only appears later in Period V and is quite distinctive. But identifying early V diagnostics is less clear. Bernal himself mentions three kinds of gray ware vessels that he believes are characteristic of Early V. These include: “Two-tone Gray hemispherical bowls with lighter or darker rims, composite silhouette vessels, and jars with open pouring spout in the rim and appliqué decorations” (Bernal 1966: 365). Recent scholars have tried to address these issues with the ceramic sequence to varying degrees of success and acceptance. Below I will provide a brief
synopsis of some of the relevant work regarding these questions about the ceramic sequence. When presenting the ceramic finds data from Postclassic Jalieza in Chapter Five, I will discuss how the surface collection assemblage from the site fits with these proposed sequence divisions.

Lind’s reclassification

In 1992 Michael Lind published an article in *Notas Mesoamericanas* titled “Unos problemas con la cronología de Monte Albán y una nueva serie de nombres para las fases” (Lind 1992). In this article Lind proposed an alternative ceramic sequence to the one based on Caso, Bernal, and Acosta’s 1967 tome. This revised sequence created more finely refined temporal categories as well as a new naming system for the phases within the sequence. Instead of the sequential roman numerals and letters, Lind proposed using Zapotec words to denote each phase (Lind 1992). In the twenty years since the first publication of this paper, there has been a slow adaptation of this new ceramic sequence. The work of Robert Markens and Cira Martinez Lopez has sought to further detail and refine this classification system (Markens 2004, 2008; Martinez Lopez et al. 2000). A number of current researchers exclusively use the Lind naming system (Joyce 2009; Herrera Muzgo and Winter 2003; Urcid 2001; Sellen 2002, 2011; Smith and Lind 2005; Winter 2000). Others continue to use the more widely accepted and longer recognized system of Caso, Bernal, and Acosta (Feinman et al. 2004; Flannery and Marcus 2005; Spencer and Redmond 2006). While still others use a combination of the two (Elson et al. 2010; Faulseit 2012).
Because the Lind/Markens system explicitly attempts to divide Monte Alban V into subsections, and because the site of Postclassic Jalieza would appear to date to only the earlier portion of Period V, I will explore the Postclassic ceramic sequence suggested in this newer typological system. It is also instructive to briefly examine the phases associated with the Late Classic/Postclassic transition. Figures 26 and 27 below are tables showing the more traditional sequence based on Caso, Bernal, and Acosta as compared with the sequence proposed by Lind and Markens.

**Figure 26: Caso, Bernal, and Acosta Ceramic Sequence (from Blanton et al. 1993)**

<table>
<thead>
<tr>
<th>Period</th>
<th>Phase</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late Postclassic</td>
<td>MA V</td>
<td>A.D. 1000-1521</td>
</tr>
<tr>
<td>Early Postclassic</td>
<td>MA IV</td>
<td>A.D. 750-1000</td>
</tr>
<tr>
<td>Late Classic</td>
<td>MA IIIB</td>
<td>A.D. 500-750</td>
</tr>
<tr>
<td>Early Classic</td>
<td>MA IIIA</td>
<td>A.D. 200-500</td>
</tr>
<tr>
<td>Terminal Formative</td>
<td>MA II</td>
<td>200 B.C.- A.D. 200</td>
</tr>
<tr>
<td>Late Formative</td>
<td>MA Late I</td>
<td>350-250 B.C.</td>
</tr>
<tr>
<td>Late Formative</td>
<td>MA Early I</td>
<td>500-350 B.C.</td>
</tr>
</tbody>
</table>

**Figure 27: Lind/Markens Ceramic Sequence (from Markens 2008)**

<table>
<thead>
<tr>
<th>Period</th>
<th>Phase</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late Postclassic</td>
<td>Chila</td>
<td>A.D. 1200-1521</td>
</tr>
<tr>
<td>Middle Postclassic</td>
<td>Late Liobaa</td>
<td>A.D. 1000-1200</td>
</tr>
<tr>
<td>Early Postclassic</td>
<td>Early Liobaa</td>
<td>A.D. 800-1000</td>
</tr>
<tr>
<td>Late Classic</td>
<td>Xoo</td>
<td>A.D. 600-800</td>
</tr>
<tr>
<td>Classic</td>
<td>Peche</td>
<td>A.D. 500-600</td>
</tr>
</tbody>
</table>
Early Classic  Pitoo/Dxu’ Complex  A.D. 400-500
Late Pre-Classic  Tani  A.D. 200-400
Late Pre-Classic  Nisa  A.D. 1- 200
Late Pre-Classic  Pe  300 B.C. – A.D. 1
Middle Pre-Classic  Danibaan  500-300 B.C.

_Late Classic-Early Postclassic Transition_

The confusion over whether there is a distinction between Monte Alban IIIb and IV ceramics, and if that distinction exists whether it might be temporal or spatial, has implications for the site of Jalieza in particular. One of the occupations at Jalieza was identified by the Valley of Oaxaca Settlement Pattern Project as a Monte Alban IV settlement, and has thus been referred to in the literature as an Early Postclassic site (Finsten 1995; Kowalewski et al. 1989). In recent decades, there seems to have emerged a general consensus that Monte Alban IIIb and IV are in fact contemporaneous phases and should be considered Late Classic assemblages, rather than Early Postclassic (Casparis 2006; Elson et al. 2010; Faulseit 2012b). Markens evaluated the ceramics from Lambityeco, the site used by Paddock to define Monte Alban IV, and concluded that they had “strikingly similarities” with other Late Classic ceramics from around the Valley of Oaxaca (Markens 2008: 52). He was also able to obtain radiocarbon dates indicating these ceramics belonged to the Late Classic period rather than Early Postclassic (Markens 2004, 2008). As Markens states, “repositioning Paddock’s Phase IV to the Late Classic period is key to identifying a viable Early Postclassic pottery complex in the Valley of Oaxaca” (Markens 2008: 87).
A Note on Confusion, or Why the Late Classic sequence is important for understanding

Postclassic Jalieza

The Valley of Oaxaca Settlement Pattern Project identified three distinct episodes of occupation at Jalieza. They were identified as MA IIIa, MA IV, and MA V (Kowalewski et al. 1989). Using the understanding of the ceramic sequence for the Valley at the time, these were considered to correspond to an Early Classic settlement (IIIa), an Early Postclassic settlement (IV), and a Late Postclassic settlement (V). So the references made by Finsten and Kowaleski et al. to the Early Postclassic settlement of Jalieza in fact means the Period IV component, which should now be understood as corresponding with the Late Classic. Following the lead of Elson and Casparis, I will refer to this occupation at the site as the Late Classic IIIb-IV component. The Period V component, the section of the site that my research focuses on, is sometimes called the Late Postclassic component by Finsten and Kowaleski et al., but is in fact likely from the Early Postclassic and represents an Early Period V ceramic assemblage. This is the phase referred to as Liobaa by Lind and Markens. I will refer to it as Liobaa/Early V, Early Postclassic, or simply Postclassic. As I will argue later in my analysis, the likely dates for this occupation fall in the A.D. 800-1200 range.

Refinement of the Late Classic to Postclassic Sequence

What is of greatest concern to me within the context of this dissertation is the Postclassic. The refinement of the Postclassic sequence has clearly been necessary for quite some time. As discussed above, there have been general proposals for such refinement, but Markens’ work has been the first to clearly define a detailed view of what
an Early V versus Late V assemblage might include. Below is a brief description of the most significant diagnostic ceramics for the Late Classic and Postclassic phases as described by Markens in his 2004 and 2008 publications.

*Late Classic Assemblages: Peche and Xoo A.D. 500-800*

These phases are marked by the presence of G35 conical bowls. Most frequently these bowls are made without supports, but during the Peche phase a number are found with tripod hollow hemispherical supports while during the Xoo phase the supports are solid. Appliqué bat claw cups are found in both phases of the Late Classic. During the Xoo phase, double-spouted ollas decorated with Cociyo mask appliqués are found. Gray hollow-handled sahumadores with large holes are found in both phases (Markens 2004, 2008).

*Early Liobaa Assemblage: A.D. 800-1000*

During the Liobaa phase, the conical bowl is largely superceded by the hemispherical bowl, a significant shift as the conical bowl had been the predominant ceramic vessel for centuries in the Valley of Oaxaca (Markens 2008: 76). There are still conical bowls present during the Liobaa, in gray and café pastes, but in lower percentages than during the Classic. Additionally crema paste conical bowls first appear during the Early Liobaa. Markens notes that during the Early Liobaa some conical bowls have a noticeably thickened base, as though the clay was squashed down at the base while wet. But it is the G3M hemispherical bowl that marks the most obvious shift from a Late Classic to an Early Postclassic assemblage. Markens notes that during the Early Liobaa
phase, hemispherical bowls with low walls made from G3M or café paste are found. The surface finish of these bowls is less refined than later hemispherical bowls, having been merely scraped on the outside and sometimes left unburnished on the exterior surface. Markens sees these as coarser than later G3M bowls. He states, the “two-tone differential firing effect is often poorly executed and may be accidental rather than intentional” (Markens 2008: 76). It is during the Early Liobaa that Huitzo Polished Cream bowls first appear. The other marker of Postclassic ceramics, the G3M composite silhouette, first appears during the Early Liobaa. Markens states that during this early phase the vessel type is harder to distinguish as the form may be attributable more to scraping the bowl’s exterior contour rather than intentional shaping. Bat claw cups, found during the Late Classic, are also present in some Early Postclassic assemblages. Chimney-shaped cups made of orangeware make their appearance. Orange pastes were also used to make small ollas with basket-type handles, though these vessels are also made from crema pastes as well. Café ware storage jars are mentioned by Markens that display distinctive swaths of short, rough parallel lines over their surface. According to Markens, the most clearly diagnostic vessels associated with the Liobaa phase, both Early and Late, are sahumadores and miniatures. Liobaa phase sahumadores are distinct from Late Classic versions because of their greatly elongated handles and the noticeable decline in quality. Early Postclassic sahumadores can be made of gray or café clay, and are usually quite coarse. The handles are solid, or contain a single small perforation that runs through the handle longitudinally. The sahumador base or receptacle is hemispherical in shape, and sometimes contains a circle or x design on the interior. Markens notes that Early Postclassic sahumadores may have holes that don’t penetrate all the way through. The
other clear diagnostic of the Early and Late Liobaa are miniature vessels. These miniatures may be made of gray or café paste and may include forms such as hemispherical bowls, trays, ollas, sahumadores, or bat-claw vessels. Significantly these miniatures are not found during the Chila phase (Markens 2004, 2008).

*Late Liobaa Assemblage: A.D. 1000-1200*

This phase is characterized, for the most part, by a similar assemblage of vessels as those found in the Early Liobaa, the distinction seems to lie in the quality and regularity of the vessel types. Hemispherical G3M bowls and composite silhouettes are most prevalent, but tend to be of better manufacture and finer quality. The two-tone differential firing characteristic of the Early Postclassic seems to be better executed in this phase, an intentional design rather than an accident of firing. Bat claw cups continue to be found. Composite silhouette G3M ollas appear, some with short hollow supports. The presence of sahumadores and miniatures, as described above in the Early Liobaa assemblage, continue and are good diagnostic indicators (Markens 2004, 2008).

*Chila Assemblage: A.D. 1200-1521*

The Chila phase is characterized by polychrome pottery and vessels with elongated supports. These include polychrome conical bowls with hollow elongated legs or slab legs, composite silhouette bowls with elongated hollow supports, polychrome and G3M tripod cups and ollas with hollow, elongated supports, which often are polychrome as well. Significantly Liobaa-style sahumadores don’t continue. The sahumerio,
described by Markens as an excised censer, becomes prevalent. Miniatures common to the Liobaa phase are also not found during the Chila phase (Markens 2004, 2008).

The distinctions between Early and Late Liobaa seem to be on the order of quality, similar forms but better made and more standardized by Late Liobaa. This level of refinement is likely difficult to gauge with surface sherds. However, if we look at the broader distinction between Liobaa and Chila phases, there is a distinct difference between the two assemblages, one that temporally matches the earlier suggestions of an Early V and Late V. As I will describe in more detail concerning the ceramic finds from Postclassic Jalieza in Chapter Five, I believe the Postclassic component at Jalieza can be understood as an Early V/Liobaa site. I include a quote below from Markens on the distinctive aspects of Early Postclassic Valley of Oaxaca ceramics:

If the ceramic seriation I propose is correct—at least in bold strokes—then it should now be fairly straightforward to identify contexts and components belonging to the Early Postclassic Period. There are a good number of diagnostic ceramic categories that appear to have been in vogue during this time alone. These include certain varieties of miniatures, solid-handled sahumadores, G3M semispherical and composite silhouette bowls without supports, Tohil Plumbate, patojos, ollas with basket-type handles, and conjoint vessels.

Markens 2004: 303-306

An important aspect of Markens analysis that should be noted is that Markens used whole vessels from burials to develop his phyletic seriation. Most of his sample came from the Tlacolula Valley. It is quite possible that this sample is not representative of the entire valley and so gives a somewhat skewed view of Postclassic ceramics by over-representing the Tlacolula branch. I will address this issue in further detail in the subsequent chapter on the ceramic finds from Jalieza, but Markens work as well as new work from Ronald Faulseit at Cerro Danush might indicate a regional ceramic variation.
within the Valley of Oaxaca during the Early Postclassic. Markens’ over-representation of the Tlacolula Valley in his sample may mask some of this variation.

Conclusion

Ceramics can provide important information on dating, household status and wealth, and on the interconnectivity of sites and regions. However we must be cautious how we use ceramics and question our assumptions behind ceramic theory. Ceramics can tell us a lot, but we must be conscious of the limits of this source of knowledge. The ceramic sequence for the Valley of Oaxaca is still being refined and understood. The site of Postclassic Jalieza can contribute to understanding the refinement of the Postclassic sequence within the Valley of Oaxaca. Now let us examine the ceramic finds from the surface collection of Postclassic Jalieza within the parameters established in this chapter.
Chapter Five:
Surface Data from Postclassic Jalieza:
Ceramic Finds

Overview

In this chapter I will describe the ceramics finds from the surface collection at Postclassic Jalieza. The beginning of the chapter will involve a detailed description of the ceramic finds. Of particular interest is the percentage of gray ware versus café (brown) ware found at the site. Connected to this is a clear pattern of burnishing or not burnishing the surface of gray or café ware vessels. A number of other patterns that emerged within the assemblage will be discussed as well. The latter part of the chapter will provide an interpretation of some aspects of these finds based on the ceramic theory presented in Chapter Four.

Ceramic Survey Data from Postclassic Jalieza

The ceramic data from Postclassic Jalieza was gathered as part of an intensive, full-coverage field survey with controlled surface collection on the settlement area of Postclassic Jalieza. Survey techniques included field walking, mapping, and surface collection. Surface collection resulted in the collection of all artifacts from 70 collection squares, each square measuring 100 m².

Collection Squares: 70 controlled collection squares were set up throughout the site for the systematic collection of artifacts. Collection squares were laid out in both
public and residential areas of the site. Squares were placed using the Brunton International Pocket Transit Compass along a North – South alignment. The vast majority of squares were 10m x 10m, though a few measured 5m x 20m due to topography and landscape features. The total square meters for each collection square are the same to allow for comparisons to be made among squares throughout the entire site.

The sampling strategy for these squares was opportunistic. Square locations were chosen based on the presence of either terrace walls or sherd scatters. An attempt was made to evenly distribute squares throughout the site, but the placement of squares was often dependent on the surface conditions and topographic details of the site.

All portable artifacts within each collection square were collected for laboratory analysis and for quantitative assessments of artifact types throughout the site. It was decided that separating diagnostic from non-diagnostic ceramics in the field would be too time consuming, so all ceramics were collected and later separated in the lab. Large ground stone, such as manos and metates, were photographed and recorded in the field, but most were not collected due to their size. The location of each collection square was plotted on the map, as were important physical features of the landscape such as barrancas, bedrock outcroppings, water springs, creek beds, and modern day roads and cultivated fields. GPS coordinates were taken in the southwest corner of each collection square.

*Laboratory analysis:* Laboratory analysis was conducted on the collected artifacts in May of 2010. Sherds were washed and separated into two categories: diagnostic and non-diagnostic. Diagnostic sherds include rims, bases, decorated sherds, reworked sherds, figurine or urn fragments, and sherds that due to their size or shape allowed for an
interpretation of vessel type. Non-diagnostic sherds are plain body sherds that give no indication as to what kind of vessel they were once a part of. Non-diagnostic sherds were separated by paste type (mostly café or gray), and then counted, weighed and recorded for each provenience (each collection square). 2388 diagnostic sherds were individually weighed and coded based on a series of criteria that included: provenience, sherd type, paste type, surface finish, surface decoration, vessel type, temper, CBA type, detail, wall thickness, and diameter. I also included a section for notes on details concerning each diagnostic sherd. During coding, a number of sherds were selected for illustration, either drawing and imaging (280 sherds), or simply imaging (350 sherds). The selection of sherds was based primarily on their representativeness of particular types of vessels. An effort was made to select sherds that reflected the variety of vessels found throughout the site. Diagnostic sherds that were not selected for individual illustration were imaged as lots according to provenience. Ceramic coding was based on Kowalewski et al. 1978, following Caso, Bernal, and Acosta’s categories. Figure 28 shows the overall numbers of all surface ceramics collected from Postclassic Jalieza.

**Figure 28: Total Sherds**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic Sherds</td>
<td>2388</td>
</tr>
<tr>
<td>Non-Diagnostic Sherds</td>
<td>12,764</td>
</tr>
<tr>
<td>Total Number of Sherds Collected</td>
<td>15,152</td>
</tr>
</tbody>
</table>

**Paste Types**

The vast majority of sherds present at the site are made of gray paste: 77% of all sherds are gray ware. The percentages of gray versus café are quite similar for non-
diagnostic (76% gray) sherds, while gray is more heavily represented amongst diagnostic sherds (85% gray). The significance of the predominance of gray ware will be discussed in further detail later in the chapter. There is a very small representation of other paste types within the surface collection: 0.5% of all sherds, 1% of diagnostic sherds. These sherds were quite rare and their significance will be discussed in greater detail later in the chapter as well.

Figure 29: Paste Type: All Sherds: 15,152

Percentages for Paste Type, All Sherds
- 77.38% gray
- 22.12% café
- 0.5% other
Figure 30: Paste Type: Non-diagnostic Sherds Total: 12,764

![Non-Diagnostic Sherd Paste Type](image)

Percentages for Paste Type—Non-Diagnostic
- 75.94% gray
- 23.65% café
- 0.4% other

Figure 31: Paste Type: Diagnostic Sherds: 2388

![Diagnostic Sherd Paste Type](image)

Percentages for Paste Type—Diagnostic
- 85.1% gray
- 13.9% café
- 1% other
**Surface Finish**

Non-diagnostic sherds generally don’t provide a lot of information. They are often only counted on-site and then discarded. We collected all sherds on-site, including non-diagnostic primarily as a time-saver in the field. In the lab we took the time to separate diagnostic from non-diagnostic, after washing all sherds to ensure that surface details could be easily discerned. When counting non-diagnostic sherds we also noted the surface finish, creating only two categories: burnished or unburnished. We took more detailed notes and descriptions of the surface finish for diagnostic sherds, but even this simple distinction between burnished and unburnished for non-diagnostic highlights an interesting distinction between gray wares and café wares. As can be seen in the graphs below, 91.7% of gray non-diagnostic sherds were burnished. While only 5% of café non-diagnostic sherds were burnished.

Figure 32: Non-Diagnostic Gray Surface Finish

<table>
<thead>
<tr>
<th>Total non-diagnostic gray sherds= 9693</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage non-diagnostic gray burnished= 91.7 %</td>
</tr>
<tr>
<td>Percentage non-diagnostic gray unburnished = 8.3 %</td>
</tr>
</tbody>
</table>
Total non-diagnostic café sherds = 3019  
Percentage non-diagnostic café burnished = 5%  
Percentage non-diagnostic café unburnished = 95%

Grouping diagnostic sherds into simple burnished versus unburnished categories indicates the same overall trend, with slightly different percentages. The vast majority of gray sherds are burnished (73%), while the vast majority of café are unburnished (81%).
Total diagnostic gray sherds = 2032
Percentage of diagnostic gray burnished= 73 %
Percentage of diagnostic gray unburnished= 26 %

Figure 35: Diagnostic Café Surface Finish

Total diagnostic café sherds= 332
Percentage of diagnostic café burnished= 19%
Percentage of diagnostic café unburnished= 81%

What does this overall pattern of burnishing tell us about gray ware versus café ware? First let me describe a little about the process of burnishing and the effect it creates. Burnishing is accomplished by rubbing the surface of a leather hard (dried but not fired) vessel with an object such as a smooth rock. This compresses and rearranges the clay particles and aligns them in a way that, after firing, gives the vessel a sheen or shine without the use of glaze. It is necessary to use a smooth tool so you don’t nick or scratch the surface of the vessel while burnishing it. Ethnographic studies of Oaxacan pottery production have documented the use of smooth stones, sturdy reeds, and potsherds to burnish pottery (Muller and Hopkins 1974: 81, 92). Deal’s research in the Central Maya Highlands documented the preference of potters for quartzite pebbles in
burnishing, but also noted the use of an avocado pit, a cue ball, and dried clay balls (Deal 1998: 40). To this day, tourists who visit Doña Rosa’s pottery studio in San Bartolo Coyotepec in Oaxaca can see a pottery making demonstration in which vessels are burnished using a quartzite pebble. Many potters rub the dry surface of the pot with a little water first, in order to create a slip that allows the rock to move more easily across the surface of the vessel, as well as fills in any small cracks or holes in the exterior surface. Burnishing can help also help make a vessel more watertight.

Burnishing is a very time consuming aspect of ceramic finishing. In this respect, I believe it is fair to say that a higher degree of burnishing reflects a greater amount of time put into the creation of a particular piece of pottery. Burnishing certainly improves the physical appearance of the vessel, creating an attractive, smooth, and shiny surface. This may increase the value of the finished product because of its increased aesthetic appeal (Blanton et al. 1993: 31-34). Because burnishing refines the surface of the vessel, and fills in any minor cracks or holes, I wonder if it might increase the tensile strength of the vessel, which would likely contribute to an increase in the vessel’s life span as well as improve transport without breaking. I have yet to find any studies that make this connection, so this is speculation on my part, but perhaps an interesting line of questioning to pursue in future research. Tensile strength is generally attributed to temper—Feinman and colleagues note that the fine temper of G3M bowls and their higher firing temperatures increased their tensile strength over earlier G35 bowls (Feinman et al 1989). However, if tensile strength in ceramics is weak because of their readiness to fracture along the lines of small cracks within their bodies, burnishing may in fact increase their tensile strength, even if only marginally. It would help explain why
the extra time and effort of burnishing was put into G3M bowls and other gray wares during the Postclassic. Some arguments for Late Classic G35 vessels being so poorly made is that they were made on a large scale for distribution, widely available and cheap, so to speak. There are two competing explanations that could explain a greater time investment in burnished Postclassic pottery. One is that if the trade and distribution networks of the Late Postclassic weakened or dissolved with the dissolution of the Monte Alban state, perhaps particularly in the Early Postclassic, then perhaps individuals were more inclined to make a greater investment in creating a ceramic vessel that would last longer because there was a less steady or readily available supply of mass produced ceramics. Another argument could be that a market system independent of the Monte Alban state continued after the state decline. Regional specialization emerged more distinctly in the Postclassic, and vessels produced in the Tlacolula Valley were exported to other branches of the Valley of Oaxaca, thus favoring vessel forms and finishing that improved tensile strength and transportability—largely the argument made by Feinman (Feinman et al. 1989). I will address the question of the differences in percentages of gray versus café ware in further detail below, but the lesser degree of burnishing found among café ware may indicate that it was locally produced and not expected to travel long distances—though there was no evidence of café ware production found on surface collection at Postclassic Jalieza. Another possibility is that café ware may also be less frequently burnished because of the purposes for which the vessels were made. If café paste was used more for cooking ware than for serving ware, perhaps there was less concern with the appearance of the vessel. Likewise if the expectation was that cooking
ware, made of café, would have a shorter life span, perhaps less time and effort was invested in finishing the surface of pieces.

**Sherd Types**

Below is a description of the variety of diagnostic sherd types found during the surface collection of Postclassic Jalieza. By far the most frequent diagnostic sherd type was the rim. Surprisingly the second most frequent sherd type was the body sherd. Diagnostic body sherds included decorated body sherds, unique paste types, and curved body sherds that would indicate a globular bowl-style vessel. Olla necks were also a common sherd type found within the site. Below is a table with the absolute numbers and relative percentages of sherd types found at the site, followed by a pie chart visual representation of these findings.

**Figure 36: Breakdown of Diagnostic Sherd Types**

<table>
<thead>
<tr>
<th>Sherd Type</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base w/Handle</td>
<td>1</td>
<td>0.04%</td>
</tr>
<tr>
<td>Pendant</td>
<td>2</td>
<td>0.08%</td>
</tr>
<tr>
<td>Rim-to-Base</td>
<td>2</td>
<td>0.08%</td>
</tr>
<tr>
<td>Handle Base</td>
<td>3</td>
<td>0.13%</td>
</tr>
<tr>
<td>Kiln Waster</td>
<td>3</td>
<td>0.13%</td>
</tr>
<tr>
<td>Urn/Figurine</td>
<td>16</td>
<td>0.68%</td>
</tr>
<tr>
<td>Base w/Foot</td>
<td>17</td>
<td>0.71%</td>
</tr>
<tr>
<td>Foot</td>
<td>19</td>
<td>0.80%</td>
</tr>
<tr>
<td>Miniature</td>
<td>27</td>
<td>1.13%</td>
</tr>
<tr>
<td>Handle</td>
<td>50</td>
<td>2.09%</td>
</tr>
<tr>
<td>Base</td>
<td>107</td>
<td>4.48%</td>
</tr>
<tr>
<td>Reworked Sherd</td>
<td>150</td>
<td>6.28%</td>
</tr>
<tr>
<td>Neck</td>
<td>204</td>
<td>8.54%</td>
</tr>
<tr>
<td>Body</td>
<td>279</td>
<td>11.68%</td>
</tr>
<tr>
<td>Rim</td>
<td>1508</td>
<td>63.15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2388</td>
<td>100%</td>
</tr>
</tbody>
</table>
Below is the total number of diagnostic sherds identified for each vessel type. Vessel types will be described and illustrated below, with descriptions of believed usage. The most frequently found vessel type is the composite silhouette bowl (28% of the assemblage), followed by the hemispherical bowl (18% of the assemblage). This is consistent with descriptions of Postclassic assemblages for the Oaxaca Valley (Caso et al. 1967; Markens 2004, 2008), as hemispherical bowls and composite silhouette bowls became the dominant bowl type during the Postclassic, superseding earlier conical bowls. The frequency of these bowl types along with the high percentage of ollas found (15% of the assemblage) are good indicators that the hillside terraces that compose the majority of the site are indeed domestic terraces, and that the site is composed primarily of household
contexts. There are some vessel types of particular interest and I will describe them in more detail later in the chapter. These include miniatures and sahumadores, both of which not only indicate ritual behavior but are also markers of the Early Postclassic. Also of note is the large number of reworked sherds (6% of total assemblage). I will explore the forms and possible uses of these reworked sherds in greater detail later in the chapter.

Figure 38: Breakdown of Vessel Types

<table>
<thead>
<tr>
<th>Vessel Type</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>153</td>
<td>6.41</td>
</tr>
<tr>
<td>Bowl</td>
<td>7</td>
<td>0.29</td>
</tr>
<tr>
<td>Brazier Fragment</td>
<td>1</td>
<td>0.04</td>
</tr>
<tr>
<td>Comal</td>
<td>13</td>
<td>0.54</td>
</tr>
<tr>
<td>Composite Silhouette</td>
<td>673</td>
<td>28.18</td>
</tr>
<tr>
<td>Conical Bowl</td>
<td>253</td>
<td>9.84</td>
</tr>
<tr>
<td>Cup</td>
<td>46</td>
<td>1.93</td>
</tr>
<tr>
<td>Flat-bottomed Vessel</td>
<td>11</td>
<td>0.46</td>
</tr>
<tr>
<td>Hemispherical Bowl</td>
<td>440</td>
<td>18.43</td>
</tr>
<tr>
<td>Jar</td>
<td>4</td>
<td>0.17</td>
</tr>
<tr>
<td>Kiln waster</td>
<td>2</td>
<td>0.08</td>
</tr>
<tr>
<td>Large storage</td>
<td>1</td>
<td>0.04</td>
</tr>
<tr>
<td>Miniature</td>
<td>27</td>
<td>1.13</td>
</tr>
<tr>
<td>Olla</td>
<td>347</td>
<td>14.53</td>
</tr>
<tr>
<td>Outleaning Bowl</td>
<td>144</td>
<td>6.03</td>
</tr>
<tr>
<td>Pendant</td>
<td>2</td>
<td>0.08</td>
</tr>
<tr>
<td>Reworked Sherd</td>
<td>150</td>
<td>6.28</td>
</tr>
<tr>
<td>Sahumador</td>
<td>61</td>
<td>2.55</td>
</tr>
<tr>
<td>Tecomate</td>
<td>5</td>
<td>0.21</td>
</tr>
<tr>
<td>Tripod Vessel</td>
<td>32</td>
<td>1.34</td>
</tr>
<tr>
<td>Urn/Figurine</td>
<td>16</td>
<td>0.67</td>
</tr>
<tr>
<td>Total</td>
<td>2388</td>
<td></td>
</tr>
</tbody>
</table>
Figure 39: Graph of Vessel Types

![Graph of Vessel Types](image)

**Vessel Type Descriptions**

Included below is an explanation of the vessel type categories I have used to classify the ceramic sherds found during my surface collection of Postclassic Jalieza. I have attempted to describe the criteria I used in examining sherds to classify them, as well as identify the sources for these vessel categories. I have included images to demonstrate each vessel type.

**Bowl:** This category includes sherds from vessels that were identifiable as a bowl, but could not be categorized as to a specific type or shape, such as hemispherical bowl or conical bowl. Thus these sherds were simply identified as “bowl.” Two of these sherds
were imaged, but not drawn. They are both body sherds. One was imaged because of its unique paste type, identified as possibly amarillo. The other was imaged because the sherd contained incised line surface decoration on the exterior. These sherds are most likely connected with a household association and would have been used in eating, cooking, or storage.

Figure 40: Image of Amarillo Bowl Sherd from PCJ-26, Incised Lines from PCJ-08

Overall number of bowl sherds found: 7

Percentage of overall diagnostic ceramic finds: 0.29%

Brazier Fragment: A brazier is a ceremonial vessel used for burning incense or other offerings. Only one brazier fragment was identified on the site. It was found on the far eastern slopes of the site. This area of the site has some overlap with the Late Classic (IIIb-IV) occupation so this fragment could very well date to the earlier occupation and not the Postclassic (V).
Number of brazier sherds found: 1 (gray)

Percentage of overall diagnostic ceramic finds: 0.04%

Comal: A comal is a wide, flat ceramic vessel. It is believed to be a tortilla griddle used for warming tortillas over coals or a low fire. Thus comales are associated with a household context and cooking. These vessels are very utilitarian, often roughly made and not long lasting. It is a great indicator of a household site due to its role in food preparation. Only 13 comal sherds were found at the site, of which 11 were café ware.

Figure 42: Image of Comal Fragment
Number of comal sherds found: 13 (11 café, 2 gray)
Percentage of overall diagnostic ceramic finds: 0.54%

Composite Silhouette: A composite silhouette bowl is a bowl composed of two sections. The lower rounded portion of the bowl is constructed first, and then the top half of the bowl is attached. This construction method creates a recognizable flange where the two parts are joined. It is the presence of this flange that a sherd to be identified as being from a composite silhouette vessel. It is possible that some sherds identified as hemispherical bowls may in fact be from composite silhouette vessels, but that particular sherd lacked the distinctive flange and was thus categorized as a hemispherical bowl. The particular shape of composite silhouette bowls can vary. The surface of composite silhouette bowls is usually well burnished. Many composite silhouette bowls exhibit two-tone burnishing or differential firing. The vast majority of composite silhouette bowls found at Postclassic Jalieza were gray (655 gray sherds versus 16 café sherds). The composite silhouette is commonly associated with the Postclassic/Period V (CBA 1967: 451). According to Markens, it is during the Late Liobaa and Chila Phases that this technique was perfected to produce the best made and most clearly identifiable composite silhouette vessels (Markens 2004: 271). The composite silhouette was the most frequently found vessel sherd type at Postclassic Jalieza. These vessels most likely were associated with a household and would have been used in eating, cooking, or storage. These bowls were found distributed throughout the site. Below are photos of two examples of types of composite silhouette rim sherds.
Number of composite silhouette sherds found: 673

(655 gray, 16 café, 2 amarillo)

Percentage of overall diagnostic ceramic finds: 28.18%

Conical Bowl: As its descriptive name indicates, a conical bowl is a cone-shaped bowl. It has a flat bottom and straight sidewalls that angle outward. This vessel type is found throughout the Classic and Postclassic periods (Caso, Bernal, and Acosta 1967). Poorly made conical bowls were a common vessel type during the Late Classic period and likely were continued to be produced during the early parts of the Postclassic period. The G35 conical bowls found at the site may indicate locations of overlap in the Late Classic and Postclassic settlements at Jalieza. It is also possible, as has been suggested
by Faulseit (Faulseit 2012b), that G35 conical bowls continued to be used in the early years of the Early Postclassic. According to Markens, conical bowls of the Early Postclassic/ Liobaa Phase lack the leg supports that appear in the Late Postclassic/ Chila Phase (Markens 2004: 251-254). Café ware conical bowls, often burnished and nicely finished, are described by Markens (2004, 2008) as markers of Liobaa (Early Postclassic) pottery. These vessels most likely are associated with a household and would have been used in eating, cooking, or storage.

Figure 44: Images of Conical Bowl Fragment

Number of conical bowl sherds found: 253 (54 café, 196 gray, 1 orange, 1 crema)

Percentage of overall diagnostic ceramic finds: 9.84%

Cup: I used this category to describe sherds that were thin walled and delicate with a small rim diameter. These small, thin walled cylindrical vessels were likely used for drinking. Small cup vessels may indicate higher status dwellings as they are often associated with elite food consumption. These vessels were generally well made and delicate. Markens and Caso, Bernal, and Acosta both describe more elaborate and decorated cup vessels, but the fragmentary nature of surface collections did not provide
such examples from Jalieza (Caso, Bernal, and Acosta 1967: 460-461; Markens 2004: 278-282). These may have been individual serving vessels and are most likely connected with a household association.

Figure 45: Image of Cup Fragment

One of the few orange sherds found at the site was likely from a cup.

Figure 46: Image of Orange Cup Fragment

Number of cup sherds found: 46
Percentage of overall diagnostic ceramic finds: 1.93%
Flat-bottomed Vessel: I used this category to describe vessels that clearly had a flat base but the shape of the rest of the vessel was unclear. These could include conical bowls, outleaning bowls, jars, or tripod vessels. This particular vessel type can only be identified by its base sherd and often comes from a cone-shaped vessel. These vessels most likely are associated with a household and would have been used in eating, cooking, or storage.

Figure 47: Image of Flat-bottomed Vessel Fragment

Number of sherds found: 11

Percentage of overall diagnostic ceramic finds: 0.46%

Hemispherical Bowl: This is a globular-bowl shaped vessel with a rounded body. These vessels have a continuous curve to their wall, but with a wide mouth to the vessel. The walls don’t curve back in as would an olla or tecomate. Because of the curved walls of these vessels, some body sherds were able to be identified as hemispherical bowls, though they may have been from other globular-shaped vessels such as an olla or composite silhouette. Hemispherical bowls are found during both the Classic and
Postclassic Periods, though during the Postclassic they are made from the distinctive Postclassic G3M paste type (Caso, Bernal, and Acosta 1967: 448). The hemispherical bowl becomes much more common during the Postclassic as the conical bowl becomes a less frequently used vessel shape (Markens 2004: 262-263). Most hemispherical bowls that were found at Jalieza are gray ware and were very well made. This is the second most frequent sherd type represented at this site, after the composite silhouette bowl. This would be a utilitarian, household ware. These vessels most likely are associated with a household and would have been used in eating, cooking, or storage. Like the composite silhouette bowl, it was likely used for serving rather than cooking purposes.

Figure 48: Images of Hemispherical Bowl Fragments

Number of sherds found: 440

Percentage of overall diagnostic ceramic finds: 18.43%

Jar: I’ve used to term jar to describe a tall, cylindrical vessel. These would include sherds that were narrow and straight like a cup, but larger in size and with thicker walls. These can be somewhat difficult to identify through sherds, but there were a few sherds found at the site that seemed to match jar shapes. Jars would likely have been
used for storage. These vessels most likely are associated with a household and would have been associated with eating, cooking, or storage.

Figure 49: Image of Jar Fragment

Number of sherds found: 4

Percentage of overall diagnostic ceramic finds: 0.17%

Kiln Waster: This term refers to a malformed or misshapen sherd. Kiln wasters are sherds from vessels that misfired during production. They are generally seen as evidence for ceramic production sites, particularly when found in large quantities. These sherds are usually identified by their twisted shape. Only three potential kiln wasters were found at Postclassic Jalieza. Two are pictured below
Large Storage: Large storage vessels would be used for storing large quantities of food or water. They may indicate elite households that would acquire surplus, perhaps to be used during feasting rituals. Only one sherd was identified as being from a large storage vessel simply because of its unusually large size. The vessel shape or type was unclear, but large vessels are usually associated with storage, likely within a household context.
Number of sherds found: 1

Percentage of overall diagnostic ceramic finds: 0.04%

Miniature: I’ve used the term miniature to include a miniature version of any vessel type. These miniatures include bowls, plates, comales, and cups. According to Markens, miniatures appear at the end of the Late Xoo (Late Classic) but are characteristic of the Liobaa Phase (Early Postclassic) and disappear by the end of that phase (Markens 2004: 303). Thus their presence at Postclassic Jalieza may serve as an important time marker for the site. Miniature vessels were used during ceremonial offerings to the ancestors. They are viewed as an indicator of ritual activity. Miniatures were found in several areas of the site, particularly along the hilltop ridge, believed to be the civic-ceremonial core of the site.
Number of sherds found: 27

Percentage of overall diagnostic ceramic finds: 1.13%

Olla: An olla is a globular shaped jar, with a narrow neck and flared rim. The neck and rim are the aspects of the vessel that are most identifiable (Caso, Bernal, and Acosta 1967: 459; Markens 2004: 283-287). They are often described as bean cooking pots and were certainly household utilitarian vessels. Markens draws a distinction between cántaros, which he describes as water-carrying vessels, and ollas. (Markens 2004: 291). Using only sherds rather than whole vessels, I was unable to make such a distinction and have used the category of olla only. Ollas are common household vessels through many time periods, but the fine G3M paste ollas are unique to the Postclassic. There are both gray ware and café ware ollas from this site. Ollas are associated with food preparation, rather than serving. These vessels most likely are associated with a household and would have been used in eating, cooking, or storage.
Number of sherds found: 347

Percentage of overall diagnostic ceramic finds: 14.53%

Outleaning Bowl: This is a flat-bottomed bowl with straight sides that angle out more sharply than a conical bowl, often with a flared rim. These tend to be shallower than conical bowls and have flared, squared off rims. These bowls are found in many different time periods and are not unique to the Postclassic. These vessels most likely are associated with a household and would have been used in eating, cooking, or storage.
Number of sherds found: 144
Percentage of overall diagnostic finds: 6.03%

Pendant: Two reworked sherds were recovered from the site that appear to have been pendants. These sherds had been reshaped and a small hole was drilled through them. I believe these sherds were worn as ornaments, suspended from a cord or string that was tied around an individual’s neck, thus I have classified them as pendants. Both of these pendants were recovered from the hilltop center.

Number of sherds found: 2
Percentage of overall diagnostic ceramic finds: 0.08%
Reworked Sherd: This category includes any sherd that had evidence of deliberate shaping of edges. These ceramic sherds have had their edges reworked and refined, seemingly to be used as tools. A number of reworked ceramic sherds were found throughout the site. There were four general shapes of reworked sherds identified. I chose the following subcategories to classify these sherds: scraper, notched, rounded, and rounded punch out. These are described in greater detail later in this chapter.

Figure 56: Images of Reworked Sherds

Number of sherds found: 150

Percentage of overall diagnostic ceramic finds: 6.28%

Sahumador: A sahumador is a handheld incense burner. These vessels consist of a small, shallow bowl attached to the end of a handle (Caso, Bernal, and Acosta 1967: 462). Sahumadores are found associated with Late Classic and Postclassic sites, but display stylistic variation between different phases. In particular, handle length elongates during the Early Postclassic/Liobaa and handles transform from being hollow to being solid (Markens 204: 291-296). The sahumador fragments found on surface collection included handle fragments as well as fragments from the shallow bowl part of
the sahumador in which incense would be burned. A sahumador was used during ceremonial activities to propitiate ancestors and is generally viewed as an indicator of ritual activity. Burning contents of the sahumador would send smoke up into the clouds to deliver messages to the ancestors (Flannery and Marcus 1978; Marcus 1978). A number of sahumador fragments and handles were found throughout the site, though the highest concentration of sahumadores was found in the hilltop area.

Figure 57: Images of Sahumador Fragments

Number of sherds found: 61

Percentage of overall diagnostic ceramic finds: 2.55%

Tecomate: A tecomate is a storage vessel, globular in shape with a narrow rim opening. It is similar to an olla but lacks an outward flaring rim. It is a utilitarian,
household ware. It is likely associated with a household and may have been used for storage or for containing water.

Figure 58: Images of Tecomate Fragment

[Images of Tecomate Fragment]

Number of sherds found: 5

Percentage of overall diagnostic ceramic finds: 0.21%

Tripod Vessel: A tripod vessel is a bowl or plate with three legs. Feet or bases are necessary to identify these vessels. They are most closely associated with the Postclassic period though they are present during the Late Classic as well (Caso, Bernal, and Acosta 1967: 448-451). Markens argues that elongated tripod supports are characteristic of the Chila phase of the Postclassic (Markens 2004: 305-306). Serpent feet are common indicators of Postclassic ceramics. Many Late Postclassic tripod vessels are polychrome, however no polychrome sherds were found at this site. With a surface collection assemblage like this one, tripod vessels were identifiable in sherd form mainly through the presence of a leg or base with leg attachment.
Figure 59: Images of Feet from Tripod Vessels

Number of sherds found: 32

Percentage of overall diagnostic ceramic finds: 1.34%

Urn/Figurine: I’ve grouped urns and figurines into one category for this study. Urns are vessels with human or animal forms attached to their surface. Figurines are small human or animal figures made from clay. Because of the fragmentary nature of surface ceramics, it is at times difficult to distinguish if a figurine fragment was at one time attached to a larger urn, so I’ve grouped to two into one category. Both are used in ceremonial activities that honor ancestors and are viewed as indicators of ceremonial activities. There are very few instances of urn or figurine fragments recovered from this site. They will be presented individually later in this chapter.
Figure 60: Images of Fragments from Urns/ Figurines

Number of sherds found: 16
Percentage of overall diagnostic ceramic finds: 0.67%

Unknown: This category simply includes diagnostic sherds that could not be classified according to vessel type. However, they were included amongst diagnostic sherds for such reasons as the presence of surface decoration or unique clay type.

Number of sherds found: 153
Percentage of overall diagnostic ceramic finds: 6.41%

Jalieza as an Early Postclassic/ Early V/ Liobaa site

Jalieza is an interesting site because of its limited occupation. Settlement moved to this area of the site after the Late Classic, and was gone from this area by the time of the Spanish arrival. It has the unique opportunity of offering a glimpse into those years of the Early Postclassic. The ceramic assemblage from the site quite clearly places it within that time frame, and confirms the attempts that have been made to refine the overly long period of Monte Alban V.
Markens refinement of MA V establishes criteria for Early Liobaa, Late Liobaa, and Chila phases within the previous phase of MA V. The dates for these phases are Early Liobaa A.D. 800-1000, Late Liobaa A.D. 1000-1200, and Chila A.D. 1200-1521. The distinctions between Early and Late Liobaa seem to be on the order of quality; similar forms are found in both phases but are better made and more standardized by Late Liobaa. This level of refinement is likely difficult to gauge with surface sherds. However, if we look at the broader distinction between Liobaa and Chila phases, there is a distinct difference between the two assemblages, one that temporally matches the earlier suggestions of an Early V and Late V (see Chapter Four). I will discuss the ceramic finds from Jalieza within the framework of Liobaa versus Chila below. For a more detailed description of Early Liobaa, Late Liobaa, and Chila assemblages as described by Markens (2004, 2008), see Chapter Four.

Liobaa ceramics are defined primarily by the emergence of the G3M paste type, the rise in hemispherical bowls and composite silhouette bowls, concordant with the decline in conical bowls, and the presence of miniatures and solid handled sahumadores. Markens notes that Liobaa ollas often have basket handles, small nubby handles that may have been used to suspend the vessel. These ceramic markers are distinct from earlier Late Classic diagnostics that included G35 paste, conical bowls, and hollow handled sahumadores. Chila phase ceramics are distinguished by the presence of polychrome vessels, tripod vessels with elongated supports and the disappearance of sahumadores and miniatures (Markens 2004, 2008).

I recovered 15,571 sherds from 70 collection squares throughout the settlement of Postclassic Jalieza. Not one sherd was polychrome nor did I find any elongated supports.
for tripod vessels. A few tripod supports were found, but they were short nubbin-style supports or rounded supports, not elongated. I did find a predominance of G3M paste.

Of the 2388 diagnostic sherds recovered, 28.18% were identified as composite silhouette, 18.43% as hemispherical bowls, and only 9.84% as conical bowls. Pictured below are some of the sherds that suggest an Early Postclassic/ Liobaa occupation for the site, including G3M composite silhouette bowls, miniatures, solid-handled sahumadores, and loop olla handles.

Figure 61: Images of G3M Composite Silhouette and Hemispherical Bowl Sherds

27 miniature vessels were recovered.

Figure 62: Images of Miniature Vessels
61 sahumador fragments were collected. Of the 44 sahumador handles recovered, only 4 were hollow, the rest were solid handled with a small air hole.

Figure 63: Images of Solid Sahumador Handles
A number of loop olla handles were found at Postclassic Jalieza, images of which are provided below.

Figure 64: Images of Loop Olla Handles

These diagnostic ceramics would indicate that this occupation at Jalieza was limited to the Liobaa phase, with some areas of the site potentially overlapping with a Late Classic (Xoo) occupation. The hilltop settlement of the site is clearly Early Postclassic/Liobaa. The 13 collection squares from the hilltop yielded 179 composite silhouette sherds and 106 hemispherical bowl sherds versus only 45 conical bowl sherds. They also yielded 18 miniatures and 29 sahumador fragments. While excavation and radiocarbon dates would be ideal to confirm the dating of this component of the site, I believe the surface ceramic data pretty clearly indicate the occupation can be considered Early Postclassic/ Early MA V/ Liobaa, dating to approximately A.D. 800-1200.

Variation in Vessel Type Frequencies by Paste Type

I would like to explore the issue of paste in more detail in the following pages. Paste type has been used by various researchers to distinguish between time periods based on the percentages of paste type found within an assemblage. In particular, the
presence of higher percentages of café ware during the Postclassic has been noted (Markens 2004, 2008; Faulseit 2012b). In examining the surface ceramics from Postclassic Jalieza I have noted that the vessel types represented in this assemblage vary significantly when divided according to paste type. The breakdown of vessel type by paste type is represented below.

Figure 65: Gray Vessel Types Graph
Figure 66: Gray Vessel Counts Chart

<table>
<thead>
<tr>
<th>Gray Vessel Type</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comal</td>
<td>2</td>
<td>0.10</td>
</tr>
<tr>
<td>Composite Silhouette</td>
<td>655</td>
<td>32.23</td>
</tr>
<tr>
<td>Conical Bowl</td>
<td>196</td>
<td>9.65</td>
</tr>
<tr>
<td>Cup</td>
<td>45</td>
<td>2.21</td>
</tr>
<tr>
<td>Flat-bottomed Vessel</td>
<td>9</td>
<td>0.44</td>
</tr>
<tr>
<td>Hemispherical Bowl</td>
<td>422</td>
<td>20.77</td>
</tr>
<tr>
<td>Miniature</td>
<td>9</td>
<td>0.44</td>
</tr>
<tr>
<td>Olla</td>
<td>261</td>
<td>12.84</td>
</tr>
<tr>
<td>Outleaning Bowl</td>
<td>105</td>
<td>5.17</td>
</tr>
<tr>
<td>Pendant</td>
<td>1</td>
<td>0.05</td>
</tr>
<tr>
<td>Reworked Sherd</td>
<td>147</td>
<td>7.23</td>
</tr>
<tr>
<td>Sahumador</td>
<td>9</td>
<td>0.44</td>
</tr>
<tr>
<td>Tripod Vessel</td>
<td>27</td>
<td>1.33</td>
</tr>
<tr>
<td>Urn/Figurine</td>
<td>8</td>
<td>0.39</td>
</tr>
<tr>
<td>Unknown</td>
<td>122</td>
<td>6.00</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>0.69</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2032</strong></td>
<td></td>
</tr>
</tbody>
</table>

Figure 67: Café Vessel Types Graph

![Café Vessel Types Graph]
The most frequent gray ware vessels are composite silhouette bowls and hemispherical bowls, while the most frequent café ware vessel type is the olla, followed by conical bowls and sahumadores. Below is a chart that shows the frequencies side by side for gray ware versus café ware for the most common vessel types.
There are a number of interesting trends to note here. Composite silhouettes and hemispherical bowls are predominantly gray ware. Ollas and comales are predominantly café ware. Miniatures and sahumadores are predominantly café ware. Ollas and comales are most closely associated with cooking and food preparation. Composite silhouettes and hemispherical bowls are more closely associated with food service. Miniatures and sahumadores are associated with ritual activity.

This raises a number of questions about the purpose and use of these paste types. Is café ware more disposable and so less time and effort is put into its creation and finishing? Perhaps café ware was produced locally, while gray ware vessels are imported from another town or part of the valley? This is something I’ve already suggested in the large difference between the surface finish burnishing of gray ware versus café ware. Going back to the life-history studies of ceramics mentioned in Chapter Four, cooking vessels break at greater frequencies than other ceramic vessels. Since cooking pottery tends to have a shorter life span (Bedaux 1987; David 1972; Foster 1960; Longacre 1985; Orton et al. 1993) it wouldn’t be surprising if they were made from lesser quality clay. In her study of pottery making in Atzompa, conducted in the 1950s, Hendry notes that the lowest quality clay, barro de Crespo, was used for primarily for comales (Hendry 1992). If miniatures are made for temporary use, perhaps even for single use in ceremonies that require their destruction, burning, abandonment, or burial, then one might expect that a lesser quality clay would be used, and less effort would be invested in creating the form and finishing. The same is likely true for sahumadores, which are also associated with ritual, with heating or burning, and may be used over a very short period of time only. I wonder if there is a difference in heat transfer between the two paste types—perhaps café
ware is a better medium for heating and cooking than gray ware. I haven’t found anything in the literature to suggest this, but it may be something to consider for future investigation. Very little evidence of ceramic production was found associated with the Postclassic component of Jalieza. Of the few kiln wasters that were recovered, they are all gray, indicating at least some local production of gray ware. There is no evidence for local production of café ware from my surface collection. Further research at the site may present a different picture however.

It is worth noting that when looking at the overall percentages of paste types the breakdown is 77% gray, 22% café. When looking at diagnostic versus non-diagnostic, it looks like this: non-diagnostic 76% gray, 24% café—very similar to the overall view. But for diagnostic vessels, unsurprisingly a smaller sample, the numbers are 85% gray, 14% café. Is this because café ware tends to be less better made, more friable, and thus more likely to break into smaller non-diagnostic sherds? If it is the case that more cooking vessels are made with café paste, then according the ethnoarchaeological studies cited in Chapter Four, they are more likely to break and fracture, and at higher frequencies, due to the heating and moving of vessels associated with cooking. Perhaps this would account for the smaller percentage of diagnostic café ware found at the site.

Faulseit’s work at Cerro Danush examined percentages of paste types within collection units. In the case of Cerro Danush, the site was inhabited during both the Late Classic and Early Postclassic periods, thus Faulseit needed to determine which terraces were occupied during which periods. He determined this using two complementary aspects of his surface survey ceramic data. One factor he looked at was the presence of temporally diagnostic ceramics, in this case sahumador handles: hollow handles are
distinctive to the Late Classic, while solid handles are diagnostic of the Early Postclassic. But not all collection units contained sahumador handles. So he compared the percentages of gray versus café paste sherds within the site, and then compared those results with the diagnostic artifacts found within each collection unit. He determined that the terraces with the highest percentages of gray ware were occupied exclusively during the Late Classic, while those with higher percentages of café ware were occupied during the Early Postclassic as well. The percentages for his overall ceramic assemblage were: 79.70% gray, 18.68% café, and 1.62% orange. Using paste type to determine temporal occupation, he considered terraces containing more than 80% gray to correspond with a Late Classic occupation, while those containing over 20–25% café to indicate Early Postclassic occupation. The variation in percentage of paste type for any given terrace was as follows: gray between 42.08% and 89.84%, café between 9.62% and 56.83%.

From this analysis, Faulseit was able to determine that the civic-ceremonial group at the summit of Cerro Danush was not occupied during the Early Postclassic, and that the extent of the settlement at Cerro Danush declined by 75–80% from the Late Classic to the Early Postclassic (Faulseit 2012b).

It is interesting to compare this analysis from Cerro Danush with the café and gray ware percentages at Jalieza. There are very distinct occupations at Jalieza corresponding to the Late Classic and Early Postclassic. While there may be minor overlap, there was clearly a settlement shift related to the transitional period between these occupational phases—a pattern quite different from what Faulseit found at Cerro Danush. There is little occupational overlap between the Late Classic and Early Postclassic at Jalieza, as is demonstrated by the relative paucity of Late Classic diagnostic
ceramics found during my surface survey of the site, as well as the survey conducted by the Valley of Oaxaca Settlement Pattern Project (Kowalewski et al. 1989).

As discussed in the preceding pages, the ceramic assemblage from Postclassic Jalieza yielded multiple types of diagnostic ceramics exclusive to the Early Postclassic period. While the overall percentages of café versus gray for Jalieza is similar to Cerro Danush—77% gray, 22% café, 0.5 % other at Jalieza—there is a greater variation in percentages for a given square—from 0% to 43% café paste, and from 56% to 100% gray paste. However, the mode and the mean for the percentage of café versus gray are quite close together, and as can be seen in the figures below. There is a fairly even distribution of café versus gray ware within a given square around the mode. The coefficients of variation for café and gray show that there is more variation between squares in the percentage of café than gray. This can be seen visually as well in the graphs below.

**Figure 70: Overall Percentages of Café versus Gray Wares**

<table>
<thead>
<tr>
<th></th>
<th>Café</th>
<th>Gray</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>20.85</td>
<td>78.64</td>
</tr>
<tr>
<td>Mode</td>
<td>19</td>
<td>81</td>
</tr>
<tr>
<td>Stand Dev</td>
<td>9.48</td>
<td>9.95</td>
</tr>
<tr>
<td>Co of Var</td>
<td>0.45</td>
<td>0.13</td>
</tr>
</tbody>
</table>
Figure 71: Overall Café Paste Percent Graph

![Percent Cafe Paste Graph](image)

Figure 72: Overall Gray Paste Percent Graph

![Percent Gray Paste Graph](image)
Figure 73: Café versus Gray Percentages per Collection Square

**Hilltop**

Eastern Hilltop
- PCJ-1: 36% café, 63% gray, 1% other
- PCJ-2: 22.5% café, 76.5% gray, 1% other
- PCJ-3: 19% café, 81% gray
- PCJ-4: 37% café, 63% gray
- PCJ-5: 32% café, 69% gray
- PCJ-6: 39% café, 60% gray, 1% other

Hilltop Plaza
- PCJ-7: 36% café, 61% gray, 3% other
- PCJ 8: 11% café, 89% gray

Central Hilltop
- PCJ-46: 7% café, 93% gray, 0.5% other
- PCJ-47: 28% café, 71% gray, 1% other
- PCJ-48: 26% café, 63% gray, 12% other

Western Hilltop
- PCJ-49: 23% café, 77% gray, 0.3% other
- PCJ-50: 33% café, 67% gray

**Slopes**

Western Slopes

Group 1:
- PCJ-9: 3% café, 97% gray
- PCJ-10: 19% café, 76% gray, 5% other
- PCJ-11: 8% café, 90% gray, 2% other
- PCJ-12: 7% café, 92% gray, 1% other
- PCJ-13: 19% café, 81% gray
- PCJ-14: 18% café, 82% gray
- PCJ-15: 3% café, 97% gray
- PCJ-16: 2% café, 98% gray

Group 2:
- PCJ-17: 28% café, 72% gray, 1% other
- PCJ-18: 22% café, 78% gray
- PCJ-19: 19% café, 79% gray, 2% other
- PCJ-20: 20% café, 80% gray
- PCJ-21: 32% café, 68% gray
- PCJ-22: 16% café, 84% gray
- PCJ-23: 23% café, 77% gray
- PCJ-24: 21% café, 79% gray
- PCJ-25: 23% café, 77% gray

PCJ-26: 18% café, 81% gray, 1% other
PCJ-27: 19% café, 81% gray
PCJ-28: 25% café, 75% gray
PCJ-29: 20% café, 80% gray
PCJ-30: 13% café, 87% gray
PCJ-31: 32% café, 66% gray, 2% other

Central Slopes
- PCJ-32: 21% café, 76 gray, 3% other
- PCJ-33: 20% café, 80% gray
- PCJ-34: 19% café, 81% gray
- PCJ-35: 28% café, 71% gray, 1% other
- PCJ-36: 17% café, 82% gray, 2% other
- PCJ-37: 0% café, 100% gray
- PCJ-38: 20% café, 79% gray, 1% other
- PCJ-39: 29% café, 71% gray
- PCJ-40: 13% café, 87% gray
- PCJ-41: 18% café, 82% gray, 0.2% other
- PCJ-42: 13% café, 96% gray, 1% other
- PCJ-43: 31% café, 69% gray, 1% other
- PCJ-44: 15% café, 85% gray
- PCJ-45: 4% café, 96% gray
- PCJ-51: 12% café, 88% gray, 0.4% other
- PCJ-52: 30% café, 70% gray
- PCJ-53: 19% café, 80% gray, 1% other
- PCJ-54: 26% café, 73% gray, 1% other
- PCJ-55: 14% café, 86% gray
- PCJ-56: 17% café, 83% gray
- PCJ-57: 28% café, 72% gray
- PCJ-58: 23% café, 72% gray, 5% other

Central Eastern Slopes
- PCJ 59: 30% café, 69% gray, 0.5% other
- PCJ-60: 8% café, 92% gray
- PCJ-61: 18% café, 82% gray, 0.5% other
- PCJ-62: 12% café, 88% gray
- PCJ-63: 27% café, 73% gray
- PCJ-64: 29% café, 71% gray
- PCJ-65: 27% café, 70% gray, 3% other
- PCJ-66: 35% café, 65% gray

Eastern Slopes
- PCJ-67: 22% café, 78% gray
- PCJ-68: 43% café, 56% gray, 1% other
- PCJ-69: 30% café, 70% gray
- PCJ-70: 13% café, 86% gray, 1% other
It is interesting to note that if one were to take either the 20% or 25% mark for percentage of the assemblage that is café as a determinant of whether a particular terrace on this site dates to the Early Postclassic, most of the site would not be considered Early Postclassic. At 20% café, 29 of the 70 collection squares would not meet the criteria. At 25% café 45 out of 70 squares don’t meet the criteria. This makes little sense in the case of Postclassic Jalieza, as many squares that are next to each other show fairly dramatic differences in paste percentages. For example: in the eastern section of the hilltop, PCJ-3 had 19% café and 81% gray, while PCJ-4 contained 37% café and 63% gray. Along the slopes, PCJ-30 contained 13% café and 87% gray, while PCJ-31 yielded 32% café, 66% gray, and 2% other. I don’t doubt that these criteria work well for Cerro Danush, and the correspondence Faulseit found between high percentages of café ware and Early Postclassic diagnostics indicate the effectiveness of this method for his site. However, I wonder if there is some degree of spatial variation in the ceramic assemblage of the Early Postclassic within the Valley of Oaxaca. Perhaps there are higher percentages of café ware found in sites in the Tlacolula branch of the Valley, and lesser percentages in other branches. Markens has done a good deal of work in trying to refine our understanding of the ceramic sequence for the Postclassic (Markens 2004; 2008). The Postclassic component of Jalieza fits quite well within much of the criteria he has established for the Early Postclassic. Where it doesn’t fit as well is in the question of high percentages of café ware. There are a few important aspects of Markens analysis that should be noted. One is that Markens used whole vessels from burials to develop his phyletic seriation and most of his sample came from the Tlacolula valley. It is quite possible that this sample is not representative of the entire valley and so gives a somewhat skewed view of
Postclassic ceramics by over-representing the Tlacolula branch. For example, Markens states that Liobaa phase pottery found at Lambityeco was “made from coarse café paste, the Liobaa assemblage at Lambityeco consists of ollas, patojos, miniatures vessels, and poorly made sahumadores.” (Markens 2008: 68) Taking into consideration Markens work, in addition to the high percentages of café ware at Faulseit’s site, perhaps what we’re seeing here is a regional variation in ceramic assemblages within the Valley of Oaxaca during the Early Postclassic.

To further compare Jalieza with Faulseit’s analysis of Cerro Danush, I examined sahumador handles found at Jalieza. In total there were 44 sahumador handles recovered during surface collection from Postclassic Jalieza. Of those, 4 were hollow handles. 2 of these were located on the hilltop, 2 located on the slopes. Of the hilltop top handles, one was found in PCJ-1. This square contained 1 hollow handle and 2 solid handles. The paste composition for the entire square was 36% café sherds, 63% gray sherds, and 1% other paste sherds. The other hilltop hollow handle was found in PCJ-2. This square also contained 1 hollow handle and 2 solid handles. The paste breakdown for that square was 22.5% café sherds, 76.5% gray sherds, and 1% other paste type sherds. So even though these squares contained a hollow handled sahumador, a marker of Late Classic ceramics, they also contained over 20% café ware, potentially indicating an Early Postclassic occupation. Both of these squares also contained two solid handled sahumadores, a marker of the Early Postclassic. This may indicate an occupation for the hilltop that dates to the transitional period from the Late Classic to Early Postclassic, in which the hollow handled sahumadores represent the earliest periods of occupation at the site. It is also possible that these hollow handled sahumadores were curated items, held on to and
reused into the Early Postclassic. PCJ-17, on the Western Slopes, yielded the third hollow handle. This was the only sahumador handle from this square. However the paste percentages for the square, 28% café, 72% gray, and 1% other, would indicate an Early Postclassic occupation. The last hollow handle comes from PCJ-61, which yielded both a gray hollow handle and a café solid handle. Located in Central Eastern Slopes, this square was only 18% café, with 82% gray and 0.5% other paste type. This square also produced 4 potential G35 sherds, which could indicate a Late Classic occupation at the terrace. However the predominate sherds recovered from this square were G3M, distinctively Postclassic vessels, suggesting any potential Late Classic occupation was followed by an Early Postclassic occupation as well.

There seems to be a different process occurring at Jalieza during the Early Postclassic than at Cerro Danush. This may be partly seen through the differences in ceramic assemblage, but also through site organization as well. At Cerro Danush, Faulseit determines that most of the Late Classic occupation is abandoned by the end of the period, including the summit complex that included elite residences in addition to a civic-ceremonial complex. Using the gray versus café percentages, he calculates a 75-80% reduction in occupation from the Late Classic to Early Postclassic. This pattern of site abandonment and population dispersal is documented for other sites within the Valley of Oaxaca during the Early Postclassic (Kowalewski et al. 1989). Faulseit finds that the households along the base of the hill, likely regarded as lower status households, are the ones that continue to be occupied into the Early Postclassic. His interpretation is that while major political shifts occurred during the Classic to Postclassic transition, individual households, particularly lower status ones, continued previous patterns, many
continuing to occupy the same terraces they had for generations, despite the decline and
disappearance of the Monte Alban-based state (Faulseit 2012b).

What seems to occur at Jalieza during the Early Postclassic is quite different. The
Late Classic settlement is not just abandoned, but instead is moved to a new location in
the Early Postclassic. This new location is on a steeper, less accessible and more remote
ridge than the Late Classic occupation. While some minor occupation seems to continue
in the Late Classic area of the site, the overwhelming majority of settlement moves to the
newly established hillside and ridge. As part of this move, the traditional settlement
pattern and site layout of a hilltop center and hillside terraces. A new civic-ceremonial
plaza and mound is constructed on the hilltop, with a restricted access area of elite
residences located behind the mound (See Chapter Eight for a full description of the site
organization of Postclassic Jalieza and Chapter Nine for a discussion of post-collaspe
continuity in the Early Postclassic). Jalieza undergoes a dramatic loss in population
between the Late Classic and Early Postclassic, but not on the same scale as Cerro
Danush. According to the Valley of Oaxaca Settlement Pattern Project, Jalieza’s Late
Classic (Period IV) population was around 16,000; its Postclassic (Period V) population
around 6600 (Kowalweski et al. 1989). This is a 58% decline—a significant loss of
population, but nowhere near the 75-80% reduction seen at Cerro Danush (Faulseit
2012b). I will explore the significance behind this deliberate movement of the village in
greater detail in Chapter Eight and Chapter Nine, but the difference between Postclassic
Jalieza and Postclassic Cerro Danush is quite dramatic and significant. Jalieza represents
a very different kind of resilience and organization in the face of the disappearance of the
centralized authority of the Monte Alban state. But it also represents a very clear and
deliberate continuation of traditional social organization and settlement patterns of earlier
time periods within the Valley of Oaxaca.

*Ceramic Variation*

The degree of variation within the ceramic assemblage at a site has been examined by other researchers in order to explore questions of production, integration, and market exchange (Allen 1992; Finsten 1995; Kowlewski 2003). More regular and standardized ceramics, showing less variability in wall thickness and rim diameter, is seen as an indication of production at trade levels, rather than for individual household consumption purposes. The idea being that if a potter devotes a significant amount of time to producing pottery, on either a part-time or full-time basis, the repetition of creating particular forms will lead to a regularity or standardization of those forms. This kind of specialized artisan is posited in opposition to the production of ceramics by a non-specialist on an irregular basis for use within the household that produces the vessel. In this case, you would expect to see greater variability in form and quality both within the ceramic assemblage of a particular household and between households within the same community. By this reasoning, a lesser degree of variation within wall thickness and rim diameter within the ceramic assemblage of a site should indicate that ceramics are being produced and consumed on a level concurrent with trade and market exchange.

Finsten analyzed the rim diameter and rim thickness of surface collected ceramics from the Early Classic (MA IIIa) and Late Classic (MA IIIb-IV) components of Jalieza (Finsten 1995). She states that, “rim thickness statistics reveal remarkable homogeneity, in terms of both average measures and degrees of variability among terrace groups”
(Finsten 1995: 54). Kowalweski uses the regularity in vessel wall thickness and rim diameter to suggest that Jalieza, during the Classic Period, could be viewed as part of the political and economic core of the Valley of Oaxaca, applying a World Systems paradigm to understanding the relationship between the Valley and its surroundings (Kowalewski 2003). In this interpretation, Jalieza with its standardized ceramic forms was well integrated into the market system of trade within Oaxaca during both the Early and Late Classic periods.

Below is a summary of Finsten’s data from her surface collection of selected terrace groups at the Early Classic and Late Classic components of Jalieza.

Figure 74: Finsten’s Data (Finsten 1995; Kowalweksi 2003)

<table>
<thead>
<tr>
<th></th>
<th>Coefficient of Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Early Classic</strong></td>
<td></td>
</tr>
<tr>
<td>High-quality serving bowls</td>
<td>.13-.24</td>
</tr>
<tr>
<td>Utilitarian bowls</td>
<td>.24-.38</td>
</tr>
<tr>
<td>Jars</td>
<td>.26-.37</td>
</tr>
<tr>
<td>Comals</td>
<td>.09-.20</td>
</tr>
<tr>
<td><strong>Late Classic</strong></td>
<td></td>
</tr>
<tr>
<td>High-quality serving bowls</td>
<td>.16-.25</td>
</tr>
<tr>
<td>Utilitarian bowls</td>
<td>.27-.44</td>
</tr>
<tr>
<td>Jars</td>
<td>.28-.36</td>
</tr>
<tr>
<td>Comals</td>
<td>.07-.35</td>
</tr>
</tbody>
</table>
Finsten calculated her statistics by terrace group, and thus there is a range for each of the vessel type groups listed above. She also grouped vessel types together into four categories: high-quality serving bowls, utilitarian bowls, jars, and comals. The distinction between high-quality serving bowls and utilitarian bowls is not as straightforward for the Early Postclassic as it is for the Classic period, mostly due to the lack of decorated surfaces on bowls. Thus I have left my vessel types ungrouped, but have calculated coefficients of variation for each of the major vessel types represented at the site. Without dividing this data by terrace group or location, I provide a single coefficient of variation for the entire site for the Early Postclassic Period for each vessel type. Below is a presentation of the ceramic variation by vessel type of the surface collection ceramics from the Postclassic component of Jalieza.
Figure 75: Composite Silhouette Bowls

Wall Thickness

Mean: 6.4 mm
Standard Deviation: 1.3
Coefficient of Variation: 0.2

Rim Diameter

Mean: 22.91 cm
Standard Deviation: 5.79
Coefficient of Variation: 0.25
Figure 76: Conical Bowls

Wall Thickness

Mean: 2.45
Standard Deviation: 8.58
Coefficient of Variation: 0.44

Rim Diameter

Mean: 27.44
Standard Deviation: 8.73
Coefficient of Variation: 0.32
Figure 77: Hemispherical Bowls

Wall Thickness

Mean: 5.9 mm  
Standard Deviation: 1.4  
Coefficient of Variation: 0.2

Rim Diameter

Mean: 21.3 cm  
Standard Deviation: 5.6  
Coefficient of Variation: 0.26
Figure 78: Cups

Wall Thickness

Mean: 5 mm
Standard Deviation: 1.05
Coefficient of Variation: 0.21

Rim Diameter

Mean: 9.74 cm
Standard Deviation: 1.25
Coefficient of Variation: 0.13
Figure 79: Ollas

Wall Thickness

Mean: 7.36 mm  
Standard Deviation: 2.49  
Coefficient of Variation: 0.34

Rim Diameter

Mean: 11.97 cm  
Standard Deviation: 4.04  
Coefficient of Variation: 0.34
Figure 80: Outleaning Bowls

Wall Thickness

Mean: 8 mm
Standard Deviation: 2.29
Coefficient of Variation: 0.29

Rim Diameter

Mean: 26.37 cm
Standard Deviation: 7.63
Coefficient of Variation: 0.29
I then divided the sample for each vessel type by paste type in order to see if there was greater or lesser variation within gray or café vessels.

Figure 81: Variation within Composite Silhouettes

Café:
- Standard Deviation: 2.43, 8.98
- Mean: 9.4, 25
- Coefficient of variation: 0.26, 0.36

Gray:
- Standard Deviation: 1.17, 5.71
- Mean: 6.3, 22.88
- Coefficient of variation: 0.18, 0.25

Figure 82: Variation within Conical Bowls

Café:
- Standard Deviation: 2.4, 8.74
- Mean: 9.04, 26.2
- Coefficient of variation: 0.27, 0.33

Gray:
- Standard Deviation: 2.45, 8.77
- Mean: 8.45, 27.82
- Coefficient of variation: 0.29, 0.32
I broke down gray conical bowls further based on G35 versus G3M paste type; G35 is associated with the Late Classic, while G3M is associated with the Postclassic:

Figure 83: Variation within G35 gray conical bowls

<table>
<thead>
<tr>
<th>Standard Deviation</th>
<th>1.68</th>
<th>6.20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>9.97</td>
<td>34.36</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.17</td>
<td>0.18</td>
</tr>
</tbody>
</table>

Figure 84: Variation within G3M gray conical bowls

<table>
<thead>
<tr>
<th>Standard Deviation</th>
<th>1.54</th>
<th>6.47</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>6.58</td>
<td>23.63</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.23</td>
<td>0.27</td>
</tr>
</tbody>
</table>

Figure 85: Variation within Hemispherical Bowls

**Café:**

<table>
<thead>
<tr>
<th>Standard Deviation</th>
<th>2.89</th>
<th>7.86</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>8.6</td>
<td>22.7</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.34</td>
<td>0.35</td>
</tr>
</tbody>
</table>

**Gray:**

<table>
<thead>
<tr>
<th>Standard Deviation</th>
<th>2.89</th>
<th>7.86</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>8.6</td>
<td>22.7</td>
</tr>
<tr>
<td>Coefficient of variation</td>
<td>0.34</td>
<td>0.35</td>
</tr>
</tbody>
</table>
Figure 86: Variation within Ollas

Café:
Standard Deviation  2.77   3.75
Mean              9.47   15.09
Coefficient of variation  0.29   0.25

Gray:
Standard Deviation  1.96   3.48
Mean              6.68   10.84
Coefficient of variation  0.29   0.32

Figure 87: Variation within Outleaning Bowls

Café:
Standard Deviation  2.14   6.81
Mean              9.32   31.8
Coefficient of variation  0.23   0.21

Gray:
Standard Deviation  2.2    7.05
Mean              7.56   24.63
Coefficient of variation  0.29   0.29

Interestingly, there seems to be little difference between the café and gray assemblages. It is worth noting that the café samples per vessel type are of a much smaller volume than gray. But the overarching pattern that seems to emerge from these numbers is that there is a similar degree of consistency in both vessel wall thickness and rim diameter for either café ware or gray ware vessels.
When examining the numbers for the variety of vessel types found associated with the Early Postclassic (MA V) component of Jalieza there is also a remarkable degree of homogeneity, with similar or only slightly higher coefficients of variation than those found for the Classic Period. This would suggest that ceramics at Early Postclassic Jalieza are still being manufactured for and obtained through market exchange, rather than being produced on the individual household level. Taking into consideration the amount of burnishing that is also found associated with the Early Postclassic ceramic assemblage from Jalieza, this would further suggest a regularity and standardization of production. If the market system in the Valley of Oaxaca was independent of state control during the Classic Period, the collapse of the Monte Alban state would have had a minor effect on the market system within the Valley of Oaxaca. Or at the very least, the market system would have remained relatively strong in the absence of a controlling state during the Early Postclassic Period. Perhaps future excavation could uncover sherd samples appropriate for INAA and petrographic studies that would be able to identify sources of ceramics found at Jalieza during both the Classic and Postclassic periods. This may shed light on the question of the market system. However, based on surface collection results for the Postclassic, if Postclassic Jalieza did participate in a robust market system, it seemed to be limited mostly to exchange within the Valley of Oaxaca. As will be discussed below, very few exotic ceramics were found associated with the site. The lack of clear trade items or luxury/ imported goods suggests that Postclassic Jalieza did not participate extensively in long distance exchange networks during the Early Postclassic.
Local production of ceramics? Household production of ceramics?

Perhaps one explanation for the differences in percentages of café ware and gray ware has to do with local production. Local production of ceramics has been the subject of a number of studies, particularly production situated within the household (Balkansky et al. 1997; Feinman 1999). Finsten’s surface collection of Early Classic and Late Classic terrace groups at Jalieza produced a number of kiln wasters that she interprets as evidence for ceramic production. Out of the 8 Early Classic terrace groups in her sample, 6 of them yielded at least one kiln waster, 3 groups yield 3 kiln wasters or above, and one terrace yielded a total of 13 kiln wasters (Finsten 1995: 58). Out of the 8 Late Classic terrace groups in her sample, 5 yielded kiln wasters. 3 of those terrace groups contained only 2 kiln wasters each, while the other two terrace groups contained 3 kiln wasters each. Among the Late Classic terrace groups, 2 molds and 5 clay lumps were also recovered. Her analysis of this evidence led her to conclude that ceramic production at Jalieza seemed to be on a greater scale during the Early Classic than during the Late Classic and was dominated by a single large, ceramic-producing area (Finsten 1995: 60).

I recovered only three sherds identified as possible kiln wasters from the entire Postclassic site. Two were G3M paste, the third a gray paste but with a coarser temper. The surface finish of two were smoothed but unburnished, the third lightly burnished. The type of vessel was unclear. Below are images of the two G3M sherds.
These kiln wasters came from PCJ-17 and PCJ-24, both located in Group 2 of the Western Slopes. It is possible that this section of the site featured ceramic specialists who produced goods for distribution and exchange. However this is scant evidence to build much of an argument around. Many studies have shown that local production of ceramics was quite common around the Valley of Oaxaca, and was based at the household level (Balkansky et al. 1997; Feinman and Nicholas 1999; Finsten 1995; Middleton 1998). It would be reasonable to assume that Jalieza followed such a model. Future excavation in this area of the site would be worthwhile to determine if it was a locus of ceramic production. As it stands now, I found little evidence of wide-scale ceramic production. The data related to ceramic variation indicates Jalieza may have
remained integrated into a market system within the Valley of Oaxaca during the Early Postclassic. Feinman has proposed that the Tlacolula branch of the Valley was the most heavily involved in the production of ceramics for export than any other branch (Feinman et al. 1989; Feinman et al. 1992). Perhaps future excavation and INAA analysis of ceramics from Jalieza can make this relationship more clearly understood.

**Unique Paste Types**

Of the 2388 diagnostic sherds found during surface collection, all but 22 were either café or gray paste. Of these 22 sherds, 6 were crema paste, 6 were amarillo paste, 7 were orange paste, and 3 were of an unknown paste. These unusual sherds stick out because of their rarity at the site. Some have interesting information to offer us. Below are images of some of these sherds, along with information about the collection squares in which they were found.

Crema Sherds:

Figure 89: Images of Crema Sherds from PCJ-07
These two small crema rims were found in collection square PCJ-07 which is located on the Hilltop Area of the site. They are from an area I argue was the civic-ceremonial center of the site, near the plaza and mound. Elsewhere in this dissertation, I have argued that this area may have been associated with feasting events among the elite. This is due to a number of factors including the low volume of sherds recovered from the square, the particular assemblage of sherds that were recovered, and the location of the square just east of the mound in the restricted area of the site. The low density of sherds in this square is in stark contrast to the numbers of household vessel fragments found associated with other clearly residential terraces along the hilltop. The location of the square suggests an area that would be restricted in access, yet its proximity to the mound and plaza suggest a ceremonial association. The other sherds recovered with these were mostly from bowls and ollas, along with a cup sherd and a tecomate fragment, all of which may have been used as serving and feasting vessels. Additionally 2 sahumador fragments were found. This may indicate feasting events associated with ritual activity were conducted in this area of the hilltop. This square also yielded 2 pieces of plaster with red pigment. Red plaster is associated with important ceremonial areas in many other sites throughout the Valley of Oaxaca including Mitla and Monte Alban.

The small size of these crema sherds make it difficult to interpret the kind of vessels they were originally a part of, though they appear to be from outleaning bowls. Both of these sherds were highly burnished on their interiors, but only roughly finished on their exteriors. They both have a gritty temper with white and black inclusions. Both had wall thicknesses of 8 mm, but seemingly different rim diameters making it unlikely that they were from the same vessel. However, their similarities in paste, temper, and
surface finish make it likely that they were manufactured in the same location. Because of the rarity of this paste type at the site, it seems reasonable to propose that these sherds represent imported vessels.

Figure 90: Image of Crema Sherd from PCJ-11

This sherd is from collection square PCJ-11, located on the lower Western Slopes of the site. This sherd was highly burnished on both the interior and the exterior. It is likely from a hemispherical bowl 24 cm in diameter, with a wall thickness of 8 mm. The temper of the clay was fine with no visible inclusions. This is an unremarkable sherd, in most ways resembling a G3M hemispherical bowl with the exception of its unusual paste. This square yielded a few other interesting finds as well, including a sahumador fragment and an urn fragment. A very nice quartzite projectile point was also recovered from this square. While not in an obviously elite section of the site, like the hilltop, this interesting assemblage may indicate that this was an elite household or at the very least had access to a wider range of goods than most households at the site.
Amarillo Sherds:

Figure 91: Image of Amarillo Sherd from PCJ-06

This sherd is from collection square PCJ-06, which is located on the Eastern Hilltop Area of the site and is likely from an elite residential context. This lightly burnished sherd is likely from an outleaning bowl 30 cm in diameter with a wall thickness of 8 mm. The temper of the clay was fine but sandy. This square is likely associated with a household context due to the presence of bowl and olla sherds. It also yielded 7 miniature fragments and 3 sahumador fragments indicating likely ritual activity.

Figure 92: Image of Amarillo Sherd from PCJ-10
This sherd is from collection square PCJ-10 located on the Western Slopes. This burnished sherd was likely from a hemispherical bowl with a wall thickness of 5 mm and an unknown rim diameter. The temper of this clay was fine. This square yielded very few artifacts—21 sherds and 3 pieces of chipped stone in total.

Figure 93: Image of Amarillo Sherd from PCJ-26

This sherd was from collection square PCJ-26, located in the Western Slopes of the site. This highly burnished body sherd was originally part of a rounded vessel, such as a hemispherical bowl or possibly an olla. The temper of the clay was fine, with small black and white inclusions. The wall thickness of the vessel was 7 mm. This collection square also yielded one of the few obsidian blades found during surface collection. 3 fragments from tripod vessels were also recovered from this square, another somewhat rare artifact from this site. While not located in an exclusively elite section of the site, these artifacts indicate that this household may have had elite status or access to rare goods.
This sherd was from collection square PCJ-58, located in the Central Slopes of the site. This lightly burnished sherd was the neck of an olla with a possible 10 cm rim diameter and a wall thickness of 6.5 mm. The temper of the clay was fine. This square also yielded two orange sherds, a tripod vessel base with foot, and 10 chipped stone pieces including 3 possible cores.

It is unclear why these collection squares yielded these unusual paste type sherds. These sherds likely represent imported vessels since such few examples of this paste were found throughout the site. That sherds from imported vessels were found at terraces in non-exclusively elite sections of the site may be an interesting insight into the availability of trade goods during the Early Postclassic period. Further research through excavation would provide more information on this subject.
Orange Sherds:

Figure 95: Images of Orange Sherd from PCJ-41

This sherd was found in collection square PCJ-41, located in the Central Slopes area of the site. It is lightly burnished and was likely from a cup with a rim diameter of 10 cm and a wall thickness of 6 mm. The temper is fine. This square yielded household vessels including bowl and olla sherds, as well as 2 tripod vessel feet, a sahumador fragment, and 11 chipped stone pieces. This collection square’s location was interesting because it was situated in a flattened area with a large accumulation of sherds on the surface. However there were no visible rock retaining walls outlining it as was the case in the vast majority of terraces found. The flattened area was surrounded by largish rock outcroppings on most sides. The unusual assemblage of artifacts from the square would suggest a higher status household.

Figure 96: Images of Orange Sherds from PCJ-58
These two sherds came from collection square PCJ-58, located in the Central Eastern Slopes of the site. While both classified as orange paste during coding, they are clearly different shades of orange and likely made from different clay. The first sherd, shown in two photos in order to represent the interior and exterior, is covered with red paint or slip and appears to have some kind of design on its surface. The surface is lightly burnished. It is likely from a cylinder vessel with a 20 cm rim diameter and a 4.5 mm wall thickness. The temper is fine. The second sherd is from a very different sort of vessel. The surface of the vessel was smoothed but unburnished. The temper of the clay was fine but with some large inclusions. The surface of the sherd itself had been somewhat eroded. It was likely from a conical bowl, 30 cm in diameter and 11 mm in wall thickness. An interesting fact to note is that the square PCJ-58 also yielded an amarillo sherd, a tripod vessel base with foot, and 10 chipped stone pieces including 3 possible cores. The variety in paste types and vessels from this square is unusual for this site and may indicate this was a high status household.

Figure 97: Image of Orange Sherd from PCJ-65

This sherd was from collection square PCJ-65, located in the Central Eastern Slopes of the site. This body sherd had a burnished interior and smoothed, but
unburnished exterior. It was possibly from a hemispherical bowl with an unknown diameter and a 7.5 mm wall thickness. Though the diameter of this vessel was unknown, the size of the sherd indicates that it was likely a fairly large vessel. The temper of the clay was fine with white and black inclusions. Very few other sherds were recovered from this square (4 diagnostic, 28 undiagnostic). Two chipped stone pieces and 7 pieces of plaster were also found in this square.

Figure 98: Image of Orange Sherd from Mark 223

This sherd was found at Mark 223 (the label in the photo is incorrect). This body sherd was from an unknown vessel type, with an unknown diameter and a wall thickness of 7 mm. Its exterior surface was burnished and the interior was smoothed. The temper is fine. Mark 223 was a large sherd dump located on a terrace to the west of PCJ-64 in the Central Eastern Slopes of the site. 246 sherds were recovered from this mark.

The rarity of these unusual paste types would seem to indicate either a weak trade network with areas outside of the Valley of Oaxaca, or a limited participation in these trade networks by the residents of Jalieza. Their rarity may also indicate relatively minor material goods or wealth differences between elite and commoner households during the Early Postclassic at Jalieza.
Reworked Sherds

An interesting feature of the ceramic assemblage from Postclassic Jalieza is the number of reworked sherds found at the site. These were sherds that showed obvious signs of retouching to at least one of their broken edges, apparently turning these broken sherds into new tools. I divided these sherds into a number of categories based on their shapes: scraper, rounded, rounded punch out, rounded scraper, notched, double rounded punch out, point, sherd with drill holes, scraper with drill hole, and rounded with drill hole. As can be seen in the chart below, by far the most common types were scrapers, rounded, and rounded punch out.

Figure 99: Reworked Sherds by Type

Below are descriptions of each of these categories, along with images showing examples of each type.
Scraper: These are sherds in which at least one edge has been retouched to make a sharp scraping edge. They resemble a chipped stone scraper in many ways.

Figure 100: Images of Reworked Sherd Scraper

Rounded: These sherds have a rounded edge to them that is smooth, without the jagged retouches of a scraper.

Figure 101: Images of Reworked Sherd Rounded
Rounded Punch Out: This is a sherd that has a punched out rounded shape to it, the curve goes into the sherd, rather than out.

Figure 102: Images of Reworked Sherd Rounded Punch Out

Rounded Scraper: This is a sherd that has a rounded shape, but with an edge like a scraper.

Figure 103: Image of Reworked Sherd Rounded Scraper

Notched: These sherds have a notched point to them, again quite similar to a chipped stone form.
Figure 104: Image of Reworked Sherd Notched

Double Rounded Punch Out: This sherd is shaped like the rounded punch out, but with two curves to it.

Figure 105: Image of Reworked Sherd Double Rounded Punch Out

Point: These sherds have a pointed edge to them.

Figure 106: Image of Reworked Sherd Points
Reworked Sherd With Drill Hole: These sherds have a clear drill hole in them, but one that doesn’t penetrate all the way through. This indicates they are not pendants. They may have been used in the manufacture of another item, perhaps placed under something that was being drilled.

Figure 107: Image of Reworked Sherd with Drill Hole

Scraper With Drill Hole: This is a scraper with an edge, but also with a drill hole in it that does not penetrate all the way through the sherd. It is possible that this type of reworked sherd was reused for two different purposes, first as a scraper, then as a sherd
underneath something being drilled.

Figure 108: Image of Reworked Sherd Scraper with Drill Hole

Rounded With Drill Hole: This is a rounded sherd with a drill hole. Again, it is possible that this type of reworked sherd was reused for two different purposes, first as a scraper, then as a sherd underneath something being drilled.

Figure 109: Image of Reworked Sherd Rounded with Drill Hole

The exact use of these reworked sherds is unknown at this point. But a number of potential uses are suggested by the literature. It has been documented in a number of sources that sherds have been reworked into spindle whorls (Brumfiel 1996; McCafferty
There are a few sherds that could potentially have been spindle whorls. The clearest possible spindle whorl is from PCJ-43, pictured first below. For the other sherds, it is more ambiguous because only fragments with no center holes were found. I have not included all possible examples of potential spindle whorls below, only a selection.

Figure 110: Images of Reworked Sherds Potential Spindle Whorl Fragments

Spindle whorls were used to produce thread to weave into fabric. Finsten’s surface collection data from the Early and Late Classic components of Jalieza produced very little evidence of spindle whorls. She notes that the 1977 mapping of the site found no spindle whorls associated with the Early Classic component of the site, nor did her surface collection in 1988. The Late Classic occupation of the site (referred to by Finsten
as the Monte Alban IV component) yielded 2 complete spindle whorls, one of which was very small. She notes that both of these spindle whorls were not reworked sherds, but seem to have been created for the express purpose of spinning. She notes that a fragment of a ceramic disc was found that may also have been a spindle whorl, but the absence of the center hole made it impossible to determine the true function. She does note that this disc also seemed to have been made as a disc, not a sherd that was reworked into a disc (Finsten 1995: 64). Interestingly, the smaller spindle whorl was collected from an elite terrace. Small spindle whorls have been shown to be used to spin cotton, while larger spindle whorls were used to spin the more common maguey fiber (Parsons 1972; Brumfiel 1996). Cotton was associated with elite status, while maguey fiber clothing was worn by the commoner class in Mesoamerica. The large spindle whorl found on the Late Classic Jalieza site was from what Finsten described as a “nonelite residential group” (Finsten 1995: 65).

It has also been suggested that rounded reworked sherds may have been used as lids for jars (Kamp 1998). Below are reworked sherds that could have functioned as potential lids.

Figure 111: Image of Reworked Sherd Possible Jar Lids
There are a number of sherds with apparent drill holes that don’t penetrate all the way through the sherd. Below are images of some of these sherds.

Figure 112: Images of Reworked Sherds with Drill Holes

Perhaps these sherds were placed under an awl to punch holes through material such as leather. Another possibility is that these sherds may be have used as a base for drilling, by being placed underneath an object that was being drilled, such as a bead or another sherd being made into a pendant. These sherds may have been used for another purpose first then reused again as a base for drilling. This may be true particularly of the sherd on the right that appears to have a reworked edge that may have been used as a scraper. There is evidence of the use of pendants at the site of Postclassic Jalieza. Two reworked sherd pendants were found on the hilltop of the site, in the restricted access eastern residential area of the site. In the case of these two pendants, the drill holes do penetrate all the way through the sherd and are placed in an appropriate place to suspend the sherd by a string or cord. While these pendants are very plain and simple in design and elaboration, their location in what appears to be the most restricted and elite area of the site makes them quite unique. These reworked pendant sherds are pictured below.
These two pendants are the only reworked sherds found in the Eastern Hilltop area. Many of the reworked sherds with incomplete drill holes found elsewhere in the site have the drill hole near the top of the sherd. This placement suggests the hole was going to be drilled all the way through to make a pendant. I would suggest a third possible explanation for the sherds with incomplete drill holes. It is that these sherds were intended to become pendants, but were discarded for some reason during the production process. Below are images of these potential pendant rejects.
Another possible explanation for the use of reworked sherds is that some of these reworked sherds may have been used as pottery tools. Ceramic sherds may be used to function as ribs to scrape the exterior or interior of a vessel. Kathryn Kamp identified a number of such sherds in her work in the Southwestern area of the United States, “Sherds used as pottery scrapers were common in the four-corners area” (Kamp 1998: 146). Examination of such sherds under a microscope reveal a unique wear pattern—“When the unmodified edge of a sherd is used to scrape a ceramic vessel, a steep usewear pattern is produced” (Kamp 1998: 146). Perhaps future research on the artifacts from Jalieza could include examination of the microscopic wear patterns on the reworked sherds.

Kamp’s work at Lizard Man Village, an 11th-13th century Sinagua village near modern-day Flagstaff, Arizona, identified a number of sherds that were repurposed for a variety of other uses as well. The forms these reworked sherds took included: “drilled sherd disks, undrilled disks, gaming pieces, sherd scraper with steep edge wear, utilized sherd with acute edge wear” (Kamp 1998: 146). Potential uses identified by Kamp included: spindle whorls, pendants, potcovers, gaming pieces, and pottery scrapers (Kamp 1998: 145).
Reworked sherds are found distributed throughout the site, with the exception of the eastern part of the hilltop, which seems to have been the most exclusive residential area for the elite at the site. An interesting factor to note is that of the 148 reworked sherds found at the site, 146 of them were made from high quality G3M gray ware sherds, while only 2 were made from café ware. I believe this is because the gray ware is a much stronger, better quality ceramic than the café ware and would stand up better to use as a tool. Perhaps a lack of access to a variety of stone tools necessitated the reuse of pottery sherds as simple tools for scraping and piercing.

A note on the locations of reworked sherds: Reworked sherds were found scattered throughout most of the site. The following collection squares yielded at least one reworked sherd: PCJ-09, PCJ-12, PCJ-17, PCJ-18, PCJ-19, PCJ-20, PCJ-24, PCJ-25, PCJ-26, PCJ-28, PCJ-31, PCJ-33, PCJ-35, PCJ-38, PCJ-39, PCJ-40, PCJ-41, PCJ-43, PCJ-44, PCJ-46, PCJ-47, PCJ-49, PCJ-50, PCJ-52, PCJ-53, PCJ-54, PCJ-55, PCJ-56, PCJ-57, PCJ-58, PCJ-59, PCJ-60, PCJ-61, PCJ-62, PCJ-63, PCJ-64, PCJ-66, PCJ-67, PCJ-68, PCJ-70, and Mark 223. Significantly, there were no reworked sherds found at either the Eastern Hilltop Elite Residential Area or the Hilltop Plaza area, but there were reworked sherds found on both the Central Hilltop and Western Hilltop areas. The sole exceptions to this are the two reworked sherd pendants that were found in the Eastern Hilltop Elite Residential Area and the Plaza area.

Miniatures

24 Miniature vessels or fragments of miniature vessels were found during surface collection at Postclassic Jalieza. The locations of these miniatures are worth noting. Of
the 24 miniatures found, 16 were from the hilltop area of the site. Miniatures were found in collection squares: PCJ-01, PCJ-03, PCJ-04, PCJ-05, PCJ-06, PCJ-09, PCJ-40, PCJ-47, PCJ-50, PCJ-68, PCJ-70 and Mark 223.

The first five of these squares are located in the Eastern Hilltop Elite Residential Area. Images of those miniatures are provided below.

Figure 115: Images of Miniatures from Eastern Hilltop Elite Residential Area

Additionally, there were miniatures recovered from the Central and Western Hilltop Areas of the site. Images of those sherds are provided below.
Some of these miniatures show evidence of burning. These could be fragments of miniature sahumadores or may simply indicate burning as part of their ritual dedication.

There were miniature vessels and fragments recovered from other areas within the site, but the number was quite limited. PCJ-09 on the Western Slopes of the site yielded two miniatures, pictured below.

Figure 117: Images of Miniatures from Western Slopes
Collection Square PCJ-40 was the only square from the Central Slopes area that yielded a miniature fragment, pictured below.

Figure 118: Images of Miniatures from Central Slopes

Collection Squares PCJ-68 and PCJ-70, as well as Mark 223 (label in photo is incorrect), yielded miniature fragments from the Eastern Slopes area. These are pictured below.

Figure 119: Images of Miniatures from Eastern Slopes
There are a couple possible explanations for the large proportion of miniatures coming from the hilltop elite area of the site. One explanation has to do with site formation processes and the higher degree of erosion experienced on the hilltop. It is possible that erosion has exposed more miniature offerings on the hilltop than on the slope sections of the site. However, there is evidence of erosion on the lower slopes of the site as well. Additionally, there are many other unusual sherds found on the hilltop that are found at far lesser frequencies in other areas of the site. Explaining this variation through erosion alone seems unsatisfactory. It is more likely that there are different assemblages found on the hilltop versus the majority of terraces on the slopes. And the most likely explanation for that would be status differences between households. The association of miniatures with ritual propitiation of the ancestors is well documented in the literature (Marcus and Flannery 1978, 1994; Markens 2004; Martinez Lopez et al. 2000), and was often associated with elite or ruling lineages, though such ritual behavior has also been noted at commoner households as well. The disproportionate finding of miniatures on the hilltop likely reflects an increased presence of ritual activity on the hilltop area of the site.
Urns and Figurines

There were 12 urn or figurine fragments found throughout the site. Most of these sherds were very fragmentary making it difficult to discern what the entire vessel they were from might have looked like. Urns and figurines are found in many different time periods throughout the Valley of Oaxaca. They are usually associated with ritual activities that honor ancestors. Urns are larger vessels that often depict human-like or animal-like visages attached to open cylindrical vessels. Early Oaxacan archaeologists interpreted these urns to be representations of gods (Caso and Bernal 1952; Caso 1965), while more recent analyses have interpreted the figures as ancestors dressed in the ceremonial garb of important gods (Marcus 1983c; Sellen 2002). It is believed that urns were used in rituals to beseech ancestors. They are encountered in both household and burial contexts. Figurines tend to be smaller and may represent people, animals, or gods. Figurines are often associated with household rituals conducted to propitiate ancestors, though they have also been encountered in burial contexts as well (Caso and Bernal 1952; Marcus 1983c, 1998; Saville 1904; Sellen 2002, 2011; Young 1993). Below I have included photos and sherd drawings of the most interesting of the urn and figurine fragments from the surface collection at Postclassic Jalieza. I have also included a description of the square and location in which they were found and the other relevant artifacts recovered with them.
This sherd was recovered in collection square PCJ-05, located on the Eastern Hilltop, an area I have argued was the most elite residential area within the Postclassic site. The sherd is a fragment of a corncob, likely from an urn. There are examples of other urns with corncobs on them, mostly from the Classic period, including ones collected by Marshall Saville from Xoxocotlan in the early 1900s that are now on display at the American Museum of Natural History (Saville 1904). Mary Eubanks Dunn described the use of real corncobs as molds in making modeled clay corn for inclusion on urns (Dunn 1975). This urn fragment includes a realistic portrayal of a corncob, while some urns include more stylized representations. As the most important dietary staple in pre-Hispanic subsistence, corn was associated with fertility, agriculture, and life.

This collection square also yielded 2 miniatures and 1 sahumador handle fragment, indicating ritual activity likely took place on this terrace. The square also produced composite silhouette, conical, and hemispherical bowl sherds, 2 olla sherds, 1 fragment of ground stone, and 1 piece of plaster, indicating that it was likely a household terrace. For a full listing of artifacts recovered from PCJ-5, see Appendix A. The
location of this household in the highly restricted eastern part of the hilltop likely indicates it was an elite residence.

Figure 121: Images of Urn Fragment from PCJ-11

This urn fragment came from collection square PCJ-11, located on the Western Slopes of the site. As can be seen from the photo of the back of the fragment, this sherd was once attached to a larger vessel, likely an urn. The specific design of this fragment is unclear, but likely represents a decorative element of the larger urn. To see the detail of the design more clearly, refer to the drawing in Figure 130. This collection square also yielded 1 sahumador handle fragment, an indication of ritual activity. The presence of composite silhouette, conical, and hemispherical bowl sherds and olla sherds indicate that these sherds likely came from a household terrace site. A crema sherd was also found in this square. Crema was an unusual paste type for this site and time period. While not located in an area of the site that was clearly limited to elite occupation, this sherd assemblage does represent some unique properties not found in all squares and terraces throughout the site. The question of how to determine the distinction between elite and
commoner households will be explored in subsequent chapters. For a complete list of artifacts from PCJ-11, see Appendix A.

Figure 122: Images of Urn Fragment from PCJ-19

This urn fragment was recovered from collection square PCJ-19 located in Western Slopes area of the site. The exact design is unclear, but the modeled sharp curve that protrudes from the fragment may represent either the snarled lip of Cocijo or the area around his eye (see Finsten 1993: 87). Cocijo was the Zapotec god of lightening and a popular figure represented in urns. To see the detail of the design more clearly, refer to the drawing presented in Figure 130. No other sherds associated with ritual activity, such as miniatures or sahumadores, were recovered from this square. Household vessel types were recovered, including composite silhouette, conical, and hemispherical bowl sherds and olla sherds. A reworked sherd and a quartzite perforator were recovered as well. These are all consistent with a household context. 3 Atzompa Green sherds were recovered from this square as well, indicating recent activity on the surface. For a complete list of artifacts from PCJ-19, see Appendix A.

Figure 123: Images of Urn Fragment from PCJ-20
This urn fragment came from collection square PCJ-20 located on the Western Slopes of the site. It likely represents part of a feathered headdress. One miniature was also recovered from this square. Household vessels, including composite silhouette, conical bowl, and hemispherical bowl sherds, were also recovered, plus 4 pieces of plaster. These can be considered good indications of a household terrace. In addition, 3 reworked sherds and 15 chipped stone pieces were found in this square as well. For a complete list of artifacts from PCJ-20, see Appendix A.

Figure 124: Image of Figurine Fragment from PCJ-47
This sherd likely is from a figurine, rather than an urn. It was recovered from collection square PCJ-47 located on the Central Hilltop Area of the site from an elite residential section. The decoration may represent a women’s skirt (see Young 1993: 84). A miniature and a sahumador fragment were also recovered from this square, indicating likely ritual activity. The square also yielded composite silhouette, conical, and hemispherical bowl sherds and ollas sherds and 1 piece of plaster, indicating it was likely a household. 6 reworked sherds and 7 chipped stone pieces also recovered from this square could indicate productive activities may have taken place on the site as well. 2 orange paste sherds were also recovered from this square. Orange was a rare paste type at Postclassic Jalieza and was likely from imported, rather than locally made, vessels.

The presence of these unique artifacts and the location of the terrace on the hilltop area of the site likely indicate elite status for the household. For a complete list of artifacts from PCJ-47, see Appendix A.

Figure 125: Image of Figurine Fragment from PCJ-59
This figurine fragment was recovered in collection square PCJ-59, located on the Central Eastern Slopes of the site. It is the feathered headdress from a figurine. No miniatures or sahumador fragments were recovered from this square. Composite silhouette, conical, and hemispherical bowl sherds and olla sherds were recovered, indicating a likely household context for the square. 10 reworked sherds and 10 chipped stone pieces, including 3 cores, indicate productive activities likely took place in the area. For a complete list of artifacts from PCJ-59, see Appendix A.

Figure 126: Image of Urn Fragment from PCJ-60

This urn fragment was recovered from collection square PCJ-60, located in the Central Eastern Slopes of the site. It is a feathered headdress from an urn or a large figurine. One sahumador fragment was also recovered from this square. Composite silhouette, conical bowl, hemispherical bowl sherds and olla sherds were found as well, indicating a household context for the square. Interestingly, 3 tripod vessel feet were found in this square, a somewhat rare vessel type at Postclassic Jalieza. 12 reworked sherds and 5 chipped stone pieces came out of the square as well, indicating productive
activities in the area. While not located in the clearly elite area of the site, this square represents an interesting and unique assemblage of sherds. For a complete list of artifacts from PCJ-60, see Appendix A.

Figure 127: Image of Figurine Fragment from Mark 221

This figurine fragment came from Mark 221, a terrace located in the Central Eastern Slopes to the northwest of PCJ-63, next to a large barranca. It represents a realistic human face and is likely from a figurine due to its size. No other artifacts were collected along with it. The artifact assemblage from PCJ-63 indicates a household context, with composite silhouette and hemispherical bowl sherds and ollas sherds. It also yielded 2 sahumador fragments indicating possible ritual activity.
This is an urn fragment recovered from collection square PCJ-70 located in the lower Eastern Slopes of the site. It is likely a modeled ear or eye. There were no miniatures or sahumador fragments found in this square. Composite silhouette, conical, and hemispherical bowl sherds and ollas sherds, and 7 pieces of plaster, indicate the terrace was a household. 2 tripod vessel bases with feet were found in this square, an usual vessel type for this site as noted above. 1 possible kiln waster was also recovered, another unusual find for Postclassic Jalieza. 1 reworked sherd and 2 chipped stone pieces indicate productive activities on the site. For a complete list of artifacts from PCJ-70, see Appendix A.
This urn fragment was recovered from Mark 232 located in the lower Eastern Slopes of the site, just off the large terrace where PCJ-70 was located. It is likely a feature from an urn or large figurine, though the exact design of the fragment is difficult to interpret. See the drawing in Figure 132 for details. No other artifacts were collected with it.

Illustrations of Urn/Figurine Fragments from Postclassic Jalieza

On the following pages are digitized sherd drawings of each of these urn and figurine fragments that may allow better discernment of the features and designs associated with each sherd.
Figure 130: Urn Fragment Drawings
Figure 131: Feathered Headdress Drawings
Figure 132: Figurine Fragment Drawings

Figurine Fragments

PCJ-70

Mark 221

Mark 232

0 10
In her analysis of the urns and figurines from the Period IIIA (Early Classic) and Period IIIb-IV (Late Classic) components of Jalieza, Young notes that “urns were common in elite areas” (Young 1993: 131), but that they were also found in commoner areas as well. Young states, “access to these ritual items clearly was not restricted by social status in either phase” (Young 1993: 131). The same may have been true for the Period V Postclassic occupation at Jalieza as well.

Conclusion

While there does seem to be a relationship between artifact assemblage and household status, the determination is far from a clear presence versus absence of individual artifact types. Rare paste types, such as orange sherds, are quite scarce at the site and likely represent imported ceramics from outside the Valley of Oaxaca. It is not unreasonable to suppose that their presence within an assemblage may indicate an association with a higher status household. However, determining household status must be based on a multiplicity of elements. Household status will be discussed at greater length in subsequent chapters, particularly Chapters Seven and Eight, as well as in reference to the chipped stone assemblage presented in the next chapter, Chapter Six. But it is worth introducing a preliminary discussion here. The ceramic finds recovered during surface collection from Postclassic Jalieza do present some differences in assemblage between sections of the site, most prominently between the hilltop ridge and the hillside slopes (see Chapter Eight for a more detailed analysis) but the distinctions are relatively small. For the most part, the collection squares throughout the site yielded
similar assortments of ceramic artifacts, predominantly household utilitarian bowl fragments. This would suggest that the material distinctions between an elite class and a commoner one were relatively small. I will develop the argument in Chapter Eight that there was indeed a distinction between these two classes, rather than that the site of Postclassic Jalieza represented an egalitarian community. But this distinction is not manifest through a strong differentiation in material culture. Perhaps there existed a difference in status between residents of Jalieza, but not necessarily dramatic differences in wealth.
Chapter Six:  
Surface Data from Postclassic Jalieza:  
Non-Ceramic Finds

Overview

This chapter details the non-ceramic finds from the surface collection at Postclassic Jalieza. Non-ceramic finds include chipped stone, ground stone, plaster, and shell. The overwhelming majority of non-ceramic finds from the surface collection consists of chipped stone pieces. Thus the majority of this chapter is dedicated to presenting and analyzing this chipped stone assemblage. A moderate amount of ground stone and very small amounts of plaster and shell were also recovered during surface collection. A brief overview of these finds will be presented in the later part of the chapter.

Chipped Stone Finds

289 chipped stone pieces were recovered during surface collection from throughout the Postclassic component of Jalieza. The majority of these pieces were recovered from collection squares, but a few concentrations of cores and flakes that were encountered outside of collection squares were collected as well. Each artifact was examined in the lab and coded according to tool type, stone type, color, edge retouching, weight, and dimensions. Each piece was then imaged using a digital camera. Below is an example of the coding form used in the lab.
I will describe the categories and criteria that I used during coding in detail in the following pages, beginning with tool type. The coding of these tools is very basic and based on easily observable surface features. Conclusions drawn from these observations are preliminary and non-specialized.
**Tool Types**

I classified each chipped stone piece according to tool type. These categories were based on the physical shape of the artifact, and are modeled on categories used by Parry (1987).

Figure 134: Breakdown of Tool Types

<table>
<thead>
<tr>
<th>Tool Type</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adze</td>
<td>1</td>
<td>0.26</td>
</tr>
<tr>
<td>Biface</td>
<td>5</td>
<td>1.29</td>
</tr>
<tr>
<td>Blade</td>
<td>5</td>
<td>1.29</td>
</tr>
<tr>
<td>Chunk</td>
<td>18</td>
<td>4.63</td>
</tr>
<tr>
<td>Chunk/core</td>
<td>29</td>
<td>7.46</td>
</tr>
<tr>
<td>Core</td>
<td>32</td>
<td>8.23</td>
</tr>
<tr>
<td>Perforator</td>
<td>48</td>
<td>12.34</td>
</tr>
<tr>
<td>Point</td>
<td>4</td>
<td>1.03</td>
</tr>
<tr>
<td>Unutilized Flake</td>
<td>80</td>
<td>20.57</td>
</tr>
<tr>
<td>Utilized Flake—?</td>
<td>11</td>
<td>2.83</td>
</tr>
<tr>
<td>Utilized Flake—Notched</td>
<td>40</td>
<td>10.28</td>
</tr>
<tr>
<td>Utilized Flake—Scraper</td>
<td>116</td>
<td>29.82</td>
</tr>
</tbody>
</table>

389 total 100.03

Figure 135: Graph of Tool Types
**Tool Type Descriptions**

Below are descriptions of each tool type category I used for categorization purposes in coding the chipped stone assemblage from Postclassic Jalieza. I’ve included a short description of the tool type and a photo of at least one example of one such tool recovered from surface collection at Postclassic Jalieza.

Adze: An adze is a large axe-like stone tool that could be used for chopping. Many adzes from Mesoamerica are made from fine stone material and may have been more ceremonial in purpose. Only one adze fragment was found on surface collection at Postclassic Jalieza. Made from sandstone, this was likely a utilitarian object.

Figure 136: Image of Adze

Biface: A biface is a chipped stone piece that has been worked on both faces, or sides, of the artifact. These may in fact be broken fragments of projectile points, where the body of the point, rather than the apex, has been recovered. There were 5 bifaces
recovered during surface collection. Of these, 4 are made from quartzite and one from fine volcanic stone. Below are images of each of these bifaces.

Figure 137: Images of Biface Chipped Stone Tools

Blade: These chipped stone pieces are long, thin, sharp artifacts that were likely used for cutting or piercing. 5 blades were found on surface collection, all of which were
made from obsidian. All of these blades are fragmentary and quite small. Blades, particularly obsidian ones, were likely very valuable and used and reused until only small fragments were left. Below are images of each of the blades found.

Figure 138: Image of Obsidian Blades
Core: A core is a large piece of worked stone that smaller flakes are chipped off from in order to make stone tools. The presence of cores is generally interpreted as evidence that stone tool production took place on or near the site. 31 cores were found on surface collection at Postclassic Jalieza, in various sizes and stone types. These cores will be described in more detail later in this chapter. Below is an example of a chert core found on the hilltop of the site.

Figure 139: Image of a Chert Core

Chunk: This is a term I’ve given to small chunks of stone that may be debris material from stone tool making or may simply be small pieces of stone that were not altered by human activity. Below is an image of a number of quartzite chunks found in collection square PCJ-14.
Chunk/core?: This is a term I’ve given to small, chunky stone pieces that may have been left over fragments of cores, may have been debris from stone tool making, or may simply be natural stone that was unaltered by humans. Below is an image of some of these stones.

Figure 141: Image of Chunk/Core?
Perforator: This category refers to a chipped stone artifact containing a sharp point that may have been used for perforating another object. These are tools likely made on the site of their use, not refined tools. Below are images of a few perforators found on the site.

Figure 142: Images of Perforators

Projectile Point: A projectile point is a finely shaped chipped stone piece with worked sides that come to a point. They were likely attached to arrows or spears in order to be thrown, hence the term projectile point. Only 4 projectile points were found during surface collection. 3 of these were made from quartzite and 1 from chert. They will be described and presented in more detail later in this chapter. Two quartzite points are pictured below.
Unutilized Flake: These are flakes that show no retouching of the edges that might indicate their use as any kind of tool. They are likely debris left over from tool making. Their presence is a good indication that stone tools were manufactured on site. 80 unutilized flakes were recovered during surface collection. The topic of local production of stone tools will be explored in more detail later in this chapter.
Utilized Flake—?: This category includes flakes that have retouched edges, indicating that they have been reworked for a purpose as a tool. However, the type of tool they may be is unclear, hence the question mark. 11 of these unknown utilized flakes were found on surface collection. A few are pictured below.

Figure 145: Images of Utilized Flakes—?

Utilized Flake—Notched: This category describes flakes with reworked edges that contained a notched shape. The purpose for which these tools were used is unknown, but the repeated shape was worth noting and recording. 40 of this type of stone tool were found during surface collection. Below are images of two examples.

Figure 146: Images of Utilized Flakes—Notched
Utilized Flake—Scraper: This category describes a flake with an edge reworked into a scraper. With 116 scrapers found during surface collection, this was the most common chipped stone type discovered at Postclassic Jalieza. Below are images of examples of scrapers.

Figure 147: Images of Utilized Flakes—Scrapers

![Images of Utilized Flakes—Scrapers]

### Stone Types

Six different types of worked stone were found on surface collection at Postclassic Jalieza. The most common stone type was chert, followed by quartzite. The most rare types were sandstone and obsidian. Within each stone category there were variations in color, indicating multiple sources for each of these stone types. The next few pages will detail the variation in stone types that were found at Postclassic Jalieza.

Figure 148: Breakdown of stone types

<table>
<thead>
<tr>
<th>Stone Type</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chert</td>
<td>191</td>
<td>49.10</td>
</tr>
<tr>
<td>Jasper</td>
<td>30</td>
<td>7.71</td>
</tr>
<tr>
<td>Fine Volcanic</td>
<td>48</td>
<td>12.34</td>
</tr>
<tr>
<td>Obsidian</td>
<td>8</td>
<td>2.06</td>
</tr>
<tr>
<td>Quartzite</td>
<td>110</td>
<td>28.28</td>
</tr>
<tr>
<td>Sandstone</td>
<td>2</td>
<td>0.51</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>389</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Descriptions and Images of Stone Types

Chert: The most common stone type found among the chipped stone artifacts from the surface collection at Postclassic Jalieza was chert. Chert is a sedimentary rock with a microcrystalline structure that allows it to fracture conchoidally producing nice sharp edges. This fracturing pattern makes chert very effective for creating stone tools. Out of the 389 pieces found, 190, almost 49%, were chert. There were a wide variety of colors of chert found. The most common were grey, white, light brown, and grey white. A number of pieces were found with banded lines or stripes in them. The variety in the appearance of the chert found indicates multiple sources for raw stone. The large number of chert artifacts found at the site likely indicates local, or relatively local, sources of chert were available to the residents of Postclassic Jalieza. Below are examples of some of the common types of chert found throughout the site.
Quartzite: The second most common stone type found on site was quartzite. Quartzite is a metamorphic rock that is produced by the metamorphism of sandstone. 110 chipped stone pieces made from quartzite were recovered during surface collection, composing 28% of the chipped stone assemblage. A number of different colors of quartzite are present within this sample, but the most common were milky translucent white and opaque white. I will discuss quartzite in more detail later in this chapter, addressing the other colors found and the variety of tools made from quartzite, as well as the question of local production of quartzite tools. In the image below, the difference
between the opaque white quartzite, pictured on the left, and the milky translucent white quartzite, on the right, is quite apparent.

Figure 151: Image of Quartzite Points

Fine Volcanic: A number of pieces from fine volcanic stone, possibly andesite, were found during surface collection. Most fine volcanic chipped stone artifacts were dark gray in color. A small number contained dark gray inclusions as well. 48 fine volcanic stone artifacts were found during surface collection, representing 12% of the chipped stone assemblage. Below are images of some of the fine volcanic tools found on site. In the photo on the right below, the contrast between the two dark gray fine volcanic scrapers on the right and the light gray chert scraper on the left is apparent. Other fine volcanic chipped stone tools were lighter in color.
Jasper: 30 jasper chipped stone pieces were recovered during surface collection, representing 8% of the assemblage. Jasper is a kind of chert usually red, dark red, or brownish in color. I’ve included it here as a category separate from chert because of its distinctive coloring. Below are some images of jasper.

Figure 153: Images of Jasper
Obsidian: An igneous rock that cooled so quickly it formed volcanic glass, obsidian was a valued resource throughout Mesoamerica. Obsidian breaks in conchoidal fractures. This makes it well suited for creating sharp and precise cutting tools. It appears to have been relatively rare in Postclassic Jalieza. Only 8 pieces of obsidian were recovered during surface collection, representing only 2% of the overall chipped stone assemblage. I will discuss obsidian in more detail below and present images and descriptions of each of the obsidian items recovered. Pictured below is a sample of two obsidian blades from the site.

Figure 154: Images of Obsidian Blades

Sandstone: There were only two pieces identified as possible sandstone found during surface collection. One was the possible adze, the other a utilized notched flake. The properties of sandstone don’t lend themselves to the production of sharp or effective stone tools. The sandstone adze is pictured below.
An interesting aspect of the chipped stone assemblage from Postclassic Jalieza is the scarcity of obsidian. Of the 389 chipped stone pieces recovered during surface collection, only 8 pieces were obsidian. Of these, five were blades, one appeared to be an unutilized flake, and two appeared to be utilized flakes but of unknown use. There was a mix of colors of obsidian found: five pieces were clear banded gray, one piece was black with gray banding, and two pieces were green obsidian. Below are images of each of these obsidian pieces.

Figure 156: Clear Banded Gray Obsidian
Figure 157: Black Obsidian with Gray Banding

Figure 158: Green Obsidian
The small numbers of obsidian found and the fact that 5 out of the 8 pieces were clearly fragments of finished blades make it quite likely that finished obsidian pieces were imported to Postclassic Jalieza. It seems unlikely to suppose that obsidian was worked at the site, or that obsidian was available in significant quantities. The variety in colors found likely indicates that obsidian came to the site from multiple locations or through multiple channels. It seems likely that obsidian was a rare, valued, and imported item, probably only available to the elite or higher status individuals and households at the site. The two pieces of green obsidian would have been imported from Pachuca in the Basin of Mexico. These may represent a higher value commodity than the gray obsidian pieces (Spence 1996). Interestingly, only one square from the Hilltop area of the site yielded obsidian, PCJ-08. This square is associated with the plaza in front of the mound and was likely not a residential context but a ceremonial area. PCJ-08 produced one obsidian blade, and two other pieces, one an unutilized flake and the other a flake with a retouched edge but of unclear use. These pieces are pictured below.

Figure 159: Images of Obsidian from PCJ-08
PCJ-08 also yielded a number of chert and quartzite chipped stone pieces, including the two quartzite projectile points pictured earlier, as well as a fine volcanic perforator. Other unusual artifacts from this square include a pendant and an urn fragment.

The other squares that produced obsidian include PCJ-26, PCJ-41, PCJ-58, PCJ-61, and PCJ-68. I will briefly describe some of the other artifacts found within these squares to create a sense of context for these unusual obsidian finds.

PCJ-26, located on the Western Slopes, also produced a quartzite perforator and 2 reworked gray sherds. Other unusual artifacts in this square include 3 tripod vessel fragments and an amarillo sherd. One of the pieces of green obsidian was found in this collection square. It is interesting that this imported obsidian is associated with an unusual paste type as well.

PCJ-41, located on the Central Slopes, yielded 10 other chipped stone pieces, including quartzite, chert, jasper, and fine volcanic. It also produced 9 reworked sherds, 1 sahumador fragment, 2 tripod vessel fragments, and a thin orange cup sherd. One of the pieces of green obsidian was found in this collection square. It is interesting that this imported obsidian is associated with an imported orange ware sherd as well.

PCJ-58, located on the edge of the Central Slopes, yielded a number of unusual items. 9 other chipped stone pieces were recovered, including fine volcanic, jasper, quartzite, and chert. 1 amarillo sherd, 2 orange sherds, 1 reworked sherd, and 1 tripod vessel were unusual sherds that were recovered from this square.
PCJ-61, located in the Central Eastern Slopes, also yielded 14 other chipped stone pieces, including chert, jasper, and quartzite. The square also produced 7 reworked sherds, 2 sahumador fragments, and 2 tripod vessels.

PCJ-68, located on the Eastern Slopes, yielded 12 other chipped stone pieces, including fine volcanic, chert, jasper, sandstone, and quartzite. It also produced 3 miniatures, 4 reworked sherds, 2 sahumador fragments, and 2 tripod vessel fragments.

What is interesting to note here is that each of these squares that yielded obsidian also contains other unusual artifacts that may be considered markers of elite status. For a more detailed analysis of the connections between the locations of these squares in terms of the areas within the site and the potential household status associated with the creation of these particular assemblages, see Chapter Eight.

**Quartzite**

In contrast to the rarity of obsidian, large amounts of quartzite were found on the site. Of the 389 chipped stone pieces found, 110 (over 28%) were quartzite. A few very nicely worked quartzite points were recovered. Perhaps more interestingly, a number of quartzite cores were recovered, indicating that quartzite was worked on the site to produce tools. There are also a variety of colors of quartzite, indicating multiple sources for the stone. The next few pages will explore the details of the quartzite chipped stone assemblage found on surface collection.

A variety of tool types that were found at the site were made from quartzite. These include cores, chunks, and both utilized and unutilized flakes that would indicate tool production activities took place at Postclassic Jalieza. There were also a small
number of nicely finished pieces recovered that included points and bifaces. Below is a chart indicating the types of quartzite tools found and their relative percentage of the quartzite assemblage. This is followed by a graphic representation of quartzite tool types.

*Types of tools made from quartzite*

Figure 160: Breakdown of Quartzite Tool Types

<table>
<thead>
<tr>
<th>Tool Type</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biface</td>
<td>4</td>
<td>3.64</td>
</tr>
<tr>
<td>Chunk</td>
<td>13</td>
<td>11.82</td>
</tr>
<tr>
<td>Chunk/Core</td>
<td>13</td>
<td>11.82</td>
</tr>
<tr>
<td>Core</td>
<td>11</td>
<td>10.00</td>
</tr>
<tr>
<td>Perforator</td>
<td>14</td>
<td>12.73</td>
</tr>
<tr>
<td>Point</td>
<td>3</td>
<td>2.73</td>
</tr>
<tr>
<td>Unutilized Flake</td>
<td>31</td>
<td>28.18</td>
</tr>
<tr>
<td>Utilized Flake—?</td>
<td>2</td>
<td>1.82</td>
</tr>
<tr>
<td>Utilized Flake—Notched</td>
<td>6</td>
<td>5.45</td>
</tr>
<tr>
<td>Utilized Flake—Scraper</td>
<td>13</td>
<td>11.82</td>
</tr>
<tr>
<td><strong>110 Total</strong></td>
<td></td>
<td><strong>100.01</strong></td>
</tr>
</tbody>
</table>

Figure 161: Graph of Quartzite Tool Types
There were a small number of nicely made, finished tools produced from quartzite that were found during surface collection. Some of these pieces are now fragmentary. Images are these finished quartzite tools are provided below.

Figure 162: Images of Quartzite Points

Figure 163: Images of Quartzite Bifaces
Four of these well-finished artifacts are from the hilltop area. Collection square PCJ-08 was located in the hilltop plaza area in front of mound, while collection squares PCJ-47 and PCJ-50 were both located in the Western Residential section of the hilltop. Collection square PCJ-08 produced a number of other interesting and unusual finds including an obsidian blade. In Chapter Eight I make the argument that this was likely a ceremonial area associated with the mound and plaza rather than one associated with a residential terrace. Collection square PCJ-47 yielded a large number of sherds (497 in total) with many indicators of household status (mostly bowls and ollas), plus a small number of interesting markers of ceremonial activity including a miniature and a sahumador fragment. It also produced 2 orange body sherds, a rare paste type. This mixture of artifact assemblage and its location on top of the hilltop indicate it was likely an elite household. Collection square PCJ-50 yielded a very similar profile. See Appendix A for a complete list of artifacts from each of these squares and Chapter Eight for a more detailed discussion of the connections between artifact assemblage, landscape positioning, and household status.
The other squares that yielded these finished quartzite pieces include collection squares PCJ-11, PCJ-59, and PCJ-68. I will provide a brief description of each of these squares below, but refer to Appendix A for a complete list of artifacts recovered from these squares and Chapter Eight for a more detailed discussion of the household and landscape aspects associated with these squares.

Collection square PCJ-11, located on the Western Slopes, produced a small number of artifacts (58 sherds and 2 chipped stone pieces), but there were a number of unusual items amongst those found. These include 1 crema rim, an urn fragment, and a sahumador handle. The square indicates potential elite status in its access to unusual goods.

Collection square PCJ-59, located on the Central Eastern Slopes, yielded 9 other chipped stone pieces, including a jasper core and a chert core. It also produced 10 reworked sherds and 1 figurine. This square yielded a large number of sherds (401) but little markers for elite status. On the other hand its large quantity of chipped stone includes a number of pieces, including cores, unutilized flakes, and a chunk/core, that may indicate stone tool production.

Collection square PCJ-68, located on the Eastern Slopes, yielded 12 other chipped stone pieces, including fine volcanic, chert, jasper, sandstone, and quartzite. It also produced 3 miniatures, 4 reworked sherds, 2 sahumador fragments, and 2 tripod vessel fragments. The assemblage presented by this square indicates likely elite status.

It is interesting, though perhaps not surprising, to note that these finished quartzite tools were all found in what appear to be elite contexts, with the exception of one that appears to be associated with a stone tool production context.
Colors of quartzite

The quartzite found on surface collection at Postclassic Jalieza came in a variety of color types. The variety of color types likely indicates that quartzite was obtained from multiple sources. Below is a description of these color types with images to illustrate.

Figure 164: Breakdown of Quartzite Colors

<table>
<thead>
<tr>
<th>Quartzite Color</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear White</td>
<td>8</td>
<td>7.27</td>
</tr>
<tr>
<td>Milky White</td>
<td>5</td>
<td>4.55</td>
</tr>
<tr>
<td>Milky Translucent White</td>
<td>39</td>
<td>35.45</td>
</tr>
<tr>
<td>Opaque White</td>
<td>48</td>
<td>43.64</td>
</tr>
<tr>
<td>Rose</td>
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<td>8.18</td>
</tr>
<tr>
<td>Opaque Peach</td>
<td>1</td>
<td>0.91</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

Figure 165: Graphic of Quartzite Colors
Figure 166: Image of Clear White Quartz

Figure 167: Image of Milky White Quartz (on right)

Figure 168: Image of Milky, Translucent White Quartz
Figure 169: Image of Opaque White Quartz

Figure 170: Image of Rose Quartz

Figure 171: Image of Opaque Peach Quartz
**Local Production of Stone Tools**

There were a number of collection squares that yielded cores and other evidence for tool production, such as chunks, chunk/cores and unutilized flakes. These squares include PCJ-08, PCJ-09, PCJ-12, PCJ-13, PCJ-14 (2 cores), PCJ-20 (4 cores). Finsten suggests that during the both the Early and Late Classic at Jalieza, many temporary or disposal tools were created for on-site use and then discarded (Finsten 1995). The presence of roughly finished tools, such as utilized flakes as well as small amounts of unutilized flakes and chunks may be indicators of this practice during the Postclassic as well. The presence of multiple cores, found only in collection squares PCJ-14 and PCJ-20, may indicate larger scale chipped stone production or production for other households in the community. It is interesting to note that many of the squares that produced larger volumes of chipped stone and pieces that may indicate production were located in the Western Slopes, grouped around PCJ-09, PCJ-12, PCJ-13, PCJ-14, and PCJ-20. This may indicate a chipped stone production enclave within the site, or may simply be due to differences in the landscape and erosion patterns at the site that may have exposed more chipped stone.

**Ground Stone**

Ground stone includes *manos* and *metates* recovered on the surface during survey. Manos are rounded handheld stones used to grind corn kernels into finer corn meal. Metates are large, flat or concave stones on which corn is placed to be ground by the movement of a mano back and forth, grinding the corn kernels between the mano and metate. Because manos and metates were commonly used to grind corn, they are seen as
excellent evidence for the domestic nature of a particular setting. Their large size and heaviness, particularly in the case of metates, means that they were often left in place of use, rather than transported when settlement moved. In most cases, ground stone was recorded *in situ* in the field. Eight metates were recorded and imaged in the field, two of which were found on the hilltop ridge. Seven manos were also recorded and photographed *in situ*. Five examples of manos were collected and imaged in the lab. A selection of manos and metates are pictured below in Figure 172 and Figure 173.

Figure 172: Images of metates
Figure 173: Images of manos
Plaster

Plaster was commonly used to cover the surface of interior patios or floors within households and on temples, mounds, and plazas from the Formative period through the Postclassic in Mesoamerica. There were a number of areas throughout the site where white plaster was found exposed on the surface including eroding out of the center of the hilltop mound. Plaster tinted with red pigment was a more rare find, limited to only two collection squares within the site. One was collection square PCJ-07, located on the hilltop ridge associated with the possible plaza area on the restricted side of the mound. The other red plaster came from collection square PCJ-65 associated with a remote area higher on the slopes on the eastern edge of the Central Eastern Slopes, an area that I
speculated may have been an elite area due to its restricted location and commanding position overlooking the mountain pass road to Tlacolula. Images of these red plaster samples are provided below in Figure 174.

Figure 174: Images of Red Plaster

Shell

Only four pieces of shell were recovered from this site. Shell was often used for personal adornments throughout Oaxaca and throughout many different time periods. Marine shells were important from the Pacific Coast to the landlocked Valley of Oaxaca. Shell tends to be associated with the elite, likely because of its association with adornment and the difficulty of gaining access to it as a commodity (Feinman and Nicholas 1993). The shell found on the site of Postclassic Jalieza has not been identified by species and it is unclear what it may have been used for or even if it is associated with the archaeological inhabitation of the site. The shell from PCJ-48 was found associated
with a collection square at the apex of the hilltop ridge. The shell found in collection square PCJ-15 shows possible evidence of having been shaped or drilled to suspend as an ornament. The other shells don’t show evidence of any particular importance, but I have chosen to include all the shell found on the site with the non-ceramic finds. Below are images of each of the shells recovered.

Figure 175: Images of shell

Conclusion

This chapter has provided an overview of the non-ceramic finds recovered during surface collection at Postclassic Jalieza. Further research on the chipped stone collection
may provide great insight into understanding the site of Postclassic Jalieza. Excavation of the areas that suggested chipped stone production would potentially yield further information as well. For a more detailed discussion of the connections between the artifact assemblages associated with the site and aspects of political organization and household status, see “Chapter Eight: Landscape and Household at Early Postclassic Jalieza.” For a complete listing of finds per collection square, see Appendix A.
Chapter Seven:
Interpreting Landscapes
and Households

Overview

This chapter will address the theoretical approaches that have influenced my interpretation of the site of Postclassic Jalieza. My thinking has been shaped by a combination of influences, the most prominent of which are landscape archaeology and household archaeology. Landscape theory concerns itself primarily with the interaction between people and the environment, both natural and built, while household studies take the household as the unit of analysis for understanding broader patterns and relations. These two theoretical approaches serve as my framework for understanding the site of Jalieza. Added to this perspective is a concern with agency and structuration, as articulated first by Bourdieu and Giddens and later expanded on by many. This approach concerns itself with the importance of understanding the impact of individual action and decision making, both by commoners and elites. This chapter will focus on unwinding the elements of landscape archaeology and household archaeology that I find relevant to the site of Early Postclassic Jalieza. I will then combine these theoretical approaches to develop a picture of Early Postclassic Jalieza as described in the following chapter, Chapter Eight.
Landscape Archaeology

In its broadest terms, landscape archaeology examines the relationship between humans and their environments. Landscape, it is important to note, is not merely the equivalent of environment, but is brought into being by the intersection of humans and nature. As the noted geographer Carl Sauer writes, landscape is “a land shape, in which the process of shaping is by no means thought of as simply physical. It may be defined, therefore, as an area made up of a distinct association of forms, both physical and cultural” (Sauer 1965: 321). Conceptualizing this relationship between people and the environment as fundamentally a dialectical one is critical to understanding the complex interplay between nature and culture while avoiding overly simplified, deterministic conclusions. Humans are constantly impacting the natural environment, in both intended and unintended ways. The environment reacts to this and changes, in expected and unexpected ways. These environmental changes, in turn, have an effect on human societies, in anticipated and unanticipated ways. It is the recognition of the dynamism of this relationship that characterizes a landscape approach and sets it apart from earlier, environmentally deterministic studies that saw the physical landscape and climate as the prime shapers of culture. As Christopher Tilley notes, “While people create their landscapes, these landscapes recursively act back so as to create the people who belong to them” (Tilley 1996: 162). Conceptualizing this relationship as a dialectic is crucial because, as David Harvey states, “Dialectical thinking prioritizes the understanding of processes, flows, fluxes, and relations over the analysis of elements, things, structures and organized systems. The latter do not exist outside of the processes that support, give rise to, and create them” (Harvey 1993: 34).
Thus a dialectical approach allows us to consider another important aspect of landscape archaeology, its concern with the concepts of phenomenology and practice. Landscape archaeology studies take into account the lived experience of a landscape by examining how people, as societies and as individuals, interact with their physical and natural surroundings and how the nature and experience of that interaction affects their daily lives and choices. Again, these landscape studies differ from environmental deterministic ones by taking into consideration the agency of individuals within collectives, situated within particular environments and social structures. Some authors refer to Bourdieu’s concept of *habitus* to frame an understanding of how the experience of daily life within a particular environment or place can shape culture (Bourdieu 1977). Other authors appeal to Gidden’s theory of structuration, which highlights the dialectical relationships between agency and structure in forming and changing societal practices (Gidden 1979). The key underlying principle to all of these formulations is the recognition of the importance of both individual and collective action in the creation and perpetuation of cultural practices, including the creation of cultural landscapes. The environment, from this perspective, is not something external that is experienced by people, but is a process that is continually being constructed and reconstructed. As Harvey points out, “processes do not operate *in* but *actively construct* space and time and in so doing define distinctive scales for their development” (Harvey 1993: 35, his emphasis).

Thus connected to this idea of dialectics and dynamic change, is the variable of time. Landscape archaeology, in its variety of forms, possesses a concern for the temporal element of life within space. Whether the focus of a study is explicitly on
change over time or not, landscape is viewed as a palimpsest, a series of overlapping layers of creation, destruction, settlement, and nature that have come together in a particular location to create the archaeological record of that place. How time is conceived of, and the scale to which it can be determined, will vary depending on the site, yet its presence and importance are always there and must be recognized.

Many authors of landscape archaeology studies draw a distinction between the goals and methods of landscape archaeology versus those of settlement archaeology. While both are concerned with recreating spatial relationships, settlement archaeology has been critiqued for focusing too exclusively on the site and ignoring its wider context. Rather than viewing archaeological sites as bounded entities where the analysis stops wherever the digging stopped, landscape archaeology seeks to understand what connects sites to the landscape around them, including “natural” elements such as forests, fields, and rivers, but also “constructed” elements like roads, streets, and the organized spaces between built structures. In Sauer’s writings on landscape he notes that, “every landscape has individuality as well as relation to other landscapes, and the same is true of the forms that make it up…A definition of landscape as singular, unorganized, or unrelated has no scientific value” (Sauer 1965: 322-323). Landscape archaeology seeks to make those connections on multiple scales: between the individual spaces within a site and the site as a whole; between individual sites and the landscapes around them; between individual landscapes and broader patterns.

Landscape archaeology keeps in mind that there can be ideological facets to utilitarian land use and seeks to develop theories and methods to understand those aspects of the archaeological record. As Carole Crumley points out, “Manipulation of the
physical circumstances of specific landscapes, whether intentional or unintentional, leaves evidence that illuminates how humans conceptualize their surroundings” (Crumley 1999: 271). An interesting aspect of landscape is that even though landscapes are created by the intersection of the physical environment and human activity, they are usually experienced as timeless aspects of the natural order. As Tilley notes, “The paradox of landscape, the double bind, is that, while they are produced culturally, they may be typically experienced as something other than a human product” (Tilley 1996: 162). Landscape archaeology studies are one of the ways through which this paradox is explored. To quote Sauer once more, he states that “the content of landscape is found therefore in the physical qualities of area that are significant to man and in the forms of his use of the area, in facts of physical background and facts of human culture” (Sauer 1965: 325).

These theoretical concerns form the core of landscape archaeology, but the particular articulations of these themes through actual studies can vary quite broadly. Below I will review a number of case studies that provide individual examples of different approaches to the archaeological study of landscape. I’ve grouped the studies by broad theoretical elements. These themes include: the analytical examination of landscape as a feature of the land; the impacts of human activities on the changing face of landscape; the reflection of social structure and control through landscape; the relationships between landscape and sense of place; the importance of sacred landscapes within cultures; looking at space and time through landscape; and the interpretation of power relations and ideology through landscape. For each case study I’ve chosen what I considered to be the dominant theme in the analysis, but there is considerable overlap in
the content and findings of each of these studies and these different thematic headings. Many studies could be listed under multiple headings, but I’ve chosen to emphasize a particular aspect, highlighting what I see as some of the fundamental elements of landscape analysis as may be applied to understanding the site of Early Postclassic Jalieza. Each of these studies engages in their own way with the central question of what happens when humans and the natural world meet each other, producing what we call a landscape.

**Landscape as Features of the Land**

Many archaeological studies view landscape as the key physical features of a particular area of land. Their analyses are built upon the quantifiable and analytical measures of human interaction with those features. Often the main focus of these studies is spatial analysis and mapping, aided by the use of GIS. This type of landscape archaeology is sometimes allied with geoarchaeology and focuses on how landscapes are formed, both through natural processes and human activity. In these landscape studies, GIS can be an extraordinarily useful analytical aid. Archaeologists often direct much of their attention to analyzing the spatial relationships among elements on multiple scales (such as analyzing the spatial distributions of artifacts, structures, and settlements). GIS can provide the tools for not only articulating these relationships, but for developing visual representations of them in a way that is not possible with classic statistics. Andrew Bevan and James Conolly used GIS to tackle four separate research questions formulated during survey work on the island Kythera, Greece. These questions included: the relationship between surface visibility of artifacts to rates of artifact recovery and site
discovery; the feasibility of determining a site’s extent by scatter patterns and densities of surface artifact finds; and whether one could construct a predictive model for site locations based on the characteristics of terrain. Their findings demonstrated the usefulness of GIS approaches and analyses in identifying patterns of settlement and land use. The models they created demonstrate how the quantification of landscape features allows for their inclusion as part of a dataset for analysis (Bevan and Conolly 2002).

This direct modeling of landscape features is the most scientifically minded, processual approach to landscape archaeology that I will discuss in this paper. It is extremely useful in understanding the mechanics of how individual sites were created. The process itself requires careful fieldwork and laboratory analysis. But considering landscape to be just the features of the land can overlook some crucial elements to landscape, namely the idea that landscape is formed out of the relationship between people and the land around them, rather than seeing human use of the landscape simply as a reaction to its features. If the relationship between people and their environment truly is dynamic and ever changing, then something like the relationship between slope and field enclosure should vary with time (and particular social and political moments) and thus not be a measurable constant. This approach to landscape tends not to take agency into account, and instead focuses on what may be thought of as an overpredictive, model-making endeavor. The challenge with landscape archaeology, as with all forms of archaeology, is to find a balance between scientifically grounded research methods and data on the one hand, and a theoretical concern with the ideological, symbolic, and non-utilitarian aspects of culture on the other.
**Human—Landscape Interaction**

Another aspect of landscape archaeology is a close examination of the impact that human activities have had on the landscape and environment of a particular area. This has been the focus of a large amount of research being conducted in the North Atlantic by members of the North Atlantic Biocultural Organization (NABO). Excavations in Greenland, Iceland, the Faroes, and other North Atlantic islands have uncovered a wealth of often surprising information about the complex relationship between climate, environment and human activity (see Amorosi et al. 1997, Dugmore et al. 2007, Edvarsson et al. 2004, McGovern et al. 2007). Research in this area has effectively combined the accumulation and analysis of quantifiable scientific data (from zooarchaeology, paleobotany, soil science, and climatology) with a theoretical concern for human agency and ideology. Rather than stopping at the analysis of the physical landscape, many studies of this region extend their interpretive focus to examining how people made particular choices in relation with their environmental circumstances and their ideological inheritance, and the consequences that resulted from those choices.

The literature on landscapes of the islands of the North Atlantic is built upon technically driven, scientific research. This research has shown, for example, that in Iceland 90% of the forests and 40% of the soil has disappeared since colonization by humans around A.D. 874 (McGovern et al. 2007; 29). Numerous archaeological studies have documented the destruction to landscape caused by domesticated animals brought to Iceland by Viking settlers, and have traced the gradual elimination of some of these animals in the archaeological record. Studies have documented the increased exploitation of marine resources and the use of alternative sources to wood for fuel consumption and
house construction, as subsequent generations altered their subsistence practices to adjust to their changing surroundings (Edvarsson et al. 2004). These studies have documented a changing relationship between humans and the environment, one in which human actions have a direct effect on environmental conditions, which in turn have an effect on human actions. The dialectical process of this interaction is what has created the landscapes of Iceland and the other North Atlantic islands today. What makes the analyses by members of the NABO group particularly interesting, and pertinent to the environmental concerns of today, is their concern for agency within these processes of dynamic change.

Recent work by Thomas McGovern and others around Lake Myvattn in Iceland provides an excellent example of this kind of research and analysis. Years of archaeological, geological and climatological research in Iceland have uncovered a complex web of climate change, precarious soils, and disappearing trees in conjunction with human colonization and expansion. However the interpretation of these factors is not simply a straightforward story of unreflective human exploitation of the environment and subsequent environmental degradation leading to expansion into marginal environments, starvation, and depopulation. Instead the evidence coming out of Myvattn presents a different picture of early Icelandic settlement, emphasizing how important it is for analyses to pay attention to scale, regional variation in landscape elements, and the agency of individuals.

Previous studies of Iceland supposed the establishment of settlements in the interior of the island, where Myvattn is located, to have been a later expansion due to population pressure in original coastal colonies. Evidence of widespread deforestation and soil loss reinforced the idea of early settlers quickly degrading the best coastal lands,
necessitating a movement inland to unspoiled lands in subsequent generations, which then were quickly overexploited as well. However the excavations at Myvatn have uncovered a different story. The accumulation of radiocarbon dates for the establishment of farms in the region has allowed more accurate dating of the settlements on the generational scale of human experience, rather than in large, century-scale chunks like those indicated by layers of volcanic tephra in the region. These dates have revealed that interior settlements around Lake Myvatn were established within the first couple generations of colonization of the island—dates that are too early for the expansion inland to be due to population pressure. Geoarchaeological studies of the area examined the varied resource potential of the site at the time of first settlement, indicating a mix of woodlands, grasslands and wet meadows. Seeking an explanation for this surprisingly early interior settlement of a location that was less than ideal by the standards of the day, McGovern et al. cite examples of ambitious chiefs from Icelandic sagas, proposing that the economic and political maneuverings of early chiefs led them to choose sites such as Myvatn to expand their control over diverse resources in an attempt to increase their economic and political position within the climate of chiefly competition that marked Icelandic social structure (McGovern et al. 2007).

This concern with agency is also reflected in Thomas McGovern’s work in Greenland. In our Icelandic example, we can see choices being made by individuals and by collective groups to modify their social and economic practices to the particularities of their environment, through such practices as increased exploitation of marine resources and the use of alternatives to wood in fuel and construction, and in the decreased presence of domesticated animals particularly unsuited to the Icelandic environment such
as pigs, cattle and goats. McGovern’s work in Greenland shows the Norse Greenlanders made different choices in how they interacted with their environment. While Norse Greenlanders were faced with similar environmental problems as their brethren in Iceland, they did not adopt the modifications of behavior that helped the Icelanders continue to survive. Excavations of archaeological sites indicate a lack of exploitation of the full scale of marine resources available to the Norse Greenlanders. Instead the evidence indicates a persistence in herding environmentally destructive grazers such as cattle because of the status and tradition that went along with those animals. The archaeological record also indicates that while the Norse Greenlanders were in contact with the Thule Inuit for close to three centuries, they failed to adapt any of the technology that allowed the Inuit to survive in Greenland long after the Norse settlements died out. It seems the Norse Greenlanders, or more precisely the elite leaders of these settlements, refused to modify or adapt their culture in order to survive in Greenland as the climate cooled during the 15th century and the availability of resources shifted and changed (McGovern 1994). Again this study is interesting and unique in its mix of ‘hard data’ with a concern for agency and ideology. The moral of the story is not that it got cold and so the Norse Greenland settlements died out, but that the Norse, as a society and as individuals within that society, chose to hold on to maladaptive practices even when faced with more efficient and effective alternatives because of cultural and ideological motivating factors, related to religious, ethnic and cultural affiliations. In a contemporary world of global climate change, the lessons to be gleaned from such studies are invaluable.
Man-made Landscapes

Some landscape archaeology focuses specifically on built landscapes of cities or towns, examining the way in which space is constructed to control the movement and interaction of the individuals who inhabit a particular location. These types of studies tend to be concerned with how space is manipulated by a small group of place-builders and how that space then can be read as a reflection of the social organization and power structure of that community.

An example of this can be seen in the archaeological analysis of the Boott Mills complex in Lowell, Massachusetts. Lowell itself was a city intentionally created to be an industrial center, its location chosen where the Merrimack and Concord rivers met. The Boott Mills complex was designed as a factory town, with housing for workers and management, easy access to the factories, and an initial landscape design that incorporated pastoral elements into the urban surroundings. Mrozowski and Beaudry interpret the original design and operation of the complex as a reflection of an ideology of corporate paternalism that marked the industrial expansion of the woolen mill industry in 1835 when the complex was opened. The subsequent decline in the living conditions for workers (though not for management) and the gradual erasure of green space and common space by the 1880s is likewise interpreted as a reflection of changing corporate ideology about the relationship between industrialist and workforce. The physical layout of the streets and structures in the Boott Mills complex reflect the class structure of the industrial factory, with movement between different sections of housing and thus interaction between different classes of workers and management clearly restricted.

(Mrozowski and Beaudry 1990)
Similar studies have focused on the physical and social organization of plantations, including William Kelso’s excavations at Thomas Jefferson’s Monticello in Virginia. At Monticello, Kelso uncovered an elaborately designed formal gardens and lawn reaching out from the house, bordered on either side by Mulberry Row, the quarters and yards used by the plantations slaves. If one considers landscape as a reflection of the social order, then, as Knapp and Ashmore state, “this is a question not simply of the spatial ordering of residential, civic and other activities but rather of the broader conceptual landscape.” (Knapp and Ashmore 1999:16) Kelso sees this “broader conceptual landscape” in the seeming juxtaposition of the formal architecture and gardens of Monticello side by side with the “simple Mulberry cabins and trash-littered side yards” (Kelso 1990: 21). As he states, “Apparently as long as everyone looked straight ahead from and back to the formal fronts of the houses, picturesque pleasure gardens or formal architecture met the eye. What was, in reality, going on to the left and right was so commonplace to people of the time, at least rural people, that what modern eyes consider unsightly was not noticed.” (Kelso 1990: 21). What is spatially displayed here at Monticello is the paradoxical coexistence of slavery and rational Enlightenment philosophy that typified Jefferson and Virginia during this era.

Sacred Landscapes

Related to the connection between identity and landscape are archaeological studies of sacred landscapes. Examinations of sacred landscapes run the risk of floating off into a post-processual haze of speculation and invention, but when grounded in a solid dataset from physical excavations these analyses can prove quite insightful and useful.
Ethnoarchaeological studies as well as cultural anthropological literature have contributed a great deal to developing theoretical and methodological approaches to recognizing and interpreting sacred elements within a landscape while keeping these analyses connected to observable phenomena.

Christopher Tilley is one archaeologist who has done a good amount of work involving the relationships of landscape, topography, and phenomenology to sacred places. An example of one of his projects involved the analysis of prehistoric landscapes of Bodmin Moor in Cornwall, England (Tilley 1996). Tilley reads the prominent features of the landscape, specifically tors or rocky outcropping on hills, as important markers for orientation as Mesolithic peoples navigated their way through the landscape. The early and middle Neolithic saw the construction of cairns and hill-top enclosures on top of these tors, while the late Neolithic and Bronze Age saw the appearance of what he terms “ceremonial monuments,” namely stone circles and stone rows. Tilley interprets these structures built in relation to the natural tors as appropriations of sacred public spaces, and sees the increasing restriction of access to these spaces created by the built environment as a strategic move on the part of aspiring elites to control and direct sacred spaces. In his view, these spaces were used not only for orientation to the surrounding landscape, but also as learning and memory devices, akin to Basso’s work on the instructive importance of features in the Navajo landscape (Basso 1996).

Tilley’s interpretation is compelling on a number of counts. He pays mind to the importance of time within spatial analysis—features do not just appear on the landscape out of a vacuum, but are constructed in relation to what has previously existed there, often constructed in direct relationship to existing features, whether natural or man-made.
His analysis also considers the importance of the spatial experience of moving through a landscape, whether that be during the Mesolithic where one is navigating through a landscape marked exclusively by natural features, or during the Bronze Age where he considers what the vantage points and lines of site may have been from various stone circles or stone lines. But there are some theoretical concerns to his analysis as well. Many of his core tenets about the relationship between the ancient inhabitants of Bodmin Moor and their surrounding landscape are based on broad, unsupported generalizations or unexamined assumptions about the human condition. For example, when discussing Neolithic constructions on tors he states, “The construction of the long cairns served to formalize, objectify and make explicitly visible, for the first time, a relationship between social Being and the physical form of the landscape which had already existed in human thought for thousands of years” (Tilley 1996: 167, his emphasis). Accurate or not, this is more of a philosophical statement regarding the conception of the relationship between humans and their environment than a research-based archaeological finding. I find elements of his analysis extremely useful and theoretically stimulating, but I wonder how far they can be projected into the distant past.

Some studies of sacred landscapes coming out of Mesoamerican archaeology tend to be more grounded, often by incorporating ethnoarchaeological and cultural anthropological findings in a way that allows them to connect with ancient ideologies in a less speculative way. Many of these studies also engage with the concept of sense of place, emphasizing the cultural importance of certain features of landscapes over their utilitarian value in subsistence practices. The importance of mountains, caves and water
has been highlighted as key elements of the sacred landscapes for peoples throughout Mesoamerica.

Linda Brown’s ethnoarchaeological research on contemporary Maya Shrines in the Guatemalan highlands emphasizes the importance of the connections between cosmology and land use within the context of sacred landscapes (Brown 2004). Brown’s study is what she describes as “a material approach to ritual practice” (Brown 2004: 33). Through observation of witchcraft rituals performed at a mountaintop shrine in Guatemala, Brown developed a model classifying three different types of ritual practices, each associated with a particular complex of material representations within the archaeological record. But Brown’s analysis even goes beyond that to connecting these practices (including how they might be distinguishable within the archaeological record) with Maya ideological interpretations of the physical (and sacred) landscape of this mountaintop site. Large rocks situated at certain locations along this mountaintop are seen by local Maya as embodiments of ancestral beings. Thus “cultural understandings concerning the right and left sides of the human body are projected spatially upon the outcrop” (Brown 2004: 45). In Maya cosmology, the right side of a body is associated with such elements as men, life, and water, while the left side is associated with women, death, and animals. So according to Brown’s interpretation, ritual offerings found on the right side of an embodied ancestral being rock (from the perspective of the rock) are associated with offerings that seek to attract positive things, such as rain, a good harvest, or success in business. Offerings on the rock’s left-hand side tend to be for expelling negative influences. At a further distance on the left-hand side may be located burials of objects associated with bringing harm or death to someone. Essential to this analysis is
the idea that ritual space is ordered in a very particular way, a way that reflects the interaction between ideological and physical elements of a culture and that produces a particular kind of landscape. It is the particularity of this landscape creation that lends itself to interpretation from archaeological remains.

An important feature of this, and other, ethnoarchaeological work, as opposed to purely ethnographic research, is that these studies focus on how material representations of ideological or ritual activity may appear archaeologically. Brown emphasizes how the material objects associated with different rituals enter the archaeological record, aiding archaeologists in their interpretations of ceremonial objects within an excavated context. While direct application of current practices to a past culture is unadvisable (whether those cultures are connected to each other ethnically or not), ethnoarchaeological studies do provide creative and alternative ways of thinking about the material record. In such interpretations, however, it is still essential to factor in issues of spatio-temporality, recognizing how cultural practices change and adapt over time within particular places and changing landscapes.

James Brady and Wendy Ashmore have demonstrated the important connection between these natural, sacred features of the landscape, elements of architectural construction, and the power of ruling elites in a study of Dos Pilas, a Maya Late Classic complex in the Petexbatun Region of the Yucatan (Brady and Ashmore 1999). Among the Maya, and a number of other cultures throughout Mesoamerica, mountains are seen as places where the earth connects with the supernatural. Conceptualized as hollow, mountains are believed to contain caves, which are the interface between this world and the next. The importance and regular ceremonial use of caves can be traced back
thousands of years in Mesoamerica, including the use of caves as burial sites. A number of sources have linked the representation of the pyramid-temple in Mesoamerica to mountain-cave symbolism. Pyramid-temples, seen as representations of mountains, contain tombs and subterranean chambers, read as caves. The control and use of these structures by ruling elite is interpreted as forming the base of their power by facilitating their ability to communicate with the supernatural forces that shape the world. Water likewise is a crucial resource in Mesoamerica and connected to the sacred realm. The mirror-like qualities of the reflective surface of water connect it to the sacred by allowing one to see through the surface to the underworld. At Dos Pilas, Brady and Ashmore describe a pyramid-temple complex called El Duende. The main feature of this complex is a royal palace situated directly over a cave that functions as an outlet for the drainage system of the area, so when seasonal heavy rains come, the noise of the underground river reverberates through and out of the palace structure. As they state, “The landscape itself thus loudly proclaimed the king’s control over water, and presumably over rain-making and fertility…Because the king was responsible for crop productivity and quality, identifying his palace with this dramatic water source seems hardly coincidental and, in fact, a conscious political strategy” (Brady and Ashmore 1999: 130-131). The connection between the ruling elite and the seasonal cycles of the natural world is one found throughout Mesoamerica. This relationship between monumental elite architecture and important or sacred features of the landscape is also one that can be recognized in other parts of Mesoamerica as well.
Spatio-temporality and Landscape

An important factor to consider when examining landscape is how that landscape has changed over time. This is particularly important to keep in mind when considering how the experience of living within a landscape affects people’s behavior and conceptions of the world. Rosemary Joyce addresses this complex question by trying to understand the actions of the original builders of pyramid-temple mounds during the Formative Period of Mesoamerica (R. Joyce 2004). Joyce points out that the interpretation of pyramid-temples as being representative of sacred mountains may be accurate only for later periods (Classic and Postclassic) in Mesoamerica. It is quite probable that the initial builders of these structures did not envisage creating the large and imposing structures that were eventually manifest after generations of renovations and improvements. It is more likely, Joyce argues, that the original platform bases for temples were envisaged as temporary structures, that the Formative builders assumed the structures would disintegrate due to weather in the same manner as adobe houses, both having been constructed of similar materials. However, due to the large surface area of these initial earthworks platforms, they did not weather in the same manner as adobe houses, but instead endured to eventually form the base of later larger stonework pyramid-temples. Her argument is that as generations built upon these platforms, the platforms became permanent, stable features of the lived landscape of those places. As these features became taller and larger, their resemblance to sacred mountains became recognized and incorporated into the ideology of public architecture within Mesoamerican thought. It is at this point, Joyce argues, that burials of elites move from caves outside of settlements, to the constructed caves of subterranean tombs within
pyramid-temples. Joyce’s analysis is significant because she emphasizes the importance of practice and agency of individuals, the influence of lived experience with a particular space, the way that landscape changes as people modify their environment and in turn are affected by their modifications, and the importance of maintaining an awareness of and concern for the temporal element that is represented within archaeological sites.

**Landscape, Power, and Ideology**

Control of space is another feature of landscape that has received attention in the archaeological literature. While many studies have focused on sacred space in particular, sacred space in never purely sacred. It is always political space as well and control of it is a political act. The control of sacred space through the restriction of access has a long history among the Zapotec in Oaxaca. The two-room temple is considered to be one of the markers of the emergence of state-level society within Oaxaca (Marcus and Flannery 1996). This standardized arrangement is believed to separate a public area in the front of the temple from a restricted interior room where only priests had access. Coming from the elite class, priests functioned as communicators with ancestors, placing them in a special, liminal, and particularly powerful zone connecting the populace and the ruling class with the supernatural. Hidden stairways and passageways allowed priests to enter temples without passing through common areas, thus appearing atop the temple as though materializing from within the structure (Marcus and Flannery 1996). Limiting access to particular temples may have been connected to the status of the individuals allowed to use those structures. Blanton’s analysis of temples associated with the North Platform of Monte Alban indicated that this area had the most restricted access within the site of
Monte Alban. He interprets this as an indication that these temples were for the exclusive use by the elite ruling family (Blanton 1978).

**Landscape and Settlement Patterns in San Martin Tilcajete and Jalieza, Oaxaca**

I want to return for a moment to the idea of landscape as a palimpsest. This palimpsest doesn’t necessarily have to be an overlapping of settlements within one individual site. If one extends the scale of the landscape, from an individual site to a larger area, a palimpsest could also be a shifting of settlement within a given area. As settlements in a place over time begin to overlap and pile on top of each other, it seems wise to interpret such sites in relation to each other within the regional landscape in which they are situated. This idea of a palimpsest of shifting population and settlement seems particularly useful in thinking about the region of Oaxaca in which Early Postclassic Jalieza is situated. In the southern branch of the Valley of Oaxaca are a series of sites around the villages of San Martin Tilcajete and Santo Tomas Jalieza. The settlements in this area have followed a pattern of consistently shifting location every few centuries. During the majority of the Formative period (500 – 100 B.C.), population was centered around a ceremonial mound complex on the lower piedmont area of Tilcajete. After the destruction by burning of that complex at El Mogote, settlement seems to move higher up the piedmont to El Palenque (Spencer and Redmond 2001, 2005). After another cycle of destruction and abandonment, a new ceremonial/administrative complex is constructed atop the hill at Tilcajete in the Monte Alban II phase (100 B.C. – A.D. 200) (Elson 2007). Beginning with the Early Classic period (A.D. 200 -500), the ceremonial center of Tilcajete is abandoned and settlement moves across the alluvial plain to Jalieza
A similar pattern of shifting settlements between the hills of Jalieza continues with each successive phase of the Early Classic, Late Classic, and Postclassic periods. The distances covered by these movements are not great, generally within a few kilometers of each other, yet these shifts are clearly imprinted on the landscape, forming a palimpsest of settlement over the span of 2000 years (see Casparis 2006; Elson 2003, 2006; Elson et al. 2010; Spencer and Redmond 2003, 2005).

These case studies in landscape archaeology emphasize a number of important concerns not only for studies that focus specifically on aspects of the landscape, but for archaeology as a whole. Conceiving of the relationship between people and the environment as a dialectical one allows for a greater focus on agency and practice when constructing analyses of past sites. Viewing landscape as a process created by this dialectic imbues these studies with a richness that better reflects the complexity of lived experience. It is this broad theoretical concern for such principles that allows one to conceive of landscape archaeology as a body of literature and to consider it a critical addition to archaeological thought, as well as an important contribution to understanding how our current relationship with the environment will impact future landscapes. In the following chapter I will address how these theoretical approaches to landscape may be used to interpret the site of Postclassic Jalieza.

**Household Archaeology**

Early archaeologists tended to focus on the spectacular remains of temples and palaces found at ancient sites—digging tombs in search of precious, unusual, and unique artifacts, uncovering and reconstructing monumental architecture. These are the aspects
of archaeological sites that now form the cornerstones of heritage tourism—impressive remains like those found at Chichen Itza or Monte Alban. But behind every ceremonial center full of massive public architecture is an entire community whose dwellings and material remains are much less overtly impressive, but in many ways more informative to the archaeologist. Over the past 40 years, archaeologists have increasingly directed their attention to these remains that lie beyond the public elite sectors of sites, investigating the domestic remains of common residents. Household archaeology has grown over the years, not only in the number of practitioners, but also in the variety of theoretical approaches to the household and what it can tell us about ancient life. I will first address some of the key issues in household archaeological studies and then discuss how they can contribute to increasing our understanding of the archaeological record of the Valley of Oaxaca, as well as the site of Postclassic Jalieza.

A Brief Overview of the Development of Household Archaeology

An archaeological focus on digging houses coincided with the New Archaeology’s interest in looking at process, subsistence, and adaptation, even if the inquiry was yet to be termed “household archaeology.” Both historical ecology and systems theory considered the household as an adaptive unit. This functional approach viewed the household as not only one of the smallest units of archaeological analysis, but as that element of society that came in most direct contact with the environmental and subsistence conditions of the day. As the environment and available resources changed, the first line of reaction to these changes would be seen in the individual household. By viewing the household as an entity whose material remains are composed of artifacts,
ecofacts, and features, archaeologists shifted their focus from discrete artifact analysis and typology to viewing social wholes. This reconceptualized the household as an organizational entity central to the functioning of society. While this functional and adaptationist view of the household was criticized by later researchers, the shift of archaeological focus to the household as a unit of analysis was a crucial development away from isolationist studies of artifact style and morphology toward a more holistic view of past cultures.

As the number of archaeological studies focusing on the household increased, there became a concerted effort to more clearly conceptualize the household, particularly within the archaeological record. The 1980s saw a number of articles and edited volumes dedicated to defining and delineating what exactly was this approach called “household archaeology.” Drawing from cultural anthropological research on households, these studies examined how to apply cultural understandings of the household as a social unit to the material remains of the archaeological record. A crucial theoretical development was the recognition that a dwelling is not synonymous with a household, nor is a household synonymous with a co-residential lineage group (Ashmore and Wilk 1988; Netting, Wilk and Arnould 1984; Wilk and Rathje 1982).

In the 1990s a number of authors contributed to the further development of household archaeological theory. They continued to embrace the previously articulated idea of the household being based on activity, but added important layers of complexity to their interpretation of households. These studies examined broader social processes and political economies through the lens of the household—the “worm’s eye view” as Bermann describes it (Bermann 1994)—and introduced the role of agency into a
household now conceived of as a group of individuals differentiated by status and gender (Hendon 1996). Over the subsequent decade, these studies were joined by others that sought to take the examination of the household beyond the functional realms of adaptation and into the ideological realms, introducing a post-processual concern with the symbolic meaning of the household, reading the household as a form and means of communication (Coupland 2006; Robin 2003; Trieu Gau 2006; Vaughn 2004).

Today household archaeology studies continue to grow and develop, melding many of the approaches described above. Before moving on to case studies from Oaxaca, I’d like to further explore the theoretical underpinnings of conceptualizing and operationalizing the household, in an effort to develop a synthesis of household archaeological theory that can be applied to understanding the archaeology of the Valley of Oaxaca.

**Defining the Household**

The archaeology found at many sites often consists primarily of domestic remains. The most recognizable of these remains tends to be housing structures, but surrounding these structures are often archaeological features relating to the domestic realm including outdoor activity areas, storage features, cooking features, and middens. In order to develop an archaeology of households, one needs to first determine exactly what is meant by the term “household.” The next step is to identify how that correlates with the material remains that are found within archaeological sites. Last is the exploration of how household analysis can help us interpret the behaviors, beliefs, and processes of ancient peoples and cultures.
A review of the archaeological literature presents a cubist portrait of the household—simultaneously portraying it from a variety of angles. It is alternatively interpreted as a social unit, an adaptive unit, a subsistence unit, a unit of social organization, a productive unit, a consumer unit, and a reproductive unit. Seeing the household as a social unit recognizes that a household is composed of a group of social individuals, often related to each other and embedded within broader networks of social relations (Ashmore and Wilk 1988; Deetz 1982). Focusing on the household as an adaptive unit highlights its flexibility—“households are the level at which social groups articulate directly with economic and ecological processes” (Wilk and Rathje 1982: 618). Bermann describes households as “dynamic, highly flexible and sensitive to demographic, economic, sociopolitical and environmental conditions” (Bermann 1994: 26). Blanton and colleagues see households reorienting their economic strategies to adapt to the development and expansion of the Monte Alban state (Blanton et al. 1999). Related to this adaptive capacity of the household is to view it as a subsistence unit—Flannery’s work at Guila Naquitz and Cueva Blanca in Oaxaca focused on the subsistence activities of individual foraging families during the Archaic (Flannery 1986), while other household studies in Oaxaca have focused on the role of subsistence production, surplus storage, and refuse disposal (Winter 1976, 1988). Many studies have highlighted the importance of the household as a social organizational unit, the smallest such unit embedded within a wider social structure—“all households are members of larger systems organized at the supr ahousehold, community, regional and pan-regional level” (Bermann 1994: 32). Households have been studied for their productive capacities as well, focusing on intensive domestic-based production of trade goods (Feinman et al.
2002; Flannery and Winter 1976), tribute goods (Brumfiel 1996), and ceremonial goods (Flannery and Marcus 2005). While others see the household’s significance resting in its power as a consumer unit (Vaughn 2004). Households produce records of consumption in which domestic artifacts serve as indicators of household status and guide reconstructions of social order and stratification. While such household studies have traditionally focused on artifacts and trade goods, zooarchaeology studies extend our view of the household as a center for production and consumption to include animal products as well (Emery 2003; McGovern and Palsdottir 2006). Other studies address the importance of the household as a reproductive unit, focusing on the role of family and children as meaningful elements of social operation and perpetuation (Deetz 1982; Smith 2006; Wilk and Netting 1984; Wilk and Rathje 1982). Each of these ways of viewing the household offers a valuable and unique perspective on not only the individual household itself, but also on the wider context in which the household is situated.

If one searches for a unifying concept running through these views of the household, one finds the theme of activity. As Bermann succinctly puts it, “a household is as a household does” (Bermann 1994: 23). Below are a number of specific definitions of the household that all center around the equation of household and activity.

A household is

- “a group of people who interact and perform certain activities.” (Winter 1976: 25)
• “a group of people coresiding in a dwelling or residential compound, and who, to some degree, share householding activities and decision making.” (Blanton 1994: 5)
• “essentially an activity group and not necessarily a corporate social unit bound together by kinship and other social ties.” (Ashmore and Wilk 1988: 3)
• “task-oriented residence units.” Netting, Wilk and Arnould (1984:xx)
• “a social unit, specifically the group of people that shares in a maximum definable number of activities, including one or more of the following: production, consumption, pooling of resources, reproduction, coresidence, and shared ownership…It may live in one locale or it may be spatially dispersed.” (Ashmore and Wilk 1988: 6)

This idea of a household as a “task-focused group” (Hendon 1996) is important for several reasons. Households need to be defined in terms of what can be identified archaeologically, as well as what we can interpret through the archaeological record. By focusing on domestic activities and activity areas, households become identifiable in the archaeological record because activity often creates material remains. There is a danger though in assuming that because we identify something that we call a household that means it represents a unified and undifferentiated unit in which every member worked together toward a shared goal. This is not the case in many ethnographically observed households and should not be assumed to be the case in ancient households. As Hendon state, “The domestic group consists of social actors differentiated by age, gender, role, and power whose agendas and interests do not always coincide” (Hendon 1996: 46).

Likewise, Brumfiel cautions against what she calls an ecosystems theory approach that privileges the explanatory primacy of adaptation in the archaeological record. While she isn’t speaking directly in reference to household studies, her observation that this approach tends to elide differences of gender, status and faction can be applied to
household studies (Brumfiel 1992). By examining activities, household studies have become a way for archaeologists to recognize agency within the archaeological record. Such studies allow authors to “people the landscape” by identifying agency and addressing structuration through the lens of the household (Robin 2003). Brumfiel and the McCaffertys have produced analyses of cloth production in the Basin of Mexico that serve as excellent examples of how studies rooted in the analysis of household artifacts can transcend mere descriptive and functional explanations to offer more complex interpretations of social interactions (Brumfiel 1996; McCafferty and McCafferty 1998).

While understanding the organizational aspects of the household is vital to comprehending ancient cultures (or contemporary ones), it is important to look beyond the functional. For the study of households to make a significant contribution to archaeological thought, we must strive to understand the household in ideological terms, exploring its potential existence within the symbolic realms of human thought and behavior. This aspect of the household was recognized early in household archaeology studies—Netting and colleagues noted in 1984 that, “While a household can be defined by the activities it performs or by its shape and size, it can also be defined as a symbolic entity” (Netting et al. 1984: xxix). But it was the post-processual movement that developed theory able to relate to this symbolic aspect of the household.

Houses themselves can be markers of status within a community. In most stratified societies, status distinctions are often interpreted through archaeologically recognized differences in household size, architectural features, and artifact assemblages (Vaughn 2004; Trieu Gahr et al. 2006). The house is often seen “as the physical manifestation of the household and of its social rank” (Trieu Gahr et al. 2006: 1). The
house itself can also be seen as “a product of tradition, a material construction of worldview, a material marker of social position, or an adaptive tool, reflective of the social organization of domestic work” (Bermann 1994: 30). While some authors note that the relationship between wealth, status, and a dwelling is more complex than just house size and the presence of exotic artifacts (Bermann 1994), house size and structure is commonly accepted as a symbolic and communicative marker of a household’s position within the social hierarchy (Blanton 1994). In fact Blanton describes the house itself as a “consumer good” (Blanton 1994) emphasizing not only the household’s role in the consumption of goods, but the importance of the house itself as both a cultural product and as an indexical marker within a stratified society. When considering the significance of houses and house forms, it is important to keep in mind the interaction between culture and individual agency. While houses may tend to follow a “typical” form or layout, there are still aspects of household form and structure that may reflect local or individual particularities. As Blanton states, house form “reflects the interaction of both cultural norms and the decision of members of the household” (Blanton 1994: 7).

Households are often seen as microcosms of the larger social structure and as reflections of the ideological tenets of a society. Domestic remains can be interpreted as the worldview, ideology or social system writ small (Berman 1994). The built environment of the house and the associated modifications of the surrounding landscape can simultaneously reflect and impose basic social divisions related to rank, age, and gender, linking the household form to ideological structures (Blanton 1994; Hendon 1996).
Houses and households are situated within a surrounding landscape. To understand the scope of the household, one needs to understand the environment in which the household is located. They are often built where they are built for very specific reasons, whether those reasons be environmental, ideological, political, practical, or some combination of all these factors. In addition to the physical environment, households exist within a cultural environment. Households don’t exist on their own in a vacuum, independently of the rest of society, but always exist within a network, a linked area of settlement, a community. Community archaeology is a relatively recent but expanding field within archaeological theory. It aims to synthesize household archaeology, settlement patterns, and regional studies, connecting individual agency and household processes to local scale developments (Yaeger and Canuto 2000). While the above discussion of household archaeology is by no means comprehensive, I would like to move on to specific studies from the Valley of Oaxaca. Before doing so, I would like to reiterate what I believe are the most salient aspects of theorizing the household. These include 1) conceiving of the household as an activity group, 2) recognizing the extension of the household beyond the mere dwelling structure to include the areas around it, 3) understanding the ideological and symbolic aspects of the household, and 4) viewing the household as a social entity nested with a wider social, political, and economic context. Close examination of households through these four principles should yield valuable insight into past societies.
Household Studies in Oaxaca

Early archaeological studies in Oaxaca tended to focus on architecture rather than household as conceptualized above. In keeping with the contemporary theoretical framework of culture-history, architecture and architectural styles were seen as markers of ethnic identity. The Classic period pottery and architecture of Monte Alban were interpreted as evidence of Zapotec occupation, while the Period V pottery of the Postclassic was considered evidence of a Mixtec invasion of the Valley of Oaxaca (Acosta 1965; Bernal 1965a, 1965b). The features of architecture under examination were the monumental structures at sites—primarily temples, ballcourts, and palaces. Analysis tended to focus on the design and surface décor of buildings, such as the greca motifs at Mitla or the plastering and painting of surfaces. There was less concern with how the layout or floor plan of a structure might relate to the activities that would have taken place within it. Palaces were viewed not as households of the ruling elites, but instead were trenches through in search of tombs beneath the floors. Marshall Saville’s excavations in Oaxaca on the eve of the 20th century failed to recognize the plaster floors of houses, digging through them to the tombs underneath those dwelling surfaces (Saville 1899; Casparis personal communication 2008). Caso’s excavations at Monte Alban tunneled through 60 feet of platform construction to reach tombs (Caso 1932b). He even notes finding “small rooms that had floors formed from a gray layer of plaster” above Tomb 7, but the goal of such excavations was the discovery of the remarkable grave goods located within these tombs (Caso 1932a: 17, my translation). Excellent ceramic sequences were developed from the pottery found in these tombs and residences that are
used to this day to date sites in the Valley (Caso et al. 1967), but there was little attempt
made to understand how life was lived within these households.

The shift to examining the household as a unit of analysis came with Kent
Flannery’s work beginning in the 1960s. Flannery’s excavations at Guila Naquitz, Cueva
Blanca, and Gheo-Shih, outside Mitla, were focused primarily on subsistence and cultural
ecology, but they very much reflected a concern with the domestic and the mundane
(Flannery 1986; Flannery and Marcus 1996). While these remains represented
temporary, seasonal occupations by small foraging groups, the scope and scale of the
research fits quite well with a household perspective. From 1966 to 1980, Flannery
excavated the Formative period village of San Jose Mogote, located in the Etla branch of
the Valley of Oaxaca. Unlike Bernal or Acosta, the unit of excavation in San Jose
Mogote was not the trench or the pit, but the house and its surrounding areas. The goal of
the project was to understand as much as possible about the early Mesoamerican village.
The lens through which this was done was primarily the household; the methodology was
through the complete excavation of multiple households. This work at San Jose Mogote
has provided a remarkably complete record of the “household units” that make up this
Formative village (Flannery and Marcus 2005) and has informed all of the archaeology
conducted in the Valley of Oaxaca for the past 40 years.

Through the work at San Jose Mogote, Flannery is able to project that during the
Formative period a “typical” house form emerges—composed of a one-room thatch-
roofed, wattle and daub house. The floor is made of dirt that has been leveled, dampened
and stamped hard then coated with a thin layer of fine, river sand. This style of house
remains common until the appearance of adobe bricks—adobe is first associated only
with public buildings, but can be found in some residences by the Middle Formative. Only after rectangular adobes replace bun-shaped (planoconvex) ones does the adobe brick dwelling become widespread (Flannery 1976b). Associated with each house was a “dooryard” or outdoor work area. Features in these dooryards that have been identified include “sheds, ramadas, lean-tos, storage pits, wells, hearths, earth ovens, craft activity areas, and household middens” (Flannery and Marcus 2005: 34). According to Flannery, it is by understanding the standard or shared aspects of the household that one can then see variation between households. This variation between households can be particularly informative to the archaeologist. Flannery and Winter developed four tentative categories of household activities: 1) universal household activities which would include food procurement, preparation, and storage; 2) possible household specialization which would include the manufacture of stone tools, bone tools, celt production, and leatherworking; 3) possible regional specialization such as shell ornament production for the Etla region and salt making for Fabrica San Jose; and 4) possibly unique specializations such as the magnetite mirror production found within select households at San Jose Mogote (Flannery and Winter 1976). These categories of activity specialties were developed specific to the Formative period in the Etla branch of the Valley of Oaxaca, but the idea can be extended to include other time periods and regions. The identification of variation between households, between villages, and between regions can allow researchers to infer a great deal about the social, economic, and political relations within a village and between that village and the larger political structure in which it is nested.
Flannery and Marcus view the variation between houses seen within the Formative village of San Jose Mogote as evidence for the emergence of rank and stratification. One line of evidence for this nascent distinction between families is seen through the decorations found on pottery vessels associated with individual households and their burials. Flannery and Marcus identify two prominent, decorative themes repeated on ceramics in the Valley of Oaxaca: the fire-serpent and the earthquake motifs. A spatial analysis of the distribution of these motifs within the village of San Jose Mogote indicated that the west and east residential wards of San Jose Mogote featured fire-serpent motifs on their pottery, while the south residential ward featured the were-jaguar/earthquake motif (Flannery and Marcus 1976; Marcus and Flannery 1996).

Marcus and Flannery interpret these motifs as being representative of distinct lineages associated with the emergence of a ranked society. Reading rank and stratification in the comparison of household variation also involves the size and construction of the house itself, along with the material remains found in association with the house. “In both Tehuacan and Oaxaca, elite families lived in houses that were larger and better made than those of other villages; had higher quantities of goods imported from outside their region; and used greater numbers of fine gray bowls, probably for entertaining” (Marcus and Flannery 1996: 137).

Marcus and Flannery consider a non-residential structure in the village of San Jose Mogote dating the Tierras Largas phase (1400-1150 B.C.) to be connected with the emergence of rank and stratification. I would note that only after you know what constitutes a “typical” residential structure will you be able to recognize a structure that is decidedly non-residential or ceremonial. This one-room, non-residential building in San
Jose Mogote differed from the rest of excavated structures in the village in a number of significant ways: its orientation was different (8 degrees west of true north); it had 2 to 3 times more pine structural posts than “typical” houses; its floors and walls were plastered with lime; and it lacked the domestic remains that would indicate its use as a residence (Marcus and Flannery 1996). Marcus and Flannery interpreted this building as a public ceremonial building, specifically a men’s house, and considered its construction as a proxy for the organizational and influential power of an individual or set of individuals within San Jose Mogote. This ability to mobilize labor is also reflected in the later construction of large elite residences, first at San Jose Mogote and later in the establishment of the hilltop city of Monte Alban. I will argue later in this dissertation that the elite power structure at Jalieza was also able to mobilize its power and influence by moving settlement from the Late Classic area of the site to the more remote and inaccessible hilltop center of Tecolote during the Early Postclassic. What is important here is not only that elite residences and public buildings are larger or better constructed, but that their construction requires the organized labor input of a group of people, not an individual family. This cooptation of commoner labor to construct an elite residence is a feature of stratified society that will be addressed further.

Flannery and Marcus’ work at San Jose Mogote provided a model and impetus for a number of research projects throughout the Valley of Oaxaca and beyond from the 1970s up to today, including Whalen’s work at Tomaltepec (Whalen 1981) and Winter’s at Tierras Largas (Winter 1972, 1976). Both Whalen and Winter were interested in digging communities composed of households in an effort to understand the development of the village during the Formative period. This research aim represents a somewhat
radical break with the culture-history tradition of tracing ethnic identity through ceramic and architectural styles, and developing typological and chronological sequences for the region. The recognition of different types of household construction and the presentation of multiple examples of how these households appear within the archaeological record are useful contributions to Oaxacan archaeology that have come out of this large body of work. Because a large number and wide variety of sites have been excavated and the associated data has been thoroughly published, variation between households can be recognized, not merely speculated on. It is from the observation and analysis of this variation that interpretations relating to rank, status, and even gender and faction can be developed. Without this processual research basis, any post-processual interpretations relating to issues of status, gender, or faction would be purely conjectural.

Spencer and Redmond have used evidence from the excavation of elite residences at the sites of El Mogote and El Palenque at San Martin Tilcajete in the southern branch of the Valley of Oaxaca to support a number of arguments relating to political development, conquest, and resistance. They identified the Area I Palace at the Late Formative site of El Palenque as the earliest excavated palace in the Valley of Oaxaca, based on its similarity in construction and layout to other known palaces, or coquitao, within Oaxaca (Spencer and Redmond 2004). These features include an interior patio surrounding by several rooms, in addition to an exterior patio/platform that appears to have served civic-ceremonial functions. The Area I Palace complex appears to have been built in a single, planned effort. The presence of three distinct colors and textures of adobe brick is interpreted as an indication of three separate organized labor groups who provided adobe brick materials from their home areas and worked collectively on
different sections of the palace’s construction (Spencer and Redmond 2004). As described previously, this control of labor for public construction is an indication of some form of centralized power. That this public construction was also a residence would indicate that this household held a considerable amount of power over the population of this region. Spencer and Redmond use the existence of this palace at the early date of 300-100 B.C. as one aspect of their argument for the existence of state-level organization within the Valley of Oaxaca at that time (Spencer and Redmond 2001, 2005). In this way, an elite residence is not merely a home but also an indexical marker for the state; the palace exists as a symbolic entity in addition to a domestic sphere. To further underscore the symbolic meaning of the structure is Spencer and Redmond’s interpretation that the palace was burned along with the temple in an intentional conflagration that destroyed the main plaza at El Palenque at the end of Late Monte Alban I. Spencer and Redmond believe the destruction of the site was caused by Monte Alban as part of its campaign to control large areas of the Valley of Oaxaca and beyond. The burning of the palace would signify the conquest of the leadership of El Palenque by the Monte Alban invaders (Spencer and Redmond 2003, 2006), not only to us, but presumably to the subjugated residents of El Palenque as well. The establishment at Cerro Tilcajete of a new plaza with a new temple and palatial residence apparently modeled on Monte Alban upslope from the site of El Palenque is interpreted as evidence for the success of Monte Alban’s conquest and its subsequent control of the Tilcajete region (Elson 2003, 2006, 2007; Spencer and Redmond 2006). Ceramics found within the residences at El Mogote, El Palenque, and Cerro Tilcajete are interpreted as indicators of the social and political affiliations of the residents of those structures. The analysis of
ceramics found at the sites of El Mogote and El Palenque indicate a degree of independence from Monte Alban, while those found within the residence of Cerro Tilcaje te match the ceramic types found in residences at Monte Alban and are thus interpreted as evidence for Monte Alban’s control and influence in the region (Elson 2003, 2006, 2007; Spencer and Redmond 2004; 2006). This work at Tilcaje te demonstrates the ability to extend inferences from data gained through excavation and analysis of households to encompass interpretations that go beyond the functional adaptation of households to address questions of political organization and succession within a region.

Feinman and Nicholas have conducted extensive research on Classic period households in the eastern branch of the Valley of Oaxaca. Their research has been particularly effective at illuminating the role of households as loci of production. Their work at Ejutla, a valley floor site, has shown intensive craft production situated within a household context. Excavation at Ejutla centered on one particular household that specialized in marine-shell ornament production and ceramic production (Balkansky et al. 1997; Feinman and Nicholas 1999; Middleton 1998). Feinman and Nicholas also conducted extensive excavations at El Palmillo, a Classic period hilltop site also located in the eastern arm of the Valley of Oaxaca. At El Palmillo they excavated 5 residential terraces, situated at different heights along the hillside; as in many Mesoamerican sites, they interpreted the location of the terrace along the height of the hillside to be related to the status of the household—higher status residences tended to be higher up the slope, while lower status residences are located further down slope. Feinman and Nicholas examined specialized economic production within these households at El Palmillo, again
focusing particularly on craft production, finding evidence for stone, textile, and ceramic production. Their conclusions were that this production was geared toward the creation of surplus commodities to be used for trade. Of particular note was the discovery of maguey roasting pits and evidence of maguey fiber and textile production. Coupled with paleobotanical evidence of exploitation of a number of other local plants, Feinman and colleagues suggest the importance to household subsistence and surplus production of a wide variety of plant resources beyond simply maize (Feinman et al. 2002; Haines et al. 2004). These studies illustrate how a focus on households can also provide insight into the economy of village, city, or entire region. As Balkansky states in reference to ceramic production at Ejutla, “simply because ancient (and much of modern) Mesoamerican craftwork is situated domestically does not imply that such manufacture was either part-time or economically insignificant” (Balkansky et al. 1997: 156).

Though the Postclassic period in Oaxaca is closer in time to the present day, and the Late Postclassic abuts the historically documented Spanish conquest, in many ways we know less about the Postclassic than we do about earlier periods in the Valley of Oaxaca. As Marcus notes, research often focuses on Classic period civilizations, their rise, apex, and collapse, but little attention is paid to the reorganization of society after collapse (Marcus 1989). Many authors have recently bemoaned our lack of understanding of the Classic/Postclassic transition in Oaxaca, calling for further research into this time period (Blomster 2008; Winter 1989, 2008). While the ceramic sequence and chronology for the Formative and Classic periods in Oaxaca have been extensively developed and refined over the years, the Postclassic Period V in Oaxaca covers 600+ years with little distinction between centuries. Researchers have attempted to subdivide
this period in recent years, using ceramic and ethnohistorical documents (Markens 2008; Oudijk 2008), but these divisions have yet to be universally adopted. I address the subdivision of the Postclassic in other chapters and believe the site of Postclassic Jalieza has a valuable contribution to make to the chronological refinement. It is by examining the site on the household level that our understanding of the period may expand.

Households offer a conveniently packaged glimpse into the economic, political, and social workings of a society. As a fundamental building block and as an economically adaptive unit, they provide a window into the mundane aspects of life within a particular place. As symbolic markers and physical sites of activity, households allow archaeologists to examine functional and ideological aspects of particular people at particular times in particular locations. A well-rounded examination of the household, including zooarchaeology, artifacts, housing types, political structure, and economic bases, can give us a picture of how individual households adapted to their environments and how these individual households were connected to each other and to wider arenas through trade and exchange. The “worm’s eye view” of the household allows us to gain a broader understanding of the Valley of Oaxaca at large.

Connecting Households with Landscape

Households do not exist outside of space, but each household fits into its surrounding landscape. The establishment and working of a village and agricultural fields dramatically affects the landscape in its surroundings. The size, shape, and organization of a village in turn is affected by the landscape in which it is situated. Examining the household use of landscape and the impact of the landscape on the household, as well as
the household on the landscape, are essential to understanding a site. In the next chapter I will explore the households and landscape of Postclassic Jalieza.
Chapter Eight:
Landscape and Household
at Early Postclassic Jalieza

Overview

This chapter will examine the intersections of landscape, households, and site
design at Postclassic Jalieza connecting these with an interpretation of the political and
social organization of the site. Essential to this chapter is the importance of
conceptualizing landscape as the interaction between humans and the physical
environment that they inhabit. This is a dialectical relationship and so is constantly
changing—landscape influences people as people influence landscape as landscape again
in turn influences people, etc. Conscious attention to the role of agency is crucial in
recognizing this relationship. Both individual and collection action are important in the
creation and perpetuation of cultural practices, including the creation of cultural
landscapes.

This chapter will look specifically at the analytical examination of landscape as
features of the land that shape and influence the interactions of the humans who inhabit
such physical space. A consciousness of the importance of landscape inspired me to
make detailed notes of the surface landscape while creating my map of the site. These
included features such as the steepness of terrain, the presence of barrancas, and other
physical aspects of the landscape that impeded or directed my movement through the site.
I feel it is important to be mindful of whether these features would have directed
movement through the site in the past as well, and whether they might have been created, modified, or exploited by past inhabitants. These features helped to shape the experiences and interactions of the site’s inhabitants, physically shaping the households and communities of Postclassic Jalieza. But it is important as well to recognize that there may be ideological facets to utilitarian land use. The ideological aspects of landscape exploitation will be explored within this chapter as well.

This chapter will look at sections of the site based on their particular landscape features. The most important landscape distinction within the site is between the hilltop ridge and the hillside slopes. A detailed examination of the hilltop ridge section of the site will include a discussion of individual collection squares and sub-sections within the site that present particular data of note. I will then explore the landscape features and noteworthy household terraces and collection squares located on the hillside slopes. The chapter will conclude with a discussion connecting landscapes and households at Postclassic Jalieza, presenting an overall interpretation of the social and political organization of the settlement.

**Landscape Features: Hilltop Ridge versus Hillside Slopes**

The most obvious distinction within the physical geography of Postclassic Jalieza is the distinction between the hilltop ridge and the hillside slopes. There is an established tradition within the Valley of Oaxaca for sites to be located along hilltop ridges and slopes. A clear correspondence has been demonstrated between a household’s status and its location along the slopes. Higher status households tend to occupy the hilltop and upper slopes, while lower status households occupy the lower slopes of the hillside and
the alluvial plain (Blanton 1978; Feinman and Nicholas 2004). The dominant landscape features of the hilltop and hillsides at Postclassic Jalieza can be described as follows. On the hilltop, there are areas that have been flattened and areas that have been terraced. Retaining walls were built in a number of locations along the ridgeline near the steepest drops. These modifications to the landscape tend to enhance and exploit the natural features of the landscape and yet create a clearly built environment to the hilltop ridge. The gain in elevation from the base of the hill to the highest point is about a 1000 feet or 300 meters. This high elevation, along with the narrowness of the hilltop ridge and the steep drop-offs from the ridgeline all severely restrict access to the architectural features located along the summit. On the hillside slopes of the site are a number of man-made household terraces as well as areas that appear to have been intentionally flattened. Small barrancas and ridges shape terrace clusters, while large barrancas separate sections of the site. The slopes become steeper the higher one gets up the hill. The slope becomes too steep in some areas for the creation of terraces or to allow movement freely through the site, particularly restricting access to the hilltop ridge. Because of this topography, there exist a limited number of access routes to the hilltop ridge and to other sections of the upper slopes. In many areas, there is essentially one direct pathway to navigate up the slopes and amongst the higher situated terraces. There also seems to have been only one pathway that allowed access to the hilltop ridge. Much like the hilltop access to the Early Classic site, this pathway wound its way around household terraces along the hillside. The majority of the site is composed of household terraces located along the slopes of the hillside. Large barrancas separate sections of the site from one another, requiring movement up or down the hillside in order to travel from one section of terraces to
another. Large rock outcroppings also play an important part in shaping the site layout and placement of these terraces. Most of these large rock outcroppings are located in the Central and Central Eastern slopes. Some areas of the site have prominent ridges with terraces atop them offering commanding views of Valley.

I have divided the site into 5 sections based on the topography of the site. I have termed these sections the Hilltop Ridge, the Western Slopes, the Central Slopes, the Central Eastern Slopes, and the Eastern Slopes. Figure 176 on the following page is an overview map of the site, showing the division of each of these sections. Each section of the site is described in greater detail in the pages that follow, accompanied by maps of each of these sections.

**Elite versus Commoner Status at Postclassic Jalieza**

Based on distinctions between hilltop residents, upper slope residents, and lower slope residents found at other sites (examples include Blanton 1978 for Monte Alban and Feinman and Nicholas 2004 for El Palmillo, Guirun, and the Mitla Fortress), as well as the distinctions noted in the Early and Late Classic settlements at Jalieza (Casparis 2006; Elson et al. 2010; Finsten 1995), one would expect to see a clear distinction in household status as represented in the artifact assemblages recovered from the hilltop collection squares versus the slopeside collection squares. However, the distinction between the two is not as marked as one might anticipate. While the hilltop squares do yield more unusual pieces, there is not a large volume of clearly elite wares coming from this area of the site. Instead, it would appear that the material distinctions between the hilltop
Figure 176: Overview Map of Site with Site Divisions

Overview Map of Postclassic Jalieza
residents and slopeside residents are rather slight. See Chapter Five for a more detailed analysis of the ceramic assemblage from the site as it relates to status distinctions. This suggests a number of possibilities. One is that there is little social stratification within the population at Postclassic Jalieza. Another possibility is that there is a distinct elite class at Postclassic Jalieza, but that the markers of class distinction are not heavily expressed through material culture. This could be because of a lack of access on the part of the elite to imported specialty goods during the Early Postclassic. It could be due to a dip in their available wealth, either through tribute collected from the commoner class or through a disruption in control of trade and markets. It is also possible that the regional and interregional trade markets that earlier elites had access to during the Late Classic and Early Classic are no longer accessible to the elite leadership in the Early Postclassic. At this point, the answer remains unclear and I can only speculate on possibilities. I have raised the possibility in Chapter Five that Early Postclassic Jalieza may have been integrated into the regional market but not well connected with the interregional market. In this case, if there is a significant elite leadership at Postclassic Jalieza housed primarily on the hilltop ridge and some of the higher slopes, it is not surprising that the material distinctions observable between their households and commoner households is quite minimal. Excavation of terraces, both commoner and elite, would shed clearer light on this subject and offer better comparative data. However, I would like to pursue the argument within this chapter that there was a significant and important elite leadership at Early Postclassic Jalieza. Evidence for this can be seen in their interaction with the landscape of the site, particularly in the exploitation of the hilltop ridge of the site.
**A Note on Zapotec Religion and Elite Leadership**

Using ethnohistorical documents and the direct historical approach, where historically observed ethnographic information is applied to culturally related ancient populations, a picture of Zapotec religious and ideological beliefs and behaviors has been developed (Flannery and Marcus 1976; Marcus and Flannery 1978, 1994; Marcus 1978). The Zapotec call themselves the Cloud People, based on the belief that their ancestors had descended from the clouds and return there after death. From the clouds, these ancestors are able to intercede with supernatural powers on behalf of their living descendants. In order to have the ancestors intercede on your behalf, you must make sacrifices to them. The most important sacrifices contain *pe*, which is the living life force. Flowing blood in particular contains *pe*, so many rituals involve the letting of blood. Smoke from burning incense also contains *pe*. Smoke floats up to the clouds carrying the requests of living descendents. This is why blood letting is associated with ancestor veneration—and items used to pierce the skin such as obsidian blades are associated with ritual. Likewise, sahumadores or incense burners are associated with ancestor veneration rituals. Because it is elite leaders who become cloud ancestors, these rituals are associated with the elite sector of Zapotec society (Flannery and Marcus 1976; Marcus and Flannery 1978, 1994; Marcus 1978).

It is suggested that rain for agricultural success is likely the most important reason for propitiating ancestors. Anne Kirkby’s study of the environment of the Valley of Oaxaca indicates that the Valley has always been a marginal environment for agriculture. She states that in average years most areas within the Valley could be considered in a permanent state of drought. Nonetheless irrigation was not heavily relied on in the
Valley of Oaxaca. Instead most agriculture in the Valley was based on rainfall (Kirkby 1974). Thus water and rainfall were of paramount importance to the ancient Zapotec in order to ensure agricultural success in any given year. The seasonal cycle within the Valley of Oaxaca is one of alternating wet and dry seasons, thus the appearance of seasonal rains was crucial to crop survival. The most often represented supernatural force in ancient Zapotec material culture is Cocijo. Usually described as the god of lightning, thunder, or rain, Cocijo is associated with rainstorms and water (Flannery and Marcus 1976; Marcus and Flannery 1978, 1994; Marcus 1978). Most representations of Cocijo are believed to be important elite leaders dressed in the costume of Cocijo, representing the link between elite lineages and supernatural forces (Marcus 1983c; Sellen 2002). This connection between elite leadership, ancestor veneration, and agricultural success—which is essential for societal success—are the main components for the religio-ideological-political system of governance that dominated the Valley of Oaxaca from the Formative Period through the Spanish conquest. In this way, the success of elite lineages is dependent on the regular appearance of rains to sustain agricultural viability. Elements of this ideological system are present in the artifact assemblage found at the hilltop of Postclassic Jalieza, as well as in the spatial inhabitation of the landscape of the site.

**The Hilltop Ridge**

The local inhabitants of Jalieza today refer to the hill occupied by Postclassic Jalieza as Tecolote. It is the highest and most difficult to access of the three hills surrounding the modern village of Santo Tomas Jalieza. I consider the entire hilltop
ridge to be one of the five sub-sections (or neighborhoods if you like) of the site. I believe it constitutes an important conceptual entity within the site in terms of landscape, community, and political organization. However, even within this whole of the hilltop ridge, I believe there are subdivisions that can be made in order to understand the dynamics of the hilltop further. In the description below, I have divided the hilltop ridge into four sections: the Eastern Hilltop, the Plaza and Mound, the Plaza to Peak, and the Western Hilltop. The entire length of the hilltop ridge itself is quite long and narrow, as can be seen on the map in Figure 177. Based on the terrain, access to the ridge appears to have been through the center part of the Western Hilltop, past a number of high elevation terraces on the upper hillside. From this access point along the ridge, one must walk east along the spine of the hilltop, over the peak of the hill, then pass through the plaza area and around or through the only mound on the site in order to reach the Eastern Hilltop section of the site. The land drops precipitously in the area around the Eastern Hilltop, making it impossible to access this area of the site from the slopes of the hill. The same is true for the areas around the peak and the plaza sections of the hilltop. The near cliff-like steepness of the terrain dropping from the ridgeline in these areas directs the flow of traffic not only through the hilltop area of the site, but restricts the ability to access these sections of the hilltop. Figure 177 below is a map showing the location of terraces and collection squares along the entirety of the hilltop ridge. I will describe each subsection of the hilltop in greater detail in the pages that follow, starting with the Eastern section of the hilltop and moving west along the ridgeline.
Figure 177: Map of Entire Hilltop Ridge—Detailed Views on Pages to Follow
The Eastern Hilltop

Figure 178: Map of Eastern Hilltop with location of collection squares
The Eastern Hilltop section of the ridge shows clear evidence that it was a residential area. I believe that this area housed the residences of the elite rulers of the site. It contained collection squares PCJ-1, PCJ-2, PJC-3, PCJ-4, PCJ-5, and PCJ-6. I recorded 31 terraces, two possible plazas, and multiple retaining walls. Evidence for the residential nature of this section includes the presence of terracing, the construction of retaining walls in areas close to steeper slopes, the identification of manos and metates on the surface, a partially exposed house foundation, and the recovery of ollas and comales from collection squares. All of these features are represented in the photos below.

Figure 179: Images from hilltop survey
These features and artifacts are all indicative of residential occupation. I argue that this area was restricted to elite residences as evidenced by the artifacts found associated with these terraces as well as the restricted access to this area. The finds associated with the collection squares in this area of the site included some unusual or rare artifacts. These include paste types (crema and amarillo) that are not commonly found in the rest of the site and likely represent imported ceramic ware. Evidence of plaster floors were found associated with these households. A pendant was discovered in collection square PCJ-02, see photo below.

Figure 180: Image of Pendant from PCJ-02
Such indications of personal adornment were very rare at the site, limited to only two items found on the hilltop. The second pendant was found on the plaza, located just to the west along the hilltop ridge. Another unusual or rare artifact from the Eastern Hilltop area of the site was an urn fragment found in collection square PCJ-05.

Figure 181: Image of Urn Fragment from PCJ-05

Urns are associated with rituals involving ancestor veneration and are often associated with elite lineages (Marcus 1983c; Sellen 2002). This particular fragment represents a piece of corncob. Many urns are associated with corn, rain, and agriculture and reflect the connection between elite lineages, ancestor propitiation, and agricultural success. These connections will be described in greater detail below in my discussion of the Plaza and Mound section of the hilltop.

Interestingly there were a number of miniatures and sahumador fragments found on the hilltop, particularly in this eastern section. These are also associated with ritual propitiation of the ancestors and were likely employed in household rituals particularly
among the elite. Of the 20 miniatures found throughout the site, 16 were found on the hilltop ridge, and 10 of those were found among the squares of the Eastern Hilltop. 29 of the 61 sahumador fragments found throughout the site were found on the hilltop, 12 from the eastern section. I would suggest that these items are associated with household rituals of ancestor worship and would have been particularly important among elite families that trace their lineage to powerful ancestors. Thus the greater frequency of their presence on the hilltop in this section supports the idea that this was the residence of the ruling elite.

The Plaza and Mound

Adjacent to the Eastern Hilltop elite residential area is the Plaza and Mound area of the hilltop ridge. In a simplified version of the site organization of earlier settlements (see Chapter Nine for an extended discussion of this), this area consists of a mound with an associated plaza and was likely the civic-ceremonial core of the site. This sub-section of the ridgeline contained collection squares PCJ-7 and PCJ-8. Collection square PCJ-8 was located on the plaza itself, while collection square PCJ-7 was located to the east of the mound in open space. It is possible that this was a second plaza located in the more private restricted area behind the mound along the pathway to the Eastern Hilltop residential area. There were two small terraces nearby downslope from the ridge, but the immediate vicinity of the plaza showed no evidence of terraces. See Figure 183 for a map of the Plaza and Mound area. The mound itself is pictured below in Figure 182.
The mound now has a path worn through the middle of it, though I believe traffic in ancient times would have been directed around the mound. Exposed plaster floor now erodes from the center of the mound. A looter’s pit has been dug into the mound to the left of the present path. The southeast corner of the mound contains an outcrop of exposed bedrock (just to the right of this photo). Perhaps the mound was built around it to take advantage of the raised landscape. The mound itself is low, but distinctly a created mound. This area of the hilltop is somewhat flattened. It is unclear if the flatness of this area is entirely natural or was leveled by human effort, but it does appear to be the area along the hilltop ridge that is the most level. The flatness of the ground may also have been a reason this area was chosen for the construction of the plaza and mound.
Figure 183: Map of Plaza and Mound Area

Plaza and Mound

continued on
Central Hilltop
Map

continued on
Eastern
Hilltop Map
Two collection squares were placed associated with the Plaza and Mound area. The first, PCJ-07, was located to the east of the mound, in what was likely the more restricted side of the mound. The second, PCJ-08, was placed on the western edge of the plaza, located west of the mound in what was likely the public area associated with the mound. First I will discuss PCJ-07 which was located in the flattened area east of the mound but before the slope increases to the Eastern Hilltop residential section. This square yielded some unusual artifacts, including 2 crema rims, 2 sahumador fragments, and 2 pieces of plaster covered with red pigment. It also yielded some household related ceramics associated with food service, including ollas, composite silhouette bowls, and hemispherical bowls. However, this square did not yield a particularly large amount of material in comparison with terraces that seem to have been more clearly residential. For example, PCJ-07 contained only 74 sherds while other hilltop squares yielded 200-300 sherds. The presence of serving vessels but in lower numbers than might be found associated with a household might indicate that this was a feasting area with a red plaster plaza floor. The topography of the landscape separates this area from the household terraces to the east. The presence of the mound creates a physical barrier between this area and the public plaza. The area’s proximity to the mound and plaza would suggest the spot held particularly ritual importance. Its location to the east of the mound would make it a restricted site, as access would be limited and the location would be private. All these factors support the idea that this location may have been used for feasting by the elite.

PCJ-08 is located on the western edge of the plaza, to the west of the mound. This square yielded a great deal more material than PCJ-07: some 386 sherds and 24 pieces of
chipped stone. It contained a number of very interesting and unique items. The second pendant found at the site was found here (pictured below), as was an urn fragment.

Figure 184: Pendant from PCJ-08

A number of bowls and ollas were found in the square, as well as a fairly large number of unidentifiable sherds (19 unknown vessels). A large number of chipped stone finds were also recovered, including some of the most remarkable finds from the site, including two quartzite projectile points and an obsidian blade (pictured below).

Figure 185: Chipped Stone from PCJ-08

Interpreting the activities associated with the assemblage found in collection square PCJ-08 is not a straightforward endeavor. Interestingly no miniatures or sahumador fragments were found in this square. The bowls and ollas may indicate feasting activity on the plaza. The chipped stone points and blades may be indications of
ritual bloodletting activities. They could also be the remains of offerings that were left. The other chipped stone finds, including a core and unutilized flakes, would seem to indicate some manufacturing activities going on, though this seems unusual for a plaza setting. The presence of perforators and scrapers is equally puzzling to me.

**The Central Hilltop**

The Central Hilltop area climbs from the plaza west to the highest peak of the hilltop ridge and then down toward the Western Hilltop residential area. This area contained collection squares PCJ-46, PCJ-47, and PCJ-48. During the Postclassic, there was likely a path leading from the lower slopes through the upper terraces to mid-western portion of the hilltop, around collection square PCJ-49. Access to the Eastern Hilltop residential section of the site would be through the terrace groups at the peak of hilltop, down the eastern side of the peak, through the plaza, around or over the mound, and then to the Eastern Hilltop. The steepness of the slopes from the peak toward the east would have precluded other direct access to the eastern sector. There are terraces lining the pathway through the upper slopes to the hilltop. The area of the upper hillside along this likely path is now severely overgrown and very difficult to navigate. A clear path no longer exists, just a faint modeling to the landscape that winds through former terraces. It was impossible for us to map and surface collect on this area of the upper hillside because of the dense vegetation, but as we slowly fought our way through I took GPS readings of the terraces that we encountered. It would be very interesting to see what kinds of artifact assemblages might come from these terraces, but a larger crew, more time, and better clearing equipment would be necessary to set up collection squares.
Figure 186: Map of Central Hilltop Area
There are 22 terraces located between the plaza and the area around the peak. It is likely that the Central Hilltop Area was another elite residential section of the hilltop. The artifact assemblages coming from these squares present a mix of food related vessels, ritual vessels, and chipped stone/reworked sherds. This may be evidence for high status households engaged in ritual ancestor worship as well as productive activities requiring chipped stone and reworked sherd tools.

The area just west of the plaza is a large open flat area with lots of sherds but no visible walls. This is where collection square PCJ-46 was located. On the sloping sides of this flat area are located some terraces. These are small terraced areas with rock walls that face toward the steep slopes of the hillside. From this open flat area, the topography of the ridge slopes down to a narrow saddle, then up to the highest peak of the ridge top. A large number of sherds (377 sherds), including ollas and bowls were found in collection square PCJ-46, along with 6 sahumador fragments. These sahumador fragments likely indicate ritual activity. There were 9 chipped stone pieces including 3 chert cores found in this square as well as 4 reworked sherds. This is a very interesting assemblage that may indicate an elite household with associated activity area.

Collection square PCJ-47 was located down slope from a terrace where the terrain drops about 7 meters before it starts to climb more steeply toward the peak. This square also yielded a large number of sherds (497 sherds), including ollas and bowls, as well as a sahumador fragment and a miniature that indicate ritual activity. This square also contained 7 chipped stone pieces and 6 reworked sherds. A piece of plaster was also found in this square. The location of this collection square suggests that this material eroded down from terrace above. This terrace has a clear rock wall around three sides. It
is the third in a series of terraces stepping down the slope from the flat area. It is likely that this terrace was an elite household.

Collection square PCJ-48 was located at the peak of the hill, adjacent to a terrace. This is the highest point along the entire hilltop ridge. There are a number of terraces located around the peak of the hill, a cluster of 12. This square did not yield very much material (74 sherds, no chipped stone), likely due to the effects of erosion. But the artifacts that were recovered from this square include some very interesting finds including a shell, 2 crema body sherds, an urn fragment, and 6 sahumador fragments, in addition to olla and bowl fragments. This assemblage suggests an elite household and includes some rare items for the site. It seems likely that these 12 terraces arranged around this peak were a cluster of elite households.

Following the ridge to the west from the peak, there is a narrow, steep climb down. The steepest part of this descent contains no terraces. Then a few small terraces appear on the lower slopes of this part of the ridge. When the downward slope becomes more gradual a number of larger terraces appear. I consider this topographic distinction between the peak and western ridgeline of the hilltop as a demarcation line between the Central Hilltop and the Western Hilltop. As noted above, I believe access to the hilltop during the Early Postclassic was through this section of the site. Figure 187 below is a map of the Western Hilltop section of the site.
Figure 187: Map of Western Hilltop
The Western Hilltop

The Western Hilltop also appears to be a residential area. It contains collection squares PCJ-49 and PCJ-50. There are clearly delineated terraces with visible walls located in this area. The collection squares placed in this area of the site yielded large numbers of artifacts, mostly sherds, but there was not an even distribution of surface artifacts on the Western Hilltop. This is particularly true of the far western terraces which contained very little artifactual surface remains. The Western Hilltop is the lowest section in elevation along the ridgeline. In the present day the easiest route to access the hilltop was via the far western edge of the hilltop because this area of the hillside is now completely deforested and sparsely vegetated. This also means that the hillside is very eroded. After trying various routes to the ridgeline, I found hiking up the less vegetated far western slopes to approach the hilltop was the easiest access, though the loose soil made for difficult footing. It would appear that the Western Hilltop section of the site has experienced greater erosion than other areas of the hilltop. The slopes on the far west contained little vegetation and very loose soil, and the surface on the hilltop in the western section likewise contained less vegetation and showed visible signs of erosion.

Collection square PCJ-49 yielded a large number of sherds (357 sherds). The assemblage consisted mostly of bowls, but also included some ollas and one tripod vessel fragment. The chipped stone found in this square included mostly quartzite pieces. The square also contained 2 reworked sherds. This assemblage is quite similar to those recovered from the other collection squares along the hilltop, though it is missing any sahumador fragments or miniatures. The large number of quartzite pieces is interesting. Collection square PCJ-50 contained an equally large number of sherds (441 sherds),
again mostly bowls and ollas. This square did contain sahumador fragments and a miniature. It also yielded some chipped stone including a piece of chert and 2 pieces of quartzite, as well as 6 reworked sherds. Based on the contents of these collection squares, it is reasonable to propose that this section of the site was another elite residential area within the site. The location of these households on the hilltop is a good indication of their elite status. However this section is the farthest removed from the Plaza and Mound area, as well as from the Eastern Hilltop section that likely housed the most elite residences. Perhaps the Western Hilltop was a residential enclave for lower elite families.

**Summary of the Hilltop**

The Tecolote hilltop ridge area of the Postclassic site at Jalieza appears to have been the location of elite residences as well as the civic-ceremonial core to site. It was a combination of ritual space and domestic space, as well as the site of productive activities, evidenced by the presence of chipped stone and reworked sherds. The landscape of the hilltop created a particular physical and social environment. The physical landscape creates restricted access to the hilltop itself, and particularly to the far eastern section of site. One aspect of the difficulty of access to the site is its elevation above the alluvial plain. To hike from the base of the hill to the ridge takes at least 1½ to 2 hours. Then to access the far eastern part of the ridge requires another hour of walking along the ridgeline itself. I believe the restricted access of this far eastern edge of the hilltop created a removed, private, and potentially more secure space for the elite leadership.
There is a distinct lack of available resources on the hilltop. There is no fresh water and no land for food production. The distance between the hilltop ridge and the alluvial plain makes it unlikely that people living on top of the hill were working the fields below. So it is reasonable to assume that the lower status population of Postclassic Jalieza supported the subsistence needs of the hilltop elite. Another interesting aspect of the hilltop area of the site is the visibility afforded from the hilltop. The entire hilltop ridge offers commanding views of the valley in all directions, including clear views of the mountain pass road to the Tlacolula Valley. Also noteworthy is the defensibility of the hilltop. Of the three occupations at Jalieza, Postclassic Jalieza is by far the most remote, the most difficult to access, and thus the most defensive. The movement of settlement away from the mountain pass to Tlacolula to this ridge overlooking the pass would have been a significant change. This move was coupled with a shrinking in the size and population of the settlement at Jalieza as well. These are likely good indications of increased instability within the Valley during the Early Postclassic period.

The Hillside Slopes

The majority of the occupation at Postclassic Jalieza was located along the hillside slopes of Tecolote. The southern face of the hillside is covered with man-made terraces that housed the majority of the population at the site. I’ve divided the hillside slopes of this site into four major sections: the Western Slopes, the Central Slopes, the Central Eastern Slopes, and the Eastern Slopes. These divisions are based on the topography and landscape features of the site. The major landscape feature that separates each of these sections is the presence of large barrancas. In general, crossing these
barrancas would require walking downslope toward the flatter farmland area of the site—it is currently used as farmland and it is not far-fetched to suppose it was used thusly in the past as well—and then back upslope in order to move from one section to the next. It is my belief that these deep barrancas created natural neighborhoods to the settlement.

There is relatively little variation between the artifact assemblages found in each of the sections of the hillside. Indeed the material distinction between the artifact assemblages of the hilltop versus hillside collections is relatively small. This likely reflects a minimal wealth differential between elite and commoner households, though significant status distinctions between households are suggested by the architectural design of the site.

**The Western Slopes**

The Western Slopes of the site consist of lower piedmont to mid-slope terraces. I divided the Western Slopes into two groups based on a large empty ridge that separates the two clusters of occupation. See Figure 188 below for a map. Group 1 consists of 43 terraces and 8 collection squares, numbered PCJ-09 through PCJ-16. This is the far western edge of the site and likely contains some overlap with the Early Classic (IIIa) site. Group 2 consists of 63 terraces and 15 collection squares, numbered PCJ-17 through PCJ-31. There is a modern dirt road cut through the eastern edge of the Western Slopes and the southern border of this site has been cleared for cultivation. There is a large prisa or dam that has been dug adjacent to the southern part of this area as well. This prisa was empty during the time of survey as it was the height of the dry season.
Figure 188: Western Slopes—Collection Squares PCJ-09 – PCJ-31
These modern alterations of the landscape likely destroyed the southern edge of the original Postclassic site. The extent of this destruction is unclear, but the modifications coincide fairly well with the border between the upper piedmont/lower slopes and the alluvial plain, so it seems likely to suppose that the original site did not extend too much farther south into the alluvial plain during the Postclassic as this area was likely used for cultivation then as well. In this area of the site, the terracing of the hillside does not extend very far up the slopes. On the far western edge, associated with Group 1, the terrain is highly eroded and the soil very loose. I am unsure if this is due to recent erosion from deforestation or if this soil would have been as insecure during the Early Postclassic as well. While there were some flat areas identified, no cultural material was found on the surface nor were any terrace walls identified that would suggest human modification of the landscape. The terraces in Group 2 rise further upslope, but end rather abruptly due to an increase in the steepness of the hillside slope, as indicated on the map. A large barranca with steep sides separates the Western Slopes from the next area of occupation that I’ve termed the Central Slopes. In order to move from the Western Slopes area to the Central Slopes, one would have to either climb down into the barranca and back up the other side, or walk down toward the alluvial plain and back upslope. This physical barrier between sections of the site led me to categorize them as separate sub-areas within the overall hillside slopes.

The Western Slopes of the site are interesting for a number of reasons. The artifact assemblages recovered from this area of the site indicate that these were household terraces. Like the general trend throughout the site, collection squares yielded large numbers of ceramic vessels including bowls and ollas, a variety of chipped stone
tools, and ground stone including manos and metates. However, many squares in this section, such as PCJ-09, PCJ-10, PCJ-12, PCJ-13, PCJ-14 in Group 1 and PCJ-17, PCJ-20, PCJ-22, PCJ-30, and PCJ-31 in Group 2, contained cores indicating chipped stone production likely occurred in this location. There are also a number of squares that yielded unusual or rare artifacts generally associated with elite households. For example, PCJ-09 contained 2 miniatures and a cup, in addition to a large number of chipped stone pieces including a chert core and a quartzite core. PCJ-10 contained an amarillo body sherd, a rare paste type and likely an imported ceramic. PCJ-11 contained an urn fragment and a sahumador fragment, both generally associated with ancestor veneration and elite households. PCJ-11 also contained a quartzite projectile point, pictured below, while PCJ-12 contained an amarillo sherd, a sahumador fragment, and a broken chert point. These are among the few points recovered from the site.

Rounding out the unusual artifacts from the Western Slopes Group 1 are an urn fragment from PCJ-13 and a cup fragment, a sahumador fragment, and 2 pieces of shell from PCJ-15. For a complete listing of artifacts per collection square, see Appendix A.
This interesting variety of artifacts is reflected in the assemblages from some of the squares in Group 2 as well. PCJ-17 yielded a tripod vessel fragment, a cup fragment, an urn fragment, plaster, and many chipped stone pieces. PCJ-20 contained a miniature, an urn fragment, plaster, and multiple quartzite cores. Sahumador fragments were recovered from PCJ-21, PCJ-23, PCJ-27, and PCJ-29. PCJ-26 presents an unusual assemblage including an obsidian blade (one of only 5 found at the site), tripod vessel fragments, an amarillo sherd, and a cup fragment. PCJ-31 also stands out as an unusual square with the presence of an urn fragment, a tripod vessel fragment, a large amount of chipped stone, plaster, and a piece of shell.

The Central Slopes

The Central Slopes of the site cover the lower piedmont and stretch up into some of the higher slopes of the hillside. See Figure 191 for a map. This is a large area of the site and is separated from the Western Slopes by a large barranca and from the Central Eastern Slopes by an even larger barranca. This section of the site contains a number of very large rock outcroppings, as pictured below, which shape parts of the landscape.

Figure 190: Bedrock Outcroppings
Figure 191: Central Slopes—Collection Squares PCJ-32-PCJ-45 and PCJ-51 to PCJ-58
I identified 161 terraces in the Central Slopes section of the site during survey and mapping. We set up 22 collection squares in this section, numbered PCJ-32 through PCJ-45 and PCJ-51 through PCJ-58. These terraces and collection squares are indicated on the map in Figure 191. This is the largest section of the site in terms of both the number of terraces and the extent of land covered. This area, as is true of the rest of the site, is composed of household terraces. This is indicated by artifact assemblages that contain mostly bowls and ollas; vessels generally associated with household activities.

Most collection squares had small amounts of chipped stone, though a few squares yielded larger amounts that may indicate productive activities. Squares with cores or large amounts of chipped stone include PCJ-32, PCJ-41, PCJ-44, and PCJ-58. Collection square PCJ-44 contained 14 chipped stone pieces, including mostly chert pieces, a chert core, and some fine volcanic pieces. This larger volume of artifacts and the presence of a core may indicate chipped stone production associated with this area. Collection square PCJ-58 yielded a variety of stone types as well as two cores. These artifacts included 5 fine volcanic pieces including a fine volcanic core, a jasper core, 2 chert pieces, and 1 obsidian utilized flake. The presences of cores and the variety of stone types may indicate productive activities associated with this square as well. The chipped stone assemblage of collection square PCJ-41 was interesting in that it contained a variety of stone types including obsidian, jasper, quartzite, chert, and fine volcanic. These pieces were mostly scrapers and perforators, and were generally finished pieces. This may indicate a higher status household that had access to a wide variety of finished chipped stone pieces, rather than a lower status household producing tools on demand for use from one source of material. PCJ-41 also yielded an obsidian blade, a very rare
artifact at the site as only 5 blades were recovered over the entire site. This could also indicate that this square may have been associated with a higher status household.

As noted above, the ceramic assemblages from the collection squares in this section displayed a general household-related assemblage of bowls and ollas. There were a few squares that yielded some more unusual ceramics and may indicate higher levels of status than their surrounding households. But the overall impression of this section is one of general homogeneity. Noteworthy artifacts include a figurine fragment from collection square PCJ-35, sherds from a sahumador, a tripod vessel, a cup, and plaster in PCJ-39, a miniature and a sahumador fragment in PCJ-40, sherds from a sahumador and a tripod vessel in PCJ-43, and fragments from a sahumador and a tripod vessel in PCJ-51. The presence of sahumadors, figurines, and miniatures may indicate ritual activity associated with ancestor propitiation, as described earlier. Three collection squares of note include collection square PCJ-41, mentioned above for its unusual chipped stone assemblage including an obsidian blade. The ceramics from this square include a sherd from a thin orange cup rim, sahumadors, and tripod vessels. These ceramic artifacts also contribute to the argument that this was likely associated with a higher status household than those found elsewhere in the Central Slopes. Collection square PCJ-44 also presents an unusual assemblage with 2 sahumador fragments, a kiln waster, and a large amount of chipped stone pieces including a chert core. Collection square PCJ-58 produced 2 orange rims, an amarillo neck sherd from an olla, and a large number of chipped stone pieces, including 1 obsidian utilized flake and a variety of stone types including fine volcanic, jasper, chert, and quartzite.
The Central Eastern Slopes

The Central Eastern Slopes are separated from the Central Slopes by a large barranca and from the Eastern Slopes by a very deep barranca with steep cliff sides. The barranca between the Central Eastern Slopes and Eastern Slopes would be impossible to cross without walking downslope to more level ground, and then back up. The Central Eastern Slopes is a smaller enclave than the Central Slopes, with 66 identified terraces and 8 collection squares, numbered PCJ-59 to PCJ-66. The southern border of this area is concordant with a modern dirt road named “El Camino de la Piedra de Letra” because of a carved stone found to the east of this area and associated with the Late Classic site. There is also a modern prisa, or small reservoir, just past the southern edge of the site and cleared farmland area as the landscape transitions from lower slopes to alluvial plain. See Figure 192 below for a map of the Central Eastern Slopes.

Unlike the assemblages that came from the collection squares in the Central Slopes, of the 8 collection squares placed in this area, most yielded a least a few interesting or unusual artifacts. This may indicate that this sector, along with the Eastern Slopes, contained a larger concentration of higher status or lower elite households located on the slopes of the site than those found in the Central Slopes. It is possible that the location of the Central Eastern and Eastern sections of the site in closer proximity to the mountain pass road to Tlacolula may have increased the access of residents of these neighborhoods to trade and exchange via the road. However, I would argue that these households would still likely rank lower in status than their hilltop counterparts.
Figure 192: Central Eastern Slopes—Collection Squares PCJ 59 through PCJ-66
Collection square PCJ-59 contained a large number of chipped stone pieces, including 1 jasper core, 1 chert core, a quartzite chunk/core, and a quartzite biface. This same square also yielded a figurine and 10 reworked sherds. This large volume of chipped stone and reworked sherds may indicate productive activities occurred in this area of the site. Collection square PCJ-60 contained sherds from a sahumador, a tripod vessel, an urn fragment, and 5 pieces of chipped stone including chert, jasper, and fine volcanic. Collection square PCJ-61 yielded sherds from a sahumador and a tripod vessel, as well as 7 reworked sherds and 15 chipped stone pieces including a chert core, 11 other chert pieces, jasper, quartzite and 1 obsidian blade. The core and large number of chert pieces may indicate productive activities took place on site, while the presence of an obsidian blade, which is quite rare for the site, may indicate high status for the associated household. Collection square PCJ-62 produced 15 chipped stone pieces in a variety of stone types including fine volcanic, chert, jasper, and quartzite. All of these items were worked pieces, possibly indicating a higher status household that had access to a variety of finished pieces rather than producing their own tools from a limited stone source. Collection square PCJ-63 produced fragments from both a sahumador and a tripod vessel, possibly indicating ritual activity. Collection square PCJ-65 did not contain very much material, only 4 diagnostic sherds, 33 non-diagnostic sherds, 2 pieces chipped stone, and 7 pieces of plaster. However this assemblage included an orange body sherd likely from a hemispherical bowl. This is a rare paste type for the site and likely represents an imported ceramic vessel. Collection square PCJ-66 produced a very large number of sherds, 623 in all. These sherds included fragments from a variety of vessel types including a jar, cups, a comal, a flat bottomed bowl, 8 sahumador fragments, a tripod
vessel, as well as 6 reworked sherds. The square also yielded 13 chipped stone pieces from a variety of stone materials including fine volcanic, jasper, quartzite, and chert, including a chert core.

Around collection square PCJ-66 is a cluster of terraces on a rock prominence that towers over the eastern section of the site and offers a clear view of the mountain pass road to the Tlacolula Valley. This is a somewhat isolated area of the site with restricted access to it. The combination of natural and altered landscape is such that one can’t pass through it to any other part of the site or to other terraces, thus offering a certain amount of privacy and security. I suggest this was a prominent part of the lower slopes, possibly an elite household or watch post. It appears distinct from other parts of site, particularly due to its location in a very spectacular setting with very clear viewpoints of the mountain pass road to the Tlacolula Valley and the alluvial plain below.

The Eastern Slopes

Located on the far eastern edge of site, the Eastern Slopes is the smallest enclave within Postclassic Jalieza. However it is distinctly separated from the rest of the site because of the deep barranca described earlier. There is also likely some overlap in this section with the Late Classic occupation at Jalieza. 34 terraces were identified during survey and 4 collection squares, numbered PCJ-67 to PCJ-70, were placed in this section of the site. This area of the site is quite steep and quickly becomes too steep to navigate once one begins to move upslope. It is currently located between two prisas, or small reservoirs, and hugs to far eastern curve of the Tecolote hill. Walking downslope to the east and back upslope accesses the western edge of the Late Classic occupation at Jalieza.
Figure 193: Eastern Slopes—Collection Squares PCJ-67 through PCJ-70
Collection square PCJ-67 yielded a chunk of plaster with red pigment, along with sherds from bowls, ollas, a tripod vessel, 2 reworked sherds, a chert core and a fine volcanic notched flake. This red plaster was an interesting find, as described in Chapter Six. The only other red plaster found at the site was associated with the potential plaza located on the hilltop behind the mound. The red pigment may indicate high status for the household or possible ritual connections. The other artifacts recovered from this square would suggest a household context. Collection square PCJ-68 contained sherds from a comal, a cup, 4 crema sherds, a miniature, a sahumdor, a tripod vessel, as well as 13 chipped stone pieces including fine volcanic, chert, jasper, sandstone, quartzite, and an obsidian blade. The rare crema paste, miniature and sahumador indicating ancestor veneration, the variety of chipped stone materials, and the presence of an obsidian blade are all good indicators for elite status associated with the household that produced this square’s assemblage. Collection square PCJ-70 produced a kiln waster, an urn/figurine fragment, and a sherd from a tripod vessel. 7 pieces of plaster were also found within the square.

**Connecting Landscapes and Households at Postclassic Jalieza**

I’d like to return to some of the main themes related to households and landscapes that were explored in Chapter Seven and apply them specifically to Postclassic Jalieza. The exploitation of landscape can be seen as a reflection of the social order, or as a spatial ordering of the “broader conceptual landscape” (Knapp and Ashmore 1999: 16). In this way natural landscapes can be remade or molded into man-made landscapes in which space is constructed to control the movement and interaction of individuals. By
examining how space is manipulated, the landscape can be read as a reflection of the social organization and power structure of that community. In Chapter Seven, the Boott Mills factory town was presented as an example of how the manipulation of the spatial configuration of a site both reflected the ideological organization of the site and controlled the movement of actors through the site (Mrozowski and Beaudry 1990). In a similar fashion, the physical layout of the site at Jalieza reflects and reproduces the social structure of the site, with the elite on the hilltop and upper slopes and the lower status households occupying the lower slopes. This physical arrangement was deliberately reproduced when settlement was moved to the Postclassic site at a time when other sites in the Valley of Oaxaca were not necessarily following this site layout model.

Landscape can be connected with the sacred as well. Examples of elite control of sacred places were described in Chapter Seven (Blanton 1978; Tilley 1996). The ideological importance of mountain, caves, and water in Mesoamerica has been explored by other studies (Brady and Ashmore 1999; Brown 2004). There may well have been a sacred or religious connection to the hilltop areas around Jalieza. Sacred space though is never purely sacred; it is political space as well. The control of space is linked to power and ideology. Perhaps this is reflected in the restricted access to plaza and mound area at the top of hill. Blanton’s analysis of the restricted access to the Main Plaza at Monte Alban was explored in Chapter Seven, but it is worth drawing a parallel here with Jalieza (Blanton 1978). The difference here is that thousands of commoners from Jalieza willingly relocated their homes and built a new site at Tecolote that included a restricted elite residential area, in addition to a new ceremonial site. This differs significantly from what Faulsetit documents at Cerro Danush as well (Faulsetit 2012a, 2012b).
Human activities change the face of the landscape, but also exploit natural features of the landscape to support their own ideological purposes. I believe what may be interpreted through the site organization and layout of Postclassic Jalieza is an exploitation of the landscape for ideological and political purposes. The movement of settlement from the Jalieez ridgeline area to the Tecolote hill at a time that seems to coincide with the end of the Late Classic and beginning of the Early Postclassic reflects the significant expression of individual and group agency, by both commoners and elite. I suggest that a group of elite families used the ideological and religious traditions of Zapotec beliefs to persuade a core group of commoner households to relocate from Jalieez to Tecolote. By reproducing the core elements of earlier site arrangements, centered around places for ancestral propitiation, perhaps the residents of Postclassic Jalieza sought to bring about better conditions in an uncertain time by appealing to their ancestors for aid, employing the traditional methods they had at their disposal. This is a reflection of the power and influence of the elite at Jalieza, but also of the firmness of belief that commoners had about the proper way to organize village life, to venerate ancestors, and to honor or appease the gods. This theme of continuity and ideological conservatism will be explored in greater detail in the next chapter, Chapter Nine.

In Chapter Seven I described the expansion into the Lake Myvattn area of Iceland by ambitious early chiefs seeking economic and political gain. This was a marginal landscape, but through a combination of elite leadership and commoner action, new communities were established in what had previously been considered a less desirable environment. Perhaps there is a parallel that can be drawn here with the movement of settlement to Tecolote. The Postclassic site at Jalieza is more inaccessible and remote
than earlier Classic period settlements. Perhaps there are political and ideological explanations for this move to Tecolote. In practical terms, while Tecolote provides a more defensible enclave, this movement also required significant terracing and substantial altering of terrain. This reflects not only a substantial labor investment in establishing this new site, but likely a strong organizational leadership as well. Without a strong central leadership I would expect that one would see the reuse of terraces and mounds from the Late Classic or Early Classic sites. However, the movement of settlement to Tecolote is also the movement of settlement to the hardest to access and most remote hilltop in Greater Jalieza. Thus the commute to the agricultural areas of the site, and to areas for water access, becomes the greatest. As mentioned in Chapter Seven, the archaeological evidence from Viking settlements in Greenland shows persistence with mal-adaptive ecological practices because of ideology (Amorosi et al. 1997; Dugmore et al. 2007; McGovern 2006). In the case of Greenland it was the connection between status and keeping particular livestock, but might this be broadly applicable to Jalieza? Does the elite leadership of Jalieza, and a core of commoner followers, persist in reproducing the hilltop elite enclave supported by commoners that was more prevalent in earlier time periods into a Postclassic world that couldn’t really support it? Perhaps this is why Postclassic Jalieza doesn’t survive as a settlement into the Late Postclassic, but disappears before the Spanish arrival. Like the Greenland Vikings, perhaps the people of Jalieza were holding onto symbols of status from earlier periods, reproducing a conservative ideology that reflected the relationship between commoners and elites of the Classic period.
Chapter Nine:
Post-Collapse Continuity
at Postclassic Jalieza

Overview

The status of the socio-political organization of Jalieza during the Early Postclassic remains unclear. Can it be considered a *cacicazgo* during the Early Postclassic? Does it develop into one before being outcompeted by a local rival and disappearing? The settlement was abandoned by the time of the Spanish conquest, an indication that at some point during the Postclassic the settlement became untenable. The lack of any ethnohistorical information directly related to Jalieza makes it more difficult to answer these questions. Indeed these answers are outside the scope of available data and so outside the scope of this dissertation. But what is noteworthy and somewhat remarkable about Postclassic Jalieza is how similar it is in site organization and layout to earlier iterations of settlements at Jalieza during both the Early Classic and Late Classic periods. Setting aside questions of political organization and affiliation for the time being, I will examine this general trend of similarity in spatial configuration between the three sites. There are a number of differences to be recognized, but the overall impression is one of continuity of tradition. I will begin this chapter with a discussion of post-collapse continuity in general as presented in the archaeological literature. Then through a comparison of the Early Classic, Late Classic, and Postclassic components of Jalieza, I will show how certain central features of site organization that are connected to
ideological aspects of Zapotec tradition are reproduced and continued in Postclassic Jalieza. I believe this demonstrates that Postclassic Jalieza is indeed a traditional, conservative community that deliberately sought to recreate the lifeways of Zapotec culture as preserved through historical memory.

**Literature on the Collapse of Complex Society and its Aftermath**

There have been a number of studies that have looked at the social and political restructuring of societies after the collapse of a dominant political power. The idea of a spectacular and sudden collapse of a powerful state is a popular image in histories throughout the world. Part cautionary tale for the potential lack of sustainability of own our society, part adventure story of decadent societies gone amok, the paradigm of the overly powerful, over-extended state sowing the seeds of its own demise is one oft repeated in both popular and academic literature. Images of societies in the wake of these collapses often follow the model of Dark Ages Europe—backward times where the advances of civilization are forgotten, where thugs rule the land, and political and economic uncertainty become prevalent. Historically there has been little systematic archaeological study of societies in the aftermath of state collapse, but a relatively recent spate of archaeological projects has sought to examine this conventional wisdom. These works have examined both the issues surrounding collapse itself (Tainter 1988; Railey and Reycraft, ed. 2008) as well as the aftermath of the collapse of complex societies (McAnany and Yoffee, ed. 2010; Schwartz and Nichols, ed. 2006). This recent interest in collapse began with Tainter’s work, and was spurred further by the popularity of Jared Diamond’s *Collapse: How Societies Choose to Fail or Succeed* (Diamond 2005).
edited volumes listed above tackle a number of important concepts including the
distinction between decline versus collapse and the ideas of regeneration, resilience, and
the re-creation of political and social life. I will briefly describe these issues below, as
well as introduce a discussion of orthodoxy, maintenance of tradition, conservatism, and
the intertwining of religious ideology and political leadership.

First let me begin with Tainter and the question of collapse. I will discuss
whether the disappearance of the Monte Alban state qualifies as a collapse later in this
chapter. For now, I want to introduce some of the concepts that other authors have laid
out in understanding what may constitute the collapse of a complex society. Tainter
offers the following definition of collapse: “A society has collapse when it displays a
rapid, significant loss of an established level of sociopolitical complexity” (Tainter 1988:
4, author’s italics). Tainter goes on to say, “The collapse… must be rapid—taking no
more than a few decades—and must entail a substantial loss of sociopolitical structure”
(Tainter 1988: 4). If it takes longer, it should be considered decline rather than collapse.
Tainter presents several historical examples of collapse, including the Roman Empire,
Minoan Civilization, the Egyptian Old Kingdom, and, interestingly, societies in the
Mesoamerican Highlands including Teotihuacan, Tula, and Monte Alban. He notes that
common elements to collapse include the overextension of an empire’s territory and
social strife among classes or component groups. He also sees a common political
pattern in which empires break down into smaller, competing political units. About
Monte Alban in particular, he states, “sometime in the seventh century it collapsed as the
political center of the Valley, and a series of autonomous petty states formed” (Tainter
1988: 13). The question of the rapidity of Monte Alban’s demise remains somewhat
unclear, but many authors suggest decline, rather than full-scale, rapid, dramatic collapse (Balkansky 1998; Blanton et al. 1982; Casparis 2006; Elson et al. 2010; Faulseit 2012b; Flannery and Marcus 1983; Marcus 1989). I will address this in further detail below.

Tainter goes on to describe the characteristics of society that are likely to be found after collapse. These include the breakdown of authority and central control. Political centers lose prominence and power, are often ransacked, and in many cases are abandoned. He argues that it is common for small competing petty states to emerge and engage in conflict with each other thus creating a period marked by perpetual instability. He suggests this may be a time of lawlessness as the disappearance of the regulatory control of the state has left a power vacuum in its wake. Monumental construction and art disappear. Literacy is lost. Urban populations reuse existing architecture, as little new construction is undertaken. Long distance and local trade and markets decline, as does craft specialization. Population size and density decline, particularly in the case of urban populations.

Many elements of this picture of post-collapse society fit with the picture that has emerged of Postclassic Jalieza, while some aspects do not. Perhaps if Monte Alban’s power over the valley wasn’t complete, or if the power of the state had been declining for decades (or centuries?) prior to its ultimate demise, then the disappearance of the state would not have had such a destabilizing effect on individual sites within the Valley. If markets were independent of the ruling elite, you would expect them to continue. As noted in earlier chapters, some argue this was the case in the Valley of Oaxaca. But Postclassic Jalieza doesn’t show a strong connection to the market. Does this indicate there was some state-level or ruling elite control over the market? Another possibility
could include that there was a strong level of trade during the Early Postclassic but that Jalieza didn’t participate in it to a large extent, either due to economic reasons or ideological ones. It is very curious that settlement at Jalieza moves from the Late Classic component at Jalieez to the hill of Tecolote in the Early Postclassic. The site’s inhabitants don’t simply reuse the earlier terraces and mounds from the Early Classic and Late Classic settlements, at least not on a large or significant scale. While there is a paucity of monumental construction on the Postclassic site, there is still a significant amount of labor intensive construction that occurs in clearing and terracing both the hillside and entire length of the hilltop. This preparation of the site for inhabitation represents no small feat in terms of time and labor investment. It would require a significant amount of effort and likely a degree of supervisory organization, particularly when it comes to the upper terraces and the hilltop area. A ceremonial center and mound, small though they are, appear to have been created during the Early Postclassic in association with the elite residential enclave located on the eastern end of the hilltop ridge. That the site of Postclassic Jalieza is located on the steepest and most difficult to access mountain ridge in the Greater Jalieza site seems significant as well. It is likely an indication that the Valley had become more conflict-ridden during the Early Postclassic or that the elite leadership of this new Jalieza settlement considered it important to be more concerned with defense. This can be seen in the settlement’s retreat from the mountain pass road to Tlacolula as well.

One of the issues I find with applying Tainter’s work to Jalieza is the somewhat stringent definition he has of collapse. Other authors have questioned the utility of this concept as Tainter defines it. Yoffee suggests, “one might consider collapse as a
movement from a relatively more stable condition to one that is less stable” (Yoffee 2006: 222). McAnany and Yoffee’s edited volume, *Questioning Collapse*, questions the notion of societal collapse in general. As stated in the editors’ introductory chapter, “When closely examined, the overriding human story is one of survival and regeneration” (McAnany and Yoffee 2010: 5). Rather than focusing on stories of failure and loss, they introduce the idea of resilience. As they state, “Things change and they change profoundly, but more often elements of a society (including belief-systems and ways of making a living) retain their basic structure and function within longer cycles of change” (McAnany and Yoffee 2010: 10). This idea of resilience, and of continuity with the past, seems particularly useful in trying to understand Postclassic Jalieza. Other authors use the concept of transformation rather than collapse. Editors Railey and Reycraft suggest that rather than collapse, “in some cases, complex systems may be transformed (either rapidly or gradually) without a complete breakdown of economic structures, loss of complexity, political fragmentation, and demographic reduction or displacement” (Railey and Reycraft 2008: 12-13, italics theirs). McAnany and Gallerta Negron take on this view of transformation, rather than collapse and aftermath, in examining 8th century Maya society (McAnany and Gallerta Negron 2010).

Another popularly used idea in the post-collapse literature is that of regeneration and social reorganization. Joyce Marcus discusses the idea of regeneration in a number of her works (Marcus 1989, 1992, 1993, 1998), examining the aftermats of the falls of Teotihuacan and Monte Alban, as well as Maya states. Marcus discusses reorganization in her 1989 contribution “From Centralized Systems to City-State” to *Mesoamerican After the Decline of Teotihuacan*. She states that “most scholars have devoted more
attention to the ‘rise and fall’ of civilizations than to the processes that subsequently led to a reorganization of the population remaining in their territories” (Marcus 1989: 201). Marcus notes that it is common for states such as Monte Alban to dominate and control large areas of territory early in their existence, and then fragment as provinces break away from state control. What is interesting is that she also notes that the urban-based center of these states continues to grow even as their territory shrinks. This would seem to describe the expansion, contraction, growth and decline of Monte Alban. In her contribution to the above cited volume, Marcus notes that it is important to consider the role of elites, perhaps ambitious ones taking advantage of political instability, in shaping the emergence of new small-scale polities in the wake of political decentralization (Marcus 1989). This may indeed be what unfolded at Postclassic Jalieza. With the ultimate demise of Monte Alban as a centralized authority, perhaps a faction of elite families from Late Classic Jalieza were able to exert enough influence over a significant portion of the population to convince them to relocate the settlement to Tecolote. Without a clear, local leadership, it is likely that the entire population of Late Classic Jalieza would have dispersed across the landscape, reusing small portions of the Early Classic and Late Classic sites, but demonstrating no clear organizational pattern to their settlement, constructing no new terraces or civic-ceremonial spaces. An important part of this argument that merits mention is that there is also a large degree of commoner agency involved in this scenario as well. While an elite leadership may have been instrumental in moving the settlement and having a new site created, a large enough commoner base had to agree to the plan. Given the population decrease between the Late Classic and Postclassic settlements, it seems likely that not every one was convinced and
a good deal of the population did disperse. However, a significant portion of the population chose to follow this leadership and engage in the arduous work of clearing, leveling, and establishing a new site.

Other authors discuss the opportunities that political decentralization offer to individuals and sub-groups within a society. Schwartz states “with the disintegration of traditional sociopolitical and ideological structures, new opportunities for social mobility and individual agency may emerge during periods of collapse” (Schwartz 2006: 9). Yoffee states “studies of regeneration, like those of collapse, require that archaeologists reckon on the active participation of individuals who make choices among the multiple and overlapping identities available to them.” (Yoffee 2006: 227). Sahlins (1981, 1995) sees the reproduction of structural institutions within society as being attributable to both historical memories and the actions of individuals and groups within society. Masson et al.’s interpretation of Postclassic Mayapan is that the emergent new elite pick and chose elements from Classic Maya culture, preserved through historical memory, in order to selectively organize Postclassic Mayapan political and social life. This can be seen as an example of regeneration based on calculated acts by the elite that draws on conservative ideological traditions and relies on participation by commoners in the reproduction of these earlier established structures (Masson et al. 2006).

Another issue raised in this literature is the question of orthodoxy, particularly when it has been housed within a state-sponsored system. According to some authors, this will shape how people think about religious practices and religious places once the state is no longer present. As Kolata states in his chapter in *After Collapse*, “Orthodoxy, in other words, is intimately associated with the process of the transformation of
historical consciousness. Habitual social, economic, religious, and ideological practice is intimately bound to belief. Believers become citizens; citizens become believers. Subjects aspire to the values promoted by state authorities, often through religious practice.” (Kolata 2006: 214). I find it useful to think about this within the framework of a maintenance of tradition or conservatism within society. This is of particular interest to consider when there may be the intertwining of religious ideology and political leadership, as appears to have been the case within the Zapotec tradition. Many authors have explored the connection between Zapotec religious practices and elite rulership (Joyce and Winter 1996; Marcus 1978; Marcus and Flannery 1976, 1978; Sellen 2002). See Chapter Eight for a more detailed exploration of this topic. I see Postclassic Jalieza as essentially a conservative community, modeling itself on the traditional ideology of Zapotec culture that links religion, ancestors, and political leadership. Other communities that dispersed and reused sites show some continuity in ideology, but the recreation of a new site based on earlier religio-political forms represents a next level of zealotry, dedication and conservative ideology. Perhaps this population is pursuing a purified form of tradition, believing that society had gotten away from traditional beliefs in the Late Classic and that’s why things fell apart. Perhaps the establishment of the site at Postclassic Jalieza is a re-dedication to tradition and orthodoxy.

**The “Collapse” of the Monte Alban State**

Part of the question here is what constitutes “collapse” and whether we can consider the Monte Alban state to be a collapsed state. Some researchers argue for a sudden collapse of Monte Alban at the close of the Late Classic period (Winter 1989,
This argument sees the disappearance of the Zapotec great tradition within the Valley of Oaxaca with the close of the Late Classic. 

Winter has suggested that this may have been predicated upon environmental strain as Monte Alban grew too large for its agricultural base, particularly during times of drought or environmental stress. The difficulty in dating sites to the transitional Early Postclassic period has contributed to uncertainty in this debate to some extent. Many other researchers though argue that the Monte Alban state saw a long period of decline, beginning as early as the Terminal Formative and Early Classic (Balkansky 1998; Casparis 2006; Elson et al. 2010; Flannery and Marcus 1983; Marcus 1989). In this scenario, there is a slow transition of power from a centralized state based at Monte Alban to autonomous regional centers. Despite this transition of political power, the cultural influence of the capital over the Valley of Oaxaca seems to continue even after the extent of its physical territory shrinks. Under either scenario by the end of the Late Classic the Main Plaza at Monte Alban is abandoned and the residential sections of the capital are depopulated to a large extent. This would seem to signify a fairly significant shift within the Valley. Whatever political control Monte Alban may or may not have had over the Valley, it seems to have been a significant cultural influence up until its demise. The abandonment of the Main Plaza at Monte Alban is coincident with the abandonment of civic-ceremonial precincts in many other important Late Classic sites including Lambityeco (Lind and Urcid 2010), Cerro Danush/DTMG (Faulseit 2012a, 2012b), El Palmillo (Feinman and Nicholas 2004), and Jalieza (Elson et al. 2010). It is not unreasonable to suppose that this turn of events at Monte Alban had an important
ripple effect on the political and social organization of settlements throughout the Valley of Oaxaca.

While Tainter’s definition of collapse includes a short time frame for a state’s dissolution, the examples he gives to support his argument include ones that entail long periods of decline. One such example is the Western Chou Empire in China. He notes that this dynasty took power in 1122 B.C. and began to lose its power by 932 B.C., but it wasn’t until 771 B.C. that the last Western Chou emperor’s reign ended with his death. Tainter notes that this collapse of empire was followed by five centuries of “disintegration and conflict” (Tainter 1988: 6). Another example of collapse offered by Tainter that exhibits a period of decline before abandonment is Chaco Canyon, New Mexico. Research indicates that the area experienced decline in population and organizational unity beginning around A.D. 1050, but isn’t abandoned until A.D. 1300. So even within Tainter’s evidence for the collapse of states followed by social disintegration and reorganization, we find examples that may mirror in some ways a declining state power followed by eventual collapse like that potentially exhibited at Monte Alban. While ultimately it does matter whether Monte Alban collapsed quickly or slowly declined over a series of generations (and hopefully future research will help determine this), I believe that, to an extent, that is beside the point here. What matters for our purposes in understanding the political and social organization of Postclassic Jalieza is that Postclassic Jalieza is a settlement that is built and inhabited in the turbulent years after the disappearance of the Monte Alban state, the large-scale abandonment of the capital of Monte Alban, and the absence of the political or cultural influence of Monte Alban as a state-level entity.
Post-Collapse Continuity at Postclassic Jalieza

Looking specifically at Jalieza, somewhere near the end of the Late Classic period, the Late Classic site is abandoned. More than half the population disperses from Jalieza. A new Postclassic settlement is built very close by. All of this must occur for a reason. So whether we can call the dissolution of the Monte Alban state a “collapse” or not, there is significant Valley-wide change occurring that entails the disappearance of a central authority—be that authority political, religious, ideological or otherwise. It is not unreasonable to suppose that the decline of Monte Alban and the shift in settlement at Jalieza from the Late Classic to the Early Postclassic site are in some way connected or linked. I’m not suggesting direct causation, but instead that the shift in population and settlement at Jalieza is a reaction to the changing political and social environment within the Valley of Oaxaca as a whole after the demise of the Monte Alban state.

Understanding the political development of Postclassic Jalieza does depend on when Monte Alban’s actual territorial or political/administrative power over other sites within the Valley actually declines. One possibility is that Monte Alban has been on the decline since the Early Classic and Jalieza has been emerging as an independent or quasi-independent political entity since that time. If during the Late Classic, Jalieza was indeed politically independent from Monte Alban, the political and leadership transition to the Postclassic may have been relatively smoother. The same elite families may have remained in power during the transition from the Late Classic to the Postclassic, simply moving the settlement to a different, nearby, more defensible location in reaction to instability and political turmoil within the Valley. There is a significant loss of population between settlements, indicating that a good portion of the people of Jalieza
perhaps lost faith in the leadership and moved elsewhere. Simultaneously there is a sizeable population who had enough loyalty to the leadership and sense of connection to the landscape of the region that they relocated the core of their settlement in Jalieza at great physical expense. This engagement in the relocation of the site also entailed a continued support of the hilltop living elite.

Another scenario is that Monte Alban continued to control the Valley through the Late Classic and that its decline and collapse had a more dramatic impact on Jalieza. The power of the ruling elite at Jalieza diminished as Monte Alban lost its authority and most of the population from Late Classic Jalieza scattered concordant with the decline of Monte Alban. In the wake of this political turmoil a particularly persuasive family or faction of families at Jalieza emerged into a leadership position and garnered enough support to move the settlement to the hill of Tecolote. Here they established a new site based on the model of previous settlements, with a hilltop elite enclave and civic-ceremonial center.

A third scenario combines elements of the first two. This envisions that during the Late Classic, Jalieza possessed an independent or mostly independent leadership but this power establishment lost the support of the populace around the end of the Late Classic. A new ruling family emerged to move the core of the settlement to Tecolote. It seems too coincidental to image that a ruling elite at Jalieza would lose the support of their base at the same time that the ruling elite at Monte Alban are experiencing a similar event without the two events being connected, either through causation or correlation. At this point, with the scant amount of detailed data that we have on the Classic to Postclassic transition, it impossible to tell which of the above scenarios may be more
likely. Indeed, there are numerous other scenarios that may be imagined as well. To make any of this anything more than speculation, we need to know more about the decline of Monte Alban, the independence of sub-regions during the Late Classic, and the political and social situation of the Valley in the early years of the Postclassic.

However, we can say something about the Postclassic site of Jalieza despite this uncertainty. The most compelling argument for a high degree of continuity in Jalieza between the Classic period settlements and the Postclassic settlement is the site organization and layout of each component. While there are some important differences, which will be explored in further detail below, the overall arrangement displays a connection with traditional Zapotec religious and ideological beliefs, linking the elite with ceremonial precincts. This arrangement is repeated in all three temporal components. It is this repetition of traditional spatial patterning that leads me to conclude that there is a remarkable degree of continuity that can be observed between the earlier settlements at Jalieza and the Postclassic settlement. All three components involve a hilltop civic-ceremonial complex attached to a high status residence or residential area, terraced hillside households, and piedmont/high alluvium household terraces. What is somewhat surprising about Greater Jalieza is that these terraces and hilltop centers are not intensively reused throughout successive time periods, but instead the core of settlement shifts from one hillside to another with each time period. This is not a pattern commonly seen at other sites throughout the Valley. This raises two particular questions—1) why does settlement shift? and 2) why does the same pattern of settlement get repeated? The remainder of the chapter below will explore examples of continuity within the different temporal components at Jalieza, as well as incorporate a discussion of some important
differences between the settlements. I will then compare the situation at Jalieza with that of Cerro Danush (part of the DMTG complex) and information we have from other Postclassic sites from around the Valley of Oaxaca.

Comparison of Postclassic Jalieza with Early Classic and Late Classic Jalieza

As noted in earlier chapters, the terminology for the individual temporal components of Jalieza can be confusing. The three main occupations of Jalieza were identified and named by the Valley of Oaxaca Settlement Pattern Project in the 1970s. Based on the accepted ceramic sequence at the time, they were referred to as Monte Alban IIIa, Monte Alban IV, and Monte Alban V, which were believed to correspond with the Early Classic, the Epiclassic or Early Postclassic, and the Late Postclassic. Subsequent research on the settlement sequence of the Valley of Oaxaca has come to the general consensus that Monte Alban IIIa does indeed correspond to the Early Classic, but Monte Alban IV should be temporally considered part of the Late Classic. Monte Alban V encompasses all the Postclassic period, though I have made the argument earlier in this dissertation that the occupation at Jalieza is confined to the Early Postclassic, referred to by some as the Liobaa phase. For a more detailed and in-depth discussion of these temporal issues, see Chapters Four and Five. For the remainder of this chapter, I will refer to the MA IIIa settlement as Early Classic Jalieza, the MA IV settlement as Late Classic Jalieza, and the MA V settlement as Postclassic Jalieza.

Landscape features and site layout of Early Classic Jalieza. The Valley of Oaxaca Settlement Patterns Project identified the site of Early Classic Jalieza as covering 4 km² in size with a population estimate of 13,000. They identified 698 terraces and 44
mounded structures (Kowalewski et al. 1989). Subsequent research on the site included systematic surface collection by Laura Finsten in 1988 and topographic mapping, intensive survey and surface collection, and excavation by Luca Casparis in 2002-2003. Each of these research projects identified the civic-ceremonial center for the site as located on the top of a hill known as Danilin, or the Hill of the Chile Pepper, with household terraces cascading down the hillside toward the alluvial plain. Below is a view of the Early Classic site, taken from the base of Postclassic Jalieza.

Figure 194: Photo of Early Classic Jalieza settlement on Danilin Hill. Taken from lower slopes of Postclassic Jalieza.
There is a saddle in between two peaks on the hilltop. These peaks and saddle are the location of the civic-ceremonial, hilltop core of the site. The peaks were modified into platforms while the saddle between the two was artificially widened into a plaza. Mounds were built on top each of these platforms. The northern section contains a four-mound group arranged around an interior patio. The southern peak contains a single mound atop the platform. The northern four-mound group has been identified as an elite residence, while it has been suggested that the southern single mound was a two-room temple (Casparis 2006; Finsten 1995). It has also been suggested that this spatial arrangement is modeled on the Main Plaza at Monte Alban in which a large elite residence, in the form of a four-mound group surrounding an interior patio, is located on the northern end of the plaza, and a large temple is located on the southern end. The size of these buildings at Jalieza are on a significantly smaller scale than those located at Monte Alban, but the spatial arrangement is quite similar. Access to the plaza, temple, and residence at Jalieza is restricted by the landscape features of the hilltop. The approach to this enclave is too steep on all sides but one. That one approach to the summit is lined with terraces, likely elite housing, that would further restrict traffic flow (Casparis 2006; Finsten 1995). This restriction of access to the area is also seen as a similarity in design with the Main Plaza at Monte Alban.

This model of a plaza flanked by an elite residence on one side and a temple on the other is found repeated in other sites within the Valley of Oaxaca during the Terminal Formative and Early Classic as well, including at San Jose Mogote (Marcus and Flannery 1996) and at Cerro Tilcajete (Elson 2003). It suggests an association between the ruling elite and religious and ceremonial practices that would be conducted both at the temple
and associated plaza (see Chapter Eight; also Joyce and Winter 1996; Marcus 1978; Marcus and Flannery 1976, 1978; Sellen 2002). It is suggested that ritual bloodletting activities by the elite were performed as public display and that offerings were made on the plaza.

The hillside cascading down from the apex of Danilin and the civic-ceremonial core toward the alluvial plain to the south at the base of the hill was filled with household terraces. The landscape of the high alluvium reaching toward the plain included further household terraces as well as sections containing mounds identified by both Finsten and Casparis as elite residences. Casparis excavated two of these mounds in 2003. One was identified as an elite residence, while the other was interpreted as a two-room temple (Casparis 2006). The essential organization of the Early Classic site reflects a hilltop civic-ceremonial center with an associated elite residence, hillside terraces including a mixture of elite and commoner households, and piedmont/high alluvium household terraces that also featured a mixture of commoner households with some elite households.

**Landscape features and site layout of Late Classic Jalieza.** The Valley of Oaxaca Settlement Pattern Project identified the Late Classic (Monte Alban IV) component of Jalieza as covering 4.6 km$^2$ containing a population of around 16,000 (Blanton et al. 1982; Kowalewski et al. 1989). This Late Classic component of Jalieza features a number of similarities in site organization and layout with the Early Classic settlement, but also displays some important variation. The most distinct similarity is the overall arrangement of the settlement, which entails a hilltop ridge area with civic-ceremonial features including mound groups and a public plaza, hillside household
terraces, and piedmont/high alluvium household terraces and mounded architecture. The overall impression of the organization and look of the site is quite similar to the Early Classic component. The landscape of the area is used in the same manner as the Early Classic site, exploiting the steepness of terrain to restrict access to certain areas, particularly the hilltop. The defensibility of the site is largely based on landscape features and is quite similar to the Early Classic site in this way. It is worth noting though, that rather than simply reusing the terraces, mounds, and plazas of the Early Classic site, the Late Classic site is built about 3 kilometers across the alluvial plain arranged around the hilltop known as Jialeez ridge or Cerro Piedra de Gavilan.

Figure 195: Image of Late Classic Jialeza settlement on Jialeez Ridge located on left side of photo, taken from lower slopes of Postclassic Jialeza site.
It has been noted that Jalieza is an unusual Classic period site within the Valley of Oaxaca because it contains a very large population during both the Early and Late Classic, but contains very modest monumental architecture. Surely one factor in the lack of monumentality to the mounds at Jalieza is the effort that went into moving the site between the Early and Late Classic occupations. The Late Classic mounds, platforms, and structures were all built anew, rather than successively built upon earlier structures, thus making it more difficult to construct a large or monumental structure. This may suggest a change in leadership between the Early and Late Classic. This new leadership may have sought to establish a new site unaffiliated with the earlier leadership. It is also possible that the site was moved for strategic reasons. The Late Classic site straddles the mountain pass road to the Tlacolula Valley and may have achieved a certain amount of economic advantage by controlling access to and movement along this road. Nonetheless, the overall organization and site-layout of the Early Classic and Late Classic components of Jalieza bear many similarities. Excavations by Elson et al. exposed the presence of elite-level households beyond the hilltop area (Elson et al. 2010). Elite households were identified on the slopes of the hillside, adjacent to the ancient road to Tlacolula, as well as located near the ancient Tlacolula road on the high alluvium. This spatial arrangement of elite households is similar to the organization found at the Early Classic site as well. The high alluvium residential structure was part of a four-mound group containing an identified temple, an architectural arrangement also uncovered by Casparis’ excavations at the Early Classic Jalieza site.

A notable difference between the two sites is that two civic-ceremonial cores have been identified for the Late Classic site, both located along the hilltop ridge. One is a
mounded group surrounding a plaza located directly along the mountain pass road to Tlacolula. The other is located a distance along the ridge away from the road. Each of these is associated with an elite residence, but the more restricted nature of the one versus the more clearly public nature of the other is an interesting and significant difference from the Early Classic physical arrangement of the hilltop core. Finsten sees this as an important “reorganization of elite and civic-ceremonial space, and presumably their associated activities, between Monte Alban IIIa and IV” (Finsten 1995: 82). She interprets the presence of two civic-ceremonial cores as an indication that the elite political control over the site is weaker and less centralized than during the Early Classic.

**Landscape features and site layout of Postclassic Jalieza.** I will provide a summary below of Postclassic Jalieza landscape features and site layout. See Chapter Eight for a detailed explanation. The Valley of Oaxaca Settlement Pattern Project identified the Postclassic Monte Alban V site as covering 1.5 km square with a population around 6600.

Figure 196: View of Postclassic Jalieza settlement on Tecolote Hill.
The Valley of Oaxaca Settlement Pattern Project identified, and my survey confirmed, the presence of a hilltop civic-ceremonial site as an important feature of this temporal component. While the regional survey project identified no mounds at Postclassic Jalieza, I identified what clearly appears to be a mound, albeit small, located on the hilltop ridge, associated with a likely plaza. Future excavation could explore the possibility of whether this mound functioned as a platform for a temple. The mound was located at a narrow point of the hilltop ridge and access to the entire eastern end of the hilltop would require movement over, or skirting around, this mound.

Figure 197: Image of Mound Located on Top of Postclassic Jalieza Hilltop Ridge.

Adjacent to this mound, stretching along the eastern ridgeline of Tecolote, was an elite residential area. These residences contain many of the more exotic artifacts, or artifacts associated with elite households, found at the site. Elite residences are also located along the rest of the hilltop, extending west from the mound and plaza area. Access to this hilltop enclave was quite restricted, mostly due to the physical features of the landscape. Much like the earlier Classic period sites, access to the elite and
ceremonial areas on the hilltop was limited due to the steepness of terrain on the approach up the hill. Additionally, the area of the hillside that did seem to be the main avenue of access to the hilltop was lined with household terraces. That layout is again quite similar to both the Early Classic and Late Classic settlements. Cascading down the hillside from the ridgeline, in the center area of the hillside, I identified many household terraces. The number of household terraces increased as you reached the piedmont/high alluvium. Again, this is a site organization pattern that parallels that of the Classic period settlements. Like the Early Classic and Late Classic sites, the defensibility of the Postclassic site was based on the exploitation of landscape features. Indeed, the Postclassic site at Jalieza was built on the highest, steepest, and least accessible hill in the Greater Jalieza area. This overall site organization, featuring a hilltop civic-ceremonial center associated with elite residences accompanied by hillside household terraces, is quite similar to both Classic period sites found at Jalieza. It is significant to note that, like the Late Classic site after the close of the Early Classic period, the core of settlement moved away from the Late Classic center and was rebuilt nearby at great expense during the Early Postclassic.

There are some interesting differences between the Postclassic settlement at Jalieza and the Classic period components. One such difference is the dearth of mounded architecture during the Postclassic. As mentioned above, only one mound was identified for the entire Postclassic site, located on the hilltop ridge. In contrast, 44 mounded structures were identified as part of the Early Classic site, while 47 mounded structures were identified at the Late Classic site (Finsten 1995). These Classic period mounds were located both along the hilltops and ridgeline, but also on the high-alluvium as well.
The Postclassic site contains no mounded structures on the high alluvium, only household terraces. Another significant difference between the Classic period settlements at Jalieza and the Postclassic enclave is the size of each settlement: Early Classic Jalieza covered around 4 square kilometers, Late Classic Jalieza 4.6 square kilometers, and Postclassic Jalieza only 1.5 square kilometers. The difference in population is likewise significant: Early Classic Jalieza population estimates are around 13,000, Late Classic Jalieza around 16,000, and Postclassic Jalieza around 6600 (Kowalewski et al. 1989). So Postclassic Jalieza is notably smaller in both territorial size and population than either of the Classic period occupations. This follows overall trends for the Classic and Postclassic periods, as does the significant decrease in mounded architecture. Despite its smaller relative size, Jalieza remained a larger site in the Postclassic, when compared with other sites within the Valley, though it does not remain among the largest.

Comparisons of site size during the Postclassic are made difficult because of the lack of refinement of time scale within the Postclassic. As discussed earlier, the Postclassic/Period V time frame for the Valley of Oaxaca covers 600+ years. Thus comparing Jalieza with a population of 6600 with another important Postclassic site such as Mitla’s population estimated at more than 10,000 may be a faulty comparison. That population estimate for Mitla may reflect a later period within the Postclassic that may or may not have been contemporaneous with the Postclassic settlement at Jalieza.

Nonetheless, it is important to note that there is a significant population loss at Jalieza between the Late Classic and Early Postclassic components.

Each of these sites, the Early Classic, Late Classic, and Postclassic, is composed of a hilltop civic-ceremonial center, with associated elite residential wards, and hillside
household terraces stretching down to the piedmont and high alluvium. The hilltop civic-ceremonial center associated with the Early Classic site seems to have been modeled on the Main Plaza at Monte Alban. The hilltop centers of both the Late Classic and Postclassic sites, while similar in broad terms, are not modeled on the arrangement found at Monte Alban. All three temporal components at Jalieza do follow a broad pattern of a civic-ceremonial core located atop a hill, with a plaza, associated elite residences, evidence for religious ritual activity, evidence for feasting activity associated with the civic-ceremonial core, and restricted physical access to the area. All three temporal components also present household terraces descending the hillside from its apex civic-ceremonial core to the high alluvium. Each of these settlements would face the same challenges of commuting to agricultural fields and of providing water and food to the hilltop elite residents, in addition to the significant amount of construction labor it would have taken to create not only the hilltop plaza, mounds and residences, but the hillside terraces as well. Each of these sites would have benefited from the defensibility of their hillside and hilltop locations. The Postclassic site would have been the most inaccessible and remote, while the Late Classic settlement the least secure because of its location along the Tlacolula mountain pass road. It seems likely that the Late Classic location of the settlement along this road was done intentionally for strategic purposes, while the Postclassic retreat from the road may have also served some strategic purpose, likely for greater defense while still allowing a certain level of monitoring of traffic along the road.
Status Differences during Early Classic, Late Classic, and Postclassic at Jalieza

The material distinctions between elite and commoner households seem to have been more pronounced during the Classic period and less so during the Postclassic. I have explored this topic at length in previous chapters (see Chapters Five, Six, and Eight) in regards to Postclassic Jalieza, but allow me to summarize some of the thinking of previous researchers on the status distinctions present at both the Early Classic and Late Classic sites. I will include a brief summary discussion of household status within the Postclassic site as well.

For the Early Classic site, both Finsten and Casparis use architecture to help define elite versus commoner sections within the site. They compare features such as building stone, the presence of plaster, mounded structures, and the size of terraces and terrace groups in order to determine the status level of households within the site. Casparis used excavation data to confirm assumptions about household status made through these architectural components. He was able to uncover the floor plans of structures and recover associated artifacts allowing him to make more definitive determinations on the purpose of certain structures, such as a residence versus a temple, as well as gain insight into the status of residences. Some of his data included burials, such as Burial 10 found underneath Structure 4 in Area B-2 of site, the hilltop elite residence. The association of this burial with an urn and a number of vessels with carved designs and burnished patterns lends credibility to the assumption that this structure was indeed a hilltop elite residence (Casparis 2006).

Finsten looks specifically at terrace group size to determine status. She interprets larger terrace groups as associated with elite households. She finds this to be particularly
true for the Early Classic. In her analysis, she states that Late Classic (Period IV) elite terrace groups tend to be closer in size to commoner terrace groups. She also uses vessel forms to draw distinctions in household status. Serving bowls, which she describes as display ceramics and include decorated bowls as well as undecorated fine wares, are seen by Finsten as markers of elite status. Finsten also sees status differences between households in the greater percentage of large utility vessels used for food preparation and storage found among elite households. She states, “Clearly feasting was a significant elite activity” (Finsten 1995: 90). Obsidian becomes another marker of elite status in Finsten’s analysis of Jalieza. She notes that larger amounts of obsidian were recovered from elite terrace groups than commoner terrace groups. Additionally she notes that there are a wider variety of obsidian sources represented in elite terraces. According to her surface collection data, 70% of obsidian found at the Early Classic (IIIa) site came from elite contexts, while 85% of the obsidian found at the Period IV (Late Classic) site came from elite contexts (Finsten 1995). Despite this increase in the exclusivity of obsidian to elite contexts, Finsten sees an overall decline in the wealth of the elite during the Late Classic when compared with the Early Classic. She argues that perhaps due to increased competition by elites for commoner loyalty during Period IV, the elite are forced to demand less tribute and service from commoners than during the Early Classic when their power was backed by the Monte Albán state (Finsten 1995).

Finsten and Young both use artifacts associated with religious ritual to bolster arguments about elite status and ritual activity during the Classic period. Finsten notes that the ritual artifact complex of sahumadores, urns, and miniatures was found to be more widely distributed across elite and commoner contexts in the Late Classic (Period
IV) than in the Early Classic (Period IIIa), suggesting a loosening of the association between religious ritual and elite control. She states that the architecture of the Late Classic (Period IV) site suggests that public ceremony was important in religious activity, while the artifact data suggests that private religious activity was more common (Finsten 1995: 91). Young suggests that urns and figurines from Jalieza show that all Classic Jalieza residents participated in rituals associated with ancestor veneration, not just the elite. She documents 243 urns, 45 figurines, and 40 unknown from the Early Classic (IIIa) surface collections and 205 urns, 21 figurines, and 23 unknown from the Late Classic (IV) surface collections. Comparing these numbers with the relatively small amounts of urn fragments and figurines found at the Postclassic site (see Chapter Five) raises the question of why are there such high numbers from the Classic sites and such low numbers from the Postclassic site? Young states that the Valley of Oaxaca Settlement Pattern Survey data showed a primate spatial distribution of urns, “therefore, based on what we know of social stratification and of the internal political organization of Jalieza society, I would expect urns to be more prevalent in elite-focused areas rather than in commoner residential areas.” (Young 1993:123). For Early Classic Jalieza, the largest assemblage of urns is associated with the hilltop elite terrace group, and the smallest number of urns is associated with commoner terrace groups. However, she notes that when chi-square and phi-squared tests are applied to urns versus utilitarian bowls, there does not seem to be a statistically significant difference. She does conclude, however, that figurines are more densely distributed in elite areas as opposed to commoner areas. For Late Classic (IV) Jalieza, elite terrace groups have the largest numbers of urns, but when the ratio of urns to utilitarian bowls is again compared, it is
three commoner terraces that prove to have the greatest number of urns per bowl (Young 1993: 127). Young concludes that, “access to these ritual items clearly was not restricted by social status in either phase.” (Young 1993: 131). Young states, “it is very clear that all members of Jalieza society participated in the ritual life of the community.” (Young 1993: 148).

Elson et al. likewise use a mixture of terrace location and material goods to determine status level for households found within the Late Classic settlement. Like Casparis’ work at the Early Classic site, Elson et al. have the advantage of possessing excavation data to help verify assumptions about household status developed during site survey. Excavations of burials associated with both the high alluvium residence and the hillside residence revealed ceramic offerings and other burial offerings that confirm a likely elite status for the individuals buried underneath the associated structures (Elson et al. 2010).

My criteria for determining the status of households followed similar terms to those employed by Finsten, Casparis, and Elson. I specifically considered elite goods to be those material goods not found commonly throughout site. This includes unusual ceramics, which include any pastes other than café or gray, the presence of sahumadores and miniatures (artifacts that are associated with ritual), and the presence of obsidian, projectile points, and well-made chipped stone tools. Most hilltop households have some or all of these artifacts, while most hillside households do not. Further evidence that hilltop houses are in fact elite families comes from landscape and spatial features of the settlement that entail restricted access, longer travel distance to agricultural sectors of site, and a closer association with civic-ceremonial spaces within the site. I’ve made the
argument earlier that there is a lesser degree of material difference between elite and commoners during the Postclassic, but how that translates to status is unclear. As I’ve argued, there do seem to be clear status differences based on the presence of a hilltop enclave of residences versus hillside terraces. The longer travel distance to agricultural fields makes it less likely that hilltop residents are engaged in subsistence activities. Access to their homes is also restricted, in addition to being more closely associated with the civic-ceremonial core of the site. The presence of status differences and an elite ruling group during the Postclassic seems to follow the ideological settlement patterns of earlier components. This site organization pattern is modeled on the earlier settlements where the material distinction between elite and commoner households is more pronounced and clear. In the case of the Postclassic, I think it is not unreasonable to suppose that while the material distinctions between households may have been lesser, status distinctions between elite and commoners were still present. Despite the seemingly lesser degree of material wealth among the elite during the Postclassic, the re-creation of the model of these Classic period sites’ spatial organization during the Postclassic can be interpreted as an indication that while the elite of the Postclassic may not have had as much by way of wealth distinction over commoners, there was still a significant status distinction between classes within the society. I contend that much of this distinction, and the political power that ensued from it, came from the religious ideology connected to the elite’s role as intermediaries between the mundane world and the ancestral spirits. Evidence for traditional rites that propitiated ancestors, including bloodletting, incense burning, and miniature dedications are found associated with the elite sectors of the site, most prominently along the hilltop. This would indicate that the ruling elite of Postclassic
Jalieza were perpetuating the religious ideology of earlier Zapotec traditions. The fact that a new site was built to house these elite during the Early Postclassic would indicate a large enough commoner base to provide the labor required to create this new site, and so a large enough commoner base to support this elite leadership.

**Comparison with other Postclassic sites.**

It is useful to consider Postclassic Jalieza within the context of other contemporary sites in the Valley of Oaxaca as well. I’ve discussed the site of Cerro Danush extensively in previous chapters, but it proves instructive to revisit the similarities and differences between it and Jalieza here as well. Faulseit sees a process of decline, dispersal, and reorganization at Cerro Danush, part of the larger DMTG site. Faulseit’s analysis emphasizes resilience on the household level during the transitional period of the Early Postclassic. Faulseit sees a discontinuity in political organization during this time period transition, but not in social organization. He examines site abandonment patterns at Cerro Danush, but also finds evidence for what he describes as resilient household activities. Faulseit notes that the civic-ceremonial center located at the top of Cerro Danush shows a slow decline and abandonment over the course of the Late Classic into the Early Postclassic, while commoner households at the base of the hill show continued occupation from the Late Classic through the Early Postclassic. His research at the site indicates that the civic-ceremonial core located atop Cerro Danush during the Late Classic was the location of restricted elite ceremonies to Cocijo (Faulseit 2012a). However, there is a slow decline of this summit complex at the end of the Late Classic and into Early Postclassic as the overall site lost population during this period.
Faulseit states, “The complex at the summit most likely fell out of use because the ceremonial activities and elite lifestyles were no longer sustainable by the decreasing population. I have proposed elsewhere that this pattern reflects a rejection of the ruling political system by the commoners, who simply began to move away when support of the elites was no longer beneficial to them” (Faulseit 2012a: 154). During the Early Postclassic, the hilltop at Cerro Danush continues to be used for ceremonial activities, but no one lives there. Instead, Faulseit finds evidence of “open and communal ritual activities at the summit” (Faulseit 2012b: 410). “While Cerro Danush maintained its ceremonial importance into the Postclassic, the nature of the ritual behavior at the site changed significantly from restricted, elite-dominated practices to more open, communal ceremonies” (Faulseit 2012a: 152). In contrast, low status residences at the base of the hill show continued occupation from Late Classic through Early Postclassic. Faulseit interprets this as an indication that commoner households experienced little change as part of the political transition from Late Classic to Postclassic. Faulseit states, “I suggest that the evidence presented here best fits the hypothesis that while the Late Classic elite-driven system of political organization fragmented and declined, resulting in smaller, more dispersed Early Postclassic communities, social institutions that governed household ritual behavior and regional markets remained intact. These resilient institutions maintained a level of weak integration among the dispersed polities in the Early Postclassic that could later be exploited by newly founded elite lineages” (Faulseit 2012b: 421). I believe this contrasts significantly with the Late Classic to Early Postclassic transition at the site of Jalieza. Perhaps this is because Monte Albán was the ruling entity in DMTG during the Late Classic and so when it collapses there is a
leadership void there. Whereas at Jalieza, perhaps there is a leadership entrenched during the Late Classic that is independent from Monte Alban and so when Monte Alban collapses the leadership is able to continue its influence and control over the area.

Feinman and Nicholas have also done extensive work on sites that bridge the transitional period of the Late Classic to Postclassic. Their work has focused on sites located in the Tlacolula branch, the eastern arm of the Valley of Oaxaca. They conducted intensive survey and surface collection at three sites in the Mitla vicinity—Guirun, El Palmillo, and the Mitla Fortress (Feinman and Nicholas 2004). They have also excavated a number of residences and structures within the site of El Palmillo (Feinman et al. 2002). Each of these sites provides some interesting comparative data with Jalieza. Each site contains a hilltop center and hillside household terraces. They also exploit the physical aspects of the landscape for defensive purposes. Each site shows continued occupation from as early as Late I through both the Early and Late Classic periods (IIIa and IIIb-IV) and into the Postclassic (V). In some cases, such as at the Mitla Fortress and Guirun, the population expands during the Postclassic, while at El Palmillo, the population constricts during the Postclassic. In all three cases though, the Postclassic population is more dispersed than during the Classic period and reuses the previously built upon land from earlier occupations during the Postclassic period. There are some interesting features of new construction that appear during the Postclassic, most notably the large defensive walls of the Mitla Fortress are built during the Postclassic. However, there is nothing comparable to the complete relocation of a 6000-person community as at Jalieza.

The site of El Palmillo contains a Late Classic period hillside-hilltop settlement, resembling Jalieza in very broad terms. This hilltop enclave is occupied for some time
during the Postclassic, but Feinman and Nicholas described the focus of the Postclassic settlement as being located at the lower slopes of the hill (Feinman and Nicholas 2004). However at the same time, Feinman and Nicholas argue that the elite residences at the top of the hill show evidence for continued occupation and remodeling as more and more commoner households at the base of the hill are steadily abandoned. They interpret this as a long process of decline at the site rather than a rapid abandonment with the transition from Late Classic to Postclassic. Feinman and Nicholas suggest that the commoner class ultimately rejects the authority of the ruling elite by voting with their feet, i.e. abandoning the site over time, until the hilltop elite residences become untenable (Feinman and Nicholas 2009).

*Post-Collapse Continuity at Postclassic Jalieza Revisited*

What seems to be unique about Postclassic Jalieza is the movement of the site to a new locale during the Early Postclassic. The Late Classic site is not simply abandoned because the population moved away from the area or to the alluvium. The population that remained did not simply build on top of the Early and Late Classic sites. Instead a new site was deliberately created. A site that was not easy to build, not conveniently located, and not haphazardly organized. The site of Postclassic Jalieza appears to display an intentional continuity of cultural and religious practices in the face of a changing world. There is a degree of Postclassic reuse of earlier terraces and mounds at Jalieza, documented by previous researchers at the Early and Late Classic sites, including the Settlement Pattern Project, Finsten, Casparis, and Elson (Casparis 2006; Elson et al. 2010; Finsten 1995; Kowalewski et al. 1989). However, the clear center of the
Postclassic site, and the overwhelmingly vast majority of the site is new construction during the Postclassic located on the hill of Tecolote. This contrasts significantly with Cerro Danush, Cerro Tilcajete, and other sites. It has been noted by many researchers that it is not only common but the dominant practice during the Postclassic to reuse the terraces and civic-ceremonial areas or earlier sites.

Each component at Jalieza represents a heavy investment in labor to create terracing and a heavy energy investment to move up and down the hillside to reach not only the civic-ceremonial sites at the apex of the hills, but to reach housing located on the hillsides. Each temporally distinct site at Jalieza seems to exhibit a certain amount of defensibility. But each also exists contemporaneously with large alluvial plain sites as well, from the Early Classic through the Postclassic. This seems to be a curious distinction. Why does Jalieza choose to settle on hills during both the Classic and Postclassic periods while other sites are out in the open? Finsten describes the question thusly, “A major question facing the Valley of Oaxaca Settlement Pattern Project since its first work at Monte Alban… was why so many people lived on the tops and sides of hills, usually in remote, out-of-the-way places where water was scarce and where even living space had to be constructed… Exhaustive analyzes of the regional survey data collected for hilltop sites suggest that defense (Blanton 1978; Elam 1989), boundary maintenance (Kowalewski et al. 1983), piedmont agriculture (Blanton et al. 1982; Kowalewski 1982), craft production, and agricultural labour (Kowalewski et al. 1989) may have been important, although not all of these variables played a role in every locality” (Finsten 1995: 1).
Jalieza appears to be built for defense, or inaccessibility at the very least. Which begs the questions: What are they defending themselves from? What are the threats in the Valley? It has been suggested that for the Early Classic and Late Classic perhaps Monte Alban itself or other emerging independent city-states may have been threats to the security of Jalieza (Casparis 2006; Elson et al. 2010). Were rival, competing city-states even more significant threats during the Early Postclassic, so much so that the site retreated from the mountain pass road to Tlacolula to the most remote of the hills in Greater Jalieza. Or perhaps, as suggested by Tainter and others, was the collapse of the authority of state-level society followed by a general lawlessness within the Valley of Oaxaca that merited this retreat? There are many other questions raised by examining Postclassic Jalieza related to the political organization throughout the Valley during the Early Postclassic. Can we consider Postclassic Jalieza a city-state or cacicazgo? Is it perhaps a very early one that becomes established soon after the decline or collapse of Monte Alban? Interestingly, Postclassic Jalieza does not survive as a settlement into the Late Postclassic. Perhaps it is destroyed by other competing city-states. Perhaps the population moves away from the inhospitable locale of Postclassic Jalieza when the Valley becomes calmer and safer as more cacicazgos develop.

**Conclusion**

Regardless of the terminology that may or may not apply to the political organization of Postclassic Jalieza, the spatial organization of the site demonstrates a clear and apparently intentional reproduction of essential organizing principles foundational to earlier period site layouts. The great labor investment that would have
been entailed in creating this new Postclassic site speaks to the ideological significance of its location and arrangement to both the elite and commoner populations who chose to create this settlement, rather than re-inhabit earlier already-built terraces and mounds. Future excavation at Postclassic Jalieza would allow for a better understanding of the material distinctions between elite and commoner sectors of the site, as well as differences between individual households within the site. As more research emerges from this Early Postclassic period, as there develops a better understanding of the ceramics for the sub-period, we may be better equipped to develop a picture of the political structure and interaction of sites within the Valley of Oaxaca for this time period. My impression is that there is likely a wider variety of socio-political structures present in the Valley at the time of the Early Postclassic than in either the Classic or Late Postclassic periods.
Chapter Ten: Conclusions

Overview

The Postclassic component of Jalieza appears to date to the early years of the Postclassic period. While not as well understood as many other periods in the history of the Valley of Oaxaca, the Early Postclassic does seem to have been marked by socio-political instability and change. Through the lens of household archaeology and landscape analysis, this dissertation has sought to understand the site of Postclassic Jalieza at this turbulent and transitional time. Analysis of data collected during systematic survey and surface collection has developed a picture of a post-collapse community based on the continuation of traditional Zapotec beliefs and organizational strategies. The movement of settlement from the Late Classic area of the site to a new hill during the Early Postclassic reflects a significant investment in time, labor, and resources. This relocation also reflects an important expression of agency on the part of both the commoner and elite portions of the population. The deliberate re-creation of key elements of traditional Zapotec architecture, site layout and use, as well as religious practices at Postclassic Jalieza indicate a strong element of continuity with earlier settlements and practices. I believe that Postclassic Jalieza represents a conservative community intentionally preserving and perpetuating traditional beliefs and practices during a period of social and political upheaval. This chapter will reiterate my overall conclusions for the site as well as present future avenues for research at the site.
Research Topics

This project examined four essential research topics pertaining to the Postclassic period within the Valley of Oaxaca, Mexico.

1) Household and Landscape: Household and landscape organization within the community of Early Postclassic Jalieza was examined through the analysis of the structures and remains associated with household terraces and the organizational layout of the site. The remains of household goods found on the surface at the site indicated minor distinctions between the material holdings of elite and commoner households. However, the organizational layout of the site, particularly with respect to the landscape features of the hillside and hilltop, indicated the presence of some degree of stratification within the settlement. While the elite of Postclassic Jalieza may not have had access to the same level of material wealth as the elite of the earlier Classic periods, they did seem to be able to exercise enough power and influence over a significant portion of the commoner population in order to establish a new settlement during the Early Postclassic on the hill of Tecolote. The site organization and layout of this new settlement reflected not only a significant labor investment in its creation, but reproduced the previous physical dynamic of elite versus commoner stratification seen in Classic period sites—namely the hilltop and upper hillside elite residences versus lower hillside commoner residence pattern. I suggest that while wealth differences between classes may have been minimal, status distinctions were still present.

2) Post-Collapse Continuity: This household and landscape organization indicates a deliberate effort, at great labor and resource expense, to recreate traditional Zapotec patterns. The settlement was moved after the end of the Late Classic and rebuilt on a
nearby hill. This new site was clearly modeled on earlier patterns found in both the Early and Late Classic components and thus displays a remarkable degree of post-collapse continuity in both organization and practice. Like many other Classic period sites, Jalieza lost a significant amount of population during the transition to the Early Postclassic. However a large portion of the population not only remained at Jalieza, but invested a substantial amount of labor and resources into relocating the settlement to a new hilltop and hillside in close proximity to the Late Classic site. This newly established Early Postclassic component at Jalieza appears to have been modeled on the earlier site layouts found at the Classic period settlements. This high degree of continuity likely reflects a conservative re-creation of traditional community, political, and religious structures.

3) Trade: While trade appears to have been an important unifying element of Late Postclassic Oaxaca, there is little evidence that Early Postclassic Jalieza was well integrated into extensive trade networks. The very small amounts of obsidian and rare ceramic paste types indicate that Postclassic Jalieza had some limited access to non-local goods. However the paucity of material, and the minor distinctions between the assemblages found in the proposed elite areas of the site versus commoner areas, would suggest that site residents had very marginal participation in any large-scale market exchange. This may indicate that trade played a weaker role in inter-Valley integration and cooperation during the Early Postclassic in general as compared with the Late Postclassic, or simply that Jalieza’s role within the market was very weak during the Early Postclassic.
4) Ceramics: The ceramic assemblage recovered from surface collection at Postclassic Jalieza does appear to support recent refinements of the ceramic sequence for the Postclassic Valley of Oaxaca. Due to the limited temporal occupation of Postclassic Jalieza, this collection has provided an opportunity to test the correspondence of these proposed Postclassic sub-phases with surface data from this particular Postclassic site. Jalieza seems to be an exclusively Early Postclassic/ Early V/ Liobaa site and to reinforce the sub-phases proposed for the Postclassic. Excavation at the site of Postclassic Jalieza would ultimately provide a better sample of ceramics and allow for a more reliable contribution to a further understanding of the ceramic sequence.

Avenues for Further Research

There are a number of directions that future research at the site of Postclassic Jalieza could take. I have suggested future research projects throughout this dissertation, but will reiterate those suggestions here.

1) Elite versus commoner households: Analysis of the surface collection has shown relatively minor distinctions between the material assemblages of elite and commoner households. Excavation of a series of households, representing both suspected elite and commoner households, would provide more plentiful and reliable data to assess the status of the household, and the range of variation in material goods found associated with elite and commoner households. Excavation of suspected elite households or elite areas within the site may also provide greater insight into the question of Jalieza’s participation in trade and markets during the Early Postclassic.
2) Household-based production: Excavation of areas associated with potential productive activities may provide more insight into the practice of household-based production during the Early Postclassic. There was some evidence for areas within the site that may have participated in chipped stone production, and limited evidence for the potential production of ceramics.

3) Plaza and mound area: Excavation of the plaza and mound area, as well as the adjacent areas may uncover additional information about the religious and ceremonial practices that occurred at the site, providing data to understand the relationship of the ceremonial area within the site with the residential areas along hilltop. This could also provide comparative data for extending the analysis of post-collapse continuity with the Classic period sites.

4) INAA and petrographic analysis of ceramics: Excavation could provide ceramic samples appropriate for INAA and petrographic analysis. This may shed light on questions related to trade and the importation of materials within the Valley of Oaxaca and beyond during the Early Postclassic.

5) Source analysis for quartzite samples and other chipped stone: Excavation could also provide appropriate chipped stone samples for source analysis in order to better understand trade within the Early Postclassic.

**Overall Conclusions**

In the wake of the decline of the Monte Alban state, at a time when centralized power and elite power seems to have waned significantly within the Valley of Oaxaca, a significant portion of the population of Jalieza moved their village from one hillside to a
neighboring one, recreating a traditional site organization based on an elite residential 
enclave associated with ceremonial public space. At a time when other settlements 
within the Valley seemed to have abandoned hilltop sites in favor of a general dispersal 
of population into small, valley-floor settlements, or simply reused earlier terraces and 
mounds, this new settlement at Postclassic Jalieza was established. I believe that this 
Postclassic settlement at Jalieza represents a conservative element of Zapotec society—a 
deliberate reconstruction and continuation of the traditions of political and social 
organization that existed within the Valley in the centuries leading up to the Postclassic. 
This move required a very significant amount of labor input and organization, and may 
represent a deliberate effort on the part of both elite and commoners to maintain the 
traditions of their ancestors and to reproduce the practices and orientations of previous 
generations.

Postclassic Jalieza offers one potential glimpse into the aftermath of the decline of 
a state-level society. The correspondence of the site’s occupation with the disappearance 
of the Monte Alban state, but before the ethnohistorically documented Late Postclassic 
cacicazgos, provides a rare opportunity to study this transitional period. The view of 
Postclassic Jalieza that has emerged from the data collected during survey and surface 
collection is one of continuity in the face of change, modeled on the traditions of the past. 
The spatial organization of the site appears to reproduce the essential organizing 
principles found in Classic and earlier period site layouts. Creating this new Postclassic 
site would have required a heavy investment of labor and resources. Without an 
ideological significance to the location and arrangement of the site, it seems reasonable to 
suppose that Jalieza’s residents who chose to stay in the area would have simply reused
already-built terraces and mounds, found in abundance at the Early and Late Classic sites. Establishing and building a new settlement in the Early Postclassic represents a significant expression of agency on the part of both commoner and elite members of society.

As more research is conducted at sites dating to the Early Postclassic, a better picture of political and social organization within the Valley will emerge. Collectively we may be able to develop an understanding of the interaction among sites within the Valley of Oaxaca during this time period. It may be likely that a wide variety of socio-political structures existed within the Valley of Oaxaca during the Early Postclassic. If the Early Postclassic period was indeed a time of uncertainty, upheaval, and reorganization within the Valley, it is not unreasonable to suppose that a number of ways of organizing local populations emerged in the centuries following the demise of the influence of Monte Alban. Perhaps it took a few centuries for the system of competing cacicazgos, as documented in the Late Postclassic, to emerge. Postclassic Jalieza may very well represent one of these early experiments, one that clung to the ideological and political traditions of the Classic-period Zapotec but was situated within a changed Valley-wide landscape. Perhaps ultimately the model that Postclassic Jalieza was based on became outdated and untenable, and so the site was permanently abandoned.
Appendix A
Collection Square Finds

PCJ-01 Eastern Hilltop

Ceramic Finds: 233 sherds
Non-diagnostic sherds:
Café: 78 sherds
  0 café burnished
  78 café unburnished

Gray: 112 sherds
  91 gray burnished
  20 gray unburnished

Other: 2 sherds
  1 white/gray
  1 gray/café

Diagnostic Sherds:
Café: 7 sherds
  1 café handle base
  2 café handle fragments
  1 café handle
  1 café miniature
  1 café rim
  1 café body sherd

Gray: 34 sherds
  33 gray rims
  1 gray body sherd

Relative % Paste:
  36% café sherds
  63% gray sherds
  1% other paste sherds

Vessel Types:
  Composite Silhouette (4 gray) 10%
  Comal (1 gray) 2%
  Conical bowl (4 gray) 10%
  Florero (1 gray) 2%
  Hemispherical bowl (1 café, 16 gray) 41%
  Miniature (1 café, 2 gray) 7%
  Olla (1 café, 2 gray) 7%
  Sahumador (4 café) 10%
  Unknown (4 gray) 10%

Other Finds:
Chipped Stone: 2 pieces
  1 unutilized quartzite flake
  1 unutilized chert flake

Plaster:
  20 pieces of plaster
PCJ-02 Eastern Hilltop
Ceramic Finds: 200 sherds

Non-diagnostic sherds:
Café: 39 sherds
4 café burnished
35 café unburnished

Gray: 113 sherds
106 gray burnished
7 gray unburnished

Diagnostic Sherds:
Café: 6 sherds
1 café handle
1 café pendant
2 café neck
1 café rim
1 café body

Gray: 40 sherds
1 gray handle base
1 gray handle
3 gray body
34 gray rims
1 gray neck

Other: 2 sherds
1 crema rim
1 unknown body

Relative % Paste:
22.5 % Café
76.5% Gray
1% Other

Vessel Types:
Composite Silhouette (11 gray) 23%
Conical bowl (1 café, 3 gray) 8%
Hemispherical bowl (9 gray) 19%
Large storage (1 café) 2%
Olla (2 gray, 2 café) 8%
Outleaning bowl (4 gray) 8%
Pendant (1 café) 2%
Sahumador (1 café, 2 gray) 6%
Unknown (9 gray, 1 crema, 1 unknown) 23%

Other Finds:
Chipped Stone: 7 pieces
1 unutilized quartzite flake
1 quartzite perforator
1 quartzite scraper
1 chert unutilized flake
2 chert perforators
1 fine volcanic flake
PCJ-03 Eastern Hilltop

Ceramic Finds: 221 sherds
Non-diagnostic Sherds:
Café: 40 sherds
  0 café burnished
  40 cave unburnished

Gray: 150 sherds
  137 gray burnished
  17 gray unburnished

Diagnostic Sherds:
Café: 3 café
  1 café base
  2 café rims

Gray: 28 gray
  18 gray rims
  8 gray body sherds
  2 gray neck sherds

Relative % Paste:
  19% Café
  81% Gray

Vessel Types:
  Comal (1 gray) 3%
  Composite Silhouette (6 gray) 19%
  Conical Bowl (2 gray, 1 café) 10%
  Cup (1 gray) 3%
  Hemispherical Bowl (6 gray) 19%
  Miniature (1 café) 3%
  Olla (4 gray) 13%
  Outleaning Bowl (2 gray) 6%
  Unknown (6 gray, 1 café) 23%

Other Finds:
  Chipped Stone: 7 pieces
    1 chert core
    3 chert scrapers
    1 fine volcanic scraper
    2 chert notched flakes
PCJ-04 Eastern Hilltop

Ceramic Finds: 291 sherds
Non-diagnostic Sherds:
Café: 97 sherds
  2 café burnished
  95 café unburnished

Gray: 159 sherds
  144 gray burnished
  15 gray unburnished

Diagnostic Sherds:
Café: 11 sherds
  1 café handle base
  1 café miniature
  2 café body sherds
  6 café rims
  1 café neck

Gray: 24 sherds
  23 gray rims
  1 gray body sherd

Relative % Paste:
37% Café
63% Gray

Vessel Types:
Comal (2 café) 6%
Composite Silhouette (7 gray) 20%
Conical Bowl (3 gray) 9%
Cup (2 gray) 6%
Hemispherical Bowl (3 gray) 9%
Miniature (2 café) 6%
Olla (1 café, 1 gray) 6%
Outleaning Bowl (5 gray) 14%
Sahumador (1 café) 3%
Unknown (5 café, 3 gray) 23%

Other Finds:
Chipped Stone: 2 pieces
  1 chert notched flake
  1 chert unutilized flake
PCJ-05 Eastern Hilltop

Ceramic Finds: 114 sherds
Non-diagnostic Sherds:
Café: 32 sherds
  2 café burnished
  30 café unburnished

Gray: 59 sherds
  52 gray burnished
  7 gray unburnished

Diagnostic Sherds:
Café: 3 café sherds
  1 café rim
  1 café miniature
  1 café handle (sahumador)

Gray: 20 gray sherds
  13 gray rims
  1 gray neck
  3 gray body sherds
  1 gray miniature
  1 gray handle (olla small loop handle)
  1 gray urn fragment

Relative % Paste:
  32% café
  69% gray

Vessel Types:
  Composite Silhouette (5 gray) 22%
  Conical Bowl (1 café, 3 gray) 17%
  Cup (2 gray) 9%
  Hemispherical Bowl (5 gray) 22%
  Miniature (1 café, 1 gray) 9%
  Olla (2 gray) 9%
  Sahumador (1 café) 4%
  Unknown (1 gray) 4%
  Urn (1 gray) 4%

Other Finds:
Chipped Stone: 4 pieces
  3 chert unutilized flakes
  1 chert perforator

Ground Stone:
  1 Ground Stone 19 x 8 x 6.5 cm

Plaster:
  1 piece plaster
### PCJ-06 Eastern Hilltop

#### Ceramic Finds: 183 sherds

**Non-diagnostic Sherds:**
- **Café:** 56 sherds
  - 4 café burnished
  - 52 café unburnished
- **Gray:** 89 sherds
  - 75 gray burnished
  - 12 gray unburnished
- **Other:** 1 sherd
  - 1 gray/café

**Diagnostic Sherds:**
- **Café:** 16 sherds
  - 6 café miniatures
  - 9 café rims
  - 1 café neck
- **Gray:** 20 sherds
  - 1 gray handle
  - 17 gray rims
  - 2 gray body sherds

- **Amarillo:** 1 sherd
  - 1 amarillo rim

#### Relative % Paste:
- 39% café
- 60% gray
- 1% other

#### Vessel Types:
- **Composite Silhouette (1 café, 8 gray)** 24%
- **Conical Bowl (1 café, 2 gray)** 8%
- **Hemispherical Bowl (6 gray)** 16%
- **Miniature (7 café)** 19%
- **Olla (3 café, 1 gray)** 11%
- **Outleaning Bowl (1 gray, 1 amarillo)** 5%
- **Sahumador (3 café)** 8%
- **Unknown (2 café, 1 gray)** 8%

#### Other Finds:
- **Chipped Stone:** 2 pieces
  - 1 fine volcanic scraper
  - 1 chert scraper
PCJ-07 Hilltop Plaza

Ceramic Finds: 74 sherds
Non-Diagnostic Sherds:
Café: 22 sherds
  1 café burnished
  21 café unburnished
Gray: 37 sherds
  33 gray burnished
  4 gray unburnished

Diagnostic Sherds:
Café: 5 sherds
  2 café body sherds
  2 café rims
  1 café handle
Gray: 8 sherds
  7 gray rims
  1 gray neck

Other: 2 sherds
  2 crema rims

Relative % Paste:
36% café
61% gray
3% other

Vessel Types:
Composite Silhouette (1 gray) 7%
Conical Bowl (1 gray) 7%
Cup (1 gray) 7%
Hemispherical Bowl (1 café, 2 gray) 21%
Olla (1 café, 2 gray) 21%
Outleaning Bowl (1 gray, 2 crema) 21%
Sahumador (2 café) 14%
Tecomate (1 café) 7%

Other Finds:
Chipped Stone: 2 pieces
  1 chert unutilized flake
  1 chert perforator

Plaster:
  2 pieces of plaster with red pigment
PCJ-08 Hilltop Plaza

Ceramic Finds: 386 sherds
Non-Diagnostic Sherds:
Café: 36 sherds
3 burnished
33 unburnished

Gray: 289 sherds
272 burnished
15 unburnished

Diagnostic Sherds:
Café: 5 sherds
3 café rims
1 café foot
1 café body sherd

Gray: 56 sherds
45 gray rims
2 gray bases
4 gray body sherds
4 gray necks
1 gray pendant

Relative % Paste:
11% café
89% gray

Vessel Types:
Composite Silhouette (9 gray) 15%
Conical Bowl (1 café, 2 gray) 5%
Cup (2 gray) 3%
Hemispherical Bowl (15 gray) 25%
Olla (8 gray) 13%
Outleaning Bowl (1 café, 1 gray) 3%
Pendant (1 gray) 2%
Unknown (1 café, 18 gray) 31%
Urn (1 café) 2%
Tecomate (1 gray) 2%

Other Finds:
Chipped Stone: 24 pieces
1 quartzite core
1 quartzite perforator
1 quartzite unutilized flake
3 chert unutilized flakes
1 chert perforator
6 chert scraper
5 chert notched flake
1 fine volcanic perforator
2 quartzite projectile points
1 obsidian blade
1 obsidian unutilized flake
1 obsidian utilized flake
PCJ-09 Western Slopes—Group 1

Ceramic Finds: 351 Sherds
Non-Diagnostic Sherds:
Café: 10 sherds
2 café burnished
8 café unburnished

Gray: 266 sherds
256 burnished
10 unburnished

Diagnostic Sherds:
Café: 0 sherds

Gray: 75 sherds
3 gray bases
12 gray body sherds
2 gray miniatures
3 gray necks
1 gray reworked sherd
54 gray rims

Relative % Paste:
3% café
97% gray

Vessel Types:
Composite Silhouette (21 gray) 28%
Conical Bowl (9 gray) 12%
Cup (1 gray) 1%
Hemispherical Bowl (24 gray) 32%
Miniature (2 gray) 3%
Olla (7 gray) 9%
Outleaning Bowl (6 gray) 8%
Unknown (5 gray) 7%

Other Finds:
Chipped Stone:
1 chert core
5 chert unutilized flakes
2 chert scrapers
1 quartzite core
2 quartzite unutilized flakes
2 quartzite chunks
1 chert notched flake
2 jasper chunks

Ground Stone:
1 Mano 13 x 12 x 9 cm
PCJ-10 Western Slopes—Group 1

Ceramic Finds: 21 sherds
Non-Diagnostic Sherds:
Café: 2 sherds
1 café burnished
1 café unburnished

Gray: 9 sherds
8 gray burnished
1 gray unburnished

Diagnostic Sherds:
Café: 2 sherds
1 café rim
1 café body sherd

Gray: 7 sherds
3 gray rims
2 gray body sherds
2 gray base sherds

Amarillo: 1 sherd
1 amarillo body sherd

Relative % Paste:
19% café
76% gray
5% other

Vessel Types:
Comal (1 café) 10%
Conical Bowl (2 gray) 20%
Hemispherical Bowl (3 gray, 1 amarillo) 40%
Outleaning Bowl (1 café, 2 gray) 30%

Other Finds:
Chipped Stone:
2 quartzite chunks
1 quartzite chunk/core
PCJ-11 Western Slopes—Group 1

Ceramic Finds: 59 sherds

Non-Diagnostic Sherds:
Café: 3 sherds
1 café burnished
2 café unburnished

Gray: 36 sherds
36 gray burnished
0 gray unburnished

Diagnostic Sherds:
Café: 2 sherds
1 café urn frag.
1 café handle

Gray: 17 sherds
5 gray body sherds
11 gray rims
1 gray rim to base

Crema: 1 sherd
1 crema rim

Relative % Paste:
8% café
90% gray
2% other

Vessel Types:
Composite Silhouette (4 gray) 20%
Conical Bowl (1 gray) 5%
Hemispherical Bowl (8 gray, 1 crema) 45%
Olla (3 gray) 15%
Outleaning Bowl (1 gray) 5%
Sahumador (1 café) 5%
Urn (1 café) 5%

Other Finds:
Chipped Stone:
1 quartzite projectile point
1 chert scraper
PCJ-12 Western Slopes—Group 1

Ceramic Finds: 140 sherds
Non-Diagnostic Sherds:
Café: 6 sherds
  0 café burnished
  6 café unburnished

Gray: 105 sherds
  98 gray burnished
  7 gray unburnished

Diagnostic Sherds:
Café: 4 sherds
  3 café rims
  1 café base

Gray: 24 sherds
  1 gray body sherd
  3 gray reworked sherds
  1 gray neck
  19 gray rims

Amarillo?: 1 sherd
  1 amarillo neck

Relative % Paste:
  7% café
  92% gray
  1% other

Vessel Types:
Composite Silhouette (3 gray) 10%
Conical Bowl (2 gray) 7%
Cup (1 gray) 3%
Flat Bottomed Vessel (1 café) 3%
Hemispherical Bowl (7 gray) 24%
Olla (1 café, 3 gray, 1 amarillo) 17%
Outleaning Bowl (3 gray) 10%
Reworked Sherd (3 gray) 10%
Sahumador (2 café) 7%
Unknown (2 gray) 7%

Other Finds:
Chipped Stone:
  1 chert point
  1 quartzite core
  3 quartzite unutilized flakes
  1 quartzite utilized flake
PCJ-13 Western Slopes—Group 1

Ceramic Finds: 85 sherds
Non-Diagnostic Sherds:
Café: 16 sherds
5 café burnished
11 café unburnished

Gray: 50 sherds
43 gray burnished
7 gray unburnished

Diagnostic Sherds:
Café: 0 sherds

Gray: 19 sherds
10 gray rims
3 gray body sherds
1 gray foot or handle
4 gray bases
1 gray neck

Relative % Paste:
19% café
81% gray

Vessel Types:
Composite Silhouette (2 gray) 11%
Conical Bowl (7 gray) 37%
Foot or Handle (1 gray) 5%
Hemispherical Bowl (4 gray) 21%
Olla (1 gray) 5%
Outleaning Bowl (1 gray) 5%
Unknown (1 gray) 5%
Urn (2 gray) 11%

Other Finds:
Chipped Stone
1 quartzite core
PCJ-14 Western Slopes—Group 1

Ceramic Finds: 106 sherds
Non-Diagnostic Sherds:
Café: 18 sherds
1 café burnished
17 café unburnished

Gray: 66 sherds
55 gray burnished
11 gray unburnished

Diagnostic Sherds:
Café: 1 sherd
1 café rim

Gray: 21 sherds
2 gray handles
1 gray body sherd
18 gray rims

Relative % Paste:
18% café
82% gray

Vessel Types:
Composite Silhouette (3 gray) 14%
Conical Bowl (1 café, 1 gray) 9%
Cup (1 gray) 5%
Hemispherical Bowl (8 gray) 36%
Olla (5 gray) 23%
Outleaning Bowl (1 gray) 5%
Unknown (2 gray) 9%

Other Finds:
Chipped Stone:
2 quartzite cores
4 quartzite unutilized flakes
2 quartzite perforators
1 quartzite chunk
1 quartzite utilized flake
1 quartzite scraper
PCJ-15 Western Slopes—Group 1

Ceramic Finds: 87 sherds
Non-Diagnostic Sherds:
Café: 2 sherds
  0 café burnished
  2 café unburnished

Gray: 76 sherds
  76 gray burnished
  0 gray unburnished

Diagnostic Sherds:
Café: 1 sherd
  1 café handle

Gray: 8 sherds
  7 gray rims
  1 gray neck

Relative % Paste:
  3% café
  97% gray

Vessel Types:
  Composite Silhouette (2 gray) 22%
  Conical Bowl (1 gray) 11%
  Cup (1 gray) 11%
  Hemispherical Bowl (2 gray) 22%
  Olla (1 gray) 11%
  Outleaning Bowl (1 gray) 11%
  Sahumador (1 café) 11%

Other Finds:
Chipped Stone:
  2 quartzite unutilized flakes

Shell:
  2 pieces of shell
PCJ-16 Western Slopes—Group 1

Ceramic Finds: 60 sherds
Non-Diagnostic Sherds:
Café: 0 sherds
0 café burnished
0 café unburnished

Gray: 55 sherds
47 gray burnished
8 gray unburnished

Diagnostic Sherds:
Café: 1 sherd
1 café rim

Gray: 4 sherds
4 gray rims

Relative % Paste:
2% café
98% gray

Vessel Types:
Conical Bowl (1 café, 1 gray) 40 %
Outleaning Bowl (1 gray) 20%
Unknown (2 gray) 40%

Other Finds:
Chipped Stone:
2 chert scrapers
1 quartzite unutilized flake
1 quartzite chunk/core

Plaster:
2 pieces of plaster
Ceramic Finds: 944 sherds
Non-Diagnostic Sherds:
Café: 245 sherds
  3 café burnished
  242 café unburnished

Gray: 600 sherds
  571 gray burnished
  29 gray unburnished

Other: 3 sherds
  3 Crema? sherds

Diagnostic Sherds:
Café: 17 sherds
  1 café urn frag.
  1 café base with foot
  1 café body sherd
  1 café handle
  7 café necks
  1 café base
  5 café rims

Gray: 77 sherds
  1 gray reworked sherd
  3 gray body sherds
  4 gray bases
  1 gray neck
  68 gray rims

Crema?: 2 sherds
  2 crema rims

Relative % Paste:
  28% café
  72% gray
  1% other

Vessel Types:
  Composite Silhouette (17 gray) 18%
  Conical Bowl (4 café, 9 gray, 1 crema) 15%
  Cup (2 gray) 2%
  Flat Bottomed Vessel (1 gray) 1%
  Hemispherical Bowl (1 café, 20 gray) 22%
  Kiln Waster? (1 gray) 1%
  Olla (8 café, 8 gray, 1 crema) 18%
  Outleaning Bowl (10 gray) 10%
  Reworked Sherd (1 gray) 1%
  Sahumador (1 café) 1%
  Tripod Vessel (1 café) 1%
  Unknown (1 café, 8 gray) 9%
  Urn (1 café) 1%

Other Finds:
Chipped Stone:
  1 fine volcanic chunk/core
  1 chert chunk/core
  1 chert notched flake
  1 chert scraper
  1 chert perforator
  2 chert unutilized flakes
  2 quartzite chunks
  2 quartzite scrapers
  4 quartzite unutilized flakes
  1 quartzite chunk/core

Plaster:
  1 piece of plaster
PCJ-18 Western Slopes—Group 2

Ceramic Finds: 105 sherds

Non-Diagnostic Sherds:
- Café: 19 sherds
  - 0 café burnished
  - 19 café unburnished
- Gray: 53 sherds
  - 46 gray burnished
  - 7 gray unburnished

Diagnostic Sherds:
- Café: 4 sherds
  - 4 café rims
- Gray: 29 sherds
  - 2 gray body sherd
  - 7 gray reworked sherd
  - 3 gray necks
  - 2 gray bases
  - 15 gray rims

Relative % Paste:
- 22% café
- 78% gray

Vessel Types:
- Composite Silhouette (2 café, 6 gray) 24%
- Conical Bowl (5 gray) 15%
- Cup (1 gray) 3%
- Globular Bowl (1 gray) 3%
- Hemispherical Bowl (2 gray) 6%
- Olla (1 café, 3 gray) 12%
- Outleaning Bowl (1 café, 3 gray) 12%
- Reworked Sherd (7 gray) 21%
- Unknown (1 gray) 3%

Other Finds:
Chipped Stone:
- 1 quartzite perforator
- 2 chert scrapers
- 1 quartzite notched flake
- 2 quartzite scrapers
- 1 chert perforator
PCJ-19 Western Slopes—Group 2

Ceramic Finds: 175 sherds
Non-Diagnostic Sherds:
Café: 32 sherds
1 café burnished
31 café unburnished
Gray: 117 sherds
111 gray burnished
6 gray unburnished
Other: 3 sherds
3 Atzompa Green sherds

Diagnostic Sherds:
Café: 2 sherds
1 café urn fragment
1 café neck
Gray: 21 sherds
4 gray body sherds
1 gray reworked sherd
13 gray rims
1 gray base
2 gray necks

Relative % Paste:
19% café
79% gray
2% other

Vessel Types:
Composite Silhouette (6 gray) 26%
Conical Bowl (3 gray) 13%
Flat Bottomed Vessel (1 gray) 4%
Hemispherical Bowl (2 gray) 9%
Olla (1 café, 2 gray) 13%
Outleaning Bowl (4 gray) 17%
Reworked Sherd (1 gray) 4%
Tecomate (1 gray) 4%
Unknown (1 gray) 4%
Urn (1 café) 4%

Other Finds:
Chipped Stone:
1 quartzite perforator
PCJ-20 Western Slopes—Group 2

Ceramic Finds: 150 sherds

Non-Diagnostic Sherds:
Café: 26 sherds
  3 café burnished
  23 café unburnished

Gray: 96 sherds
  86 gray burnished
  10 gray unburnished

Diagnostic Sherds:
Café: 4 sherds
  4 café rims

Gray: 24 sherds
  1 gray urn fragment
  4 gray body sherds
  3 reworked sherds
  2 gray bases
  14 gray rims

Relative % Paste:
  20% café
  80% gray

Vessel Types:
  Composite Silhouette (2 gray) 7%
  Conical Bowl (2 café, 4 gray) 21%
  Cup (1 gray) 4%
  Hemispherical Bowl (6 gray) 21%
  Miniature (1 gray) 4%
  Outleaning Bowl (2 café, 4 gray) 21%
  Reworked Sherd (3 gray) 11%
  Unknown (2 gray) 7%
  Urn (1 gray) 4%

Other Finds:
Chipped Stone:
  1 chert perforator
  1 chert unutilized flake
  5 quartzite unutilized flakes
  1 quartzite notched flake
  1 quartzite chunk/core
  1 quartzite chunk
  5 quartzite cores

Plaster:
  4 pieces of plaster
### PCJ-21 Western Slopes—Group 2

**Ceramic Finds: 205 sherds**

- **Non-Diagnostic Sherds:**
  - Café: 59 sherds
    - 1 café burnished
    - 58 café unburnished
  - Gray: 117 sherds
    - 109 gray burnished
    - 8 gray unburnished
  - Crema: 1 sherd
    - 1 crema

- **Diagnostic Sherds:**
  - Café: 6 sherds
    - 1 café handle
    - 5 café rims
  - Gray: 22 sherds
    - 15 gray rims
    - 1 gray body sherd
    - 4 gray necks
    - 2 gray bases

**Relative % Paste:**
- 32% café
- 68% gray

**Vessel Types:**
- Comal (1 café) 4%
- Conical Bowl (1 café, 8 gray) 32%
- Hemispherical Bowl (6 gray) 21%
- Olla (4 gray) 14%
- Outleaning Bowl (1 café, 4 gray) 18%
- Sahumador (1 café) 4%
- Tecomate (1 café) 4%
- Unknown (1 café) 4%

**Other Finds:**
- **Chipped Stone:**
  - 2 chert notched flakes
  - 1 chert scraper
  - 1 chert utilized flake
PCJ-22 Western Slopes—Group 2

Ceramic Finds: 140 sherds
Non-Diagnostic Sherds:
Café: 22 sherds
  2 café burnished
  20 café unburnished

Gray: 102 sherds
  99 gray burnished
  3 gray unburnished

Diagnostic Sherds:
Café: 1 sherd
  1 café rim

Gray: 15 sherds
  10 gray rims
  1 gray body sherd
  4 gray necks

Relative % Paste:
  16% café
  84% gray

Vessel Types:
Conical Bowl (5 gray) 31%
Comal (1 gray) 6%
Hemispherical Bowl (5 gray) 31%
Olla (4 gray) 25%
Outleaning Bowl (1 gray) 6%

Other Finds:
Chipped Stone:
  2 chert chunk/core
  2 chert notched flakes
  1 chert unutilized flake
  1 fine volcanic unutilized flake
  1 quartzite notched flake
PCJ-23 Western Slopes—Group 2

Ceramic Finds: 128 sherds
Non-Diagnostic Sherds:
Café: 27 sherds
0 café burnished
27 café unburnished

Gray: 89 sherds
72 gray burnished
17 gray unburnished

Diagnostic Sherds:
Café: 3 sherds
1 café neck
1 café handle
1 café rim

Gray: 9 sherds
7 gray rims
2 gray bases

Relative % Paste:
23% café
77% gray

Vessel Types:
Comal (1 café) 8%
Composite Silhouette (2 gray) 17%
Conical Bowl (4 gray) 33%
Hemispherical Bowl (2 gray) 17%
Olla (1 café) 8%
Sahumador (1 café) 8%
Unknown (1 gray) 8%

Other Finds:
Chipped Stone:
1 quartzite scraper
1 chert notched flake
PCJ-24 Western Slopes—Group 2

Ceramic Finds: 121 sherds

Non-Diagnostic Sherds:
Café: 20 sherds
0 café burnished
20 café unburnished

Gray: 79 sherds
67 gray burnished
12 gray unburnished

Diagnostic Sherds:
Café: 5 sherds
2 café rims
3 café necks

Gray: 17 sherds
9 gray rims
1 gray body sherd
2 gray necks
2 gray bases
2 gray reworked sherds
1 gray kiln waster

Relative % Paste:
21% café
79% gray

Vessel Types:
Bowl (1 gray) 5%
Comal (1 café) 5%
Composite Silhouette (3 gray) 14%
Conical Bowl (3 gray) 14%
Cup (1 gray) 5%
Hemispherical Bowl (1 gray) 5%
Kiln Waster (1 gray) 5%
Olla (2 café, 3 gray) 23%
Outleaning Bowl (1 café, 1 gray) 9%
Reworked Sherd (2 gray) 9%
Unknown (2 gray) 9%

Other Finds:
Chipped Stone:
1 chert scraper
PCJ-25 Western Slopes—Group 2

Ceramic Finds: 150 sherds
Non-Diagnostic Sherds:
Café: 32
0 café burnished
32 café unburnished

Gray: 94
91 gray burnished
3 gray unburnished

Diagnostic Sherds:
Café: 2 sherds
1 café reworked sherd
1 café rim

Gray: 22 sherds
2 gray reworked sherds
14 gray rims
2 gray body sherds
1 gray neck
2 gray bases

1 gray handle/foot

Relative % Paste:
23% café
77% gray

Vessel Types:
Composite Silhouette (9 gray) 38%
Conical Bowl (1 gray) 4%
Hemispherical Bowl (5 gray) 21%
Olla (1 café, 2 gray) 13%
Outleaning Bowl (1 gray) 4%
Reworked Sherds (1 café, 2 gray) 13%
Spout handle (1 gray) 4%
Unknown (1 gray) 4%

Other Finds:
Chipped Stone:
1 chert scraper
1 quartzite unutilized flake
PCJ-26 Western Slopes—Group 2

Ceramic Finds: 220 sherds
Non-Diagnostic Sherds:
- Café: 37 sherds
  - 0 café burnished
  - 37 café unburnished
- Gray: 136 sherds
  - 135 gray burnished
  - 1 gray unburnished
- Other: 2 sherds
  - 2 gray/café sherds

Diagnostic Sherds:
- Café: 2 sherds
  - 1 café handle
  - 1 café rim
- Gray: 42 sherds
  - 2 gray base with foot
  - 2 gray bases
  - 3 gray body sherds
  - 24 gray rims
  - 2 gray reworked sherds
  - 9 gray necks

Amarillo: 1 sherd
  - 1 amarillo body sherd

Relative % Paste:
- 18% café
- 81% gray
- 1% other

Vessel Types:
- Composite Silhouette (6 gray) 13%
- Conical Bowl (3 gray) 7%
- Cup (1 gray) 2%
- Hemispherical Bowl (3 gray) 7%
- Olla (1 café, 16 gray, 1 amarillo) 40%
- Outleaning Bowl (8 gray) 18%
- Reworked Sherd (2 gray) 4%
- Tripod Vessel (3 gray) 7%
- Unknown (1 gray) 2%

Other Finds:
- Chipped Stone:
  - 1 quartzite perforator
  - 1 obsidian blade
PCJ-27 Western Slopes—Group 2

Ceramic Finds: 105 sherds
Non-Diagnostic Sherds:
Café: 18 sherds
  0 café burnished
  18 café unburnished

Gray: 74 sherds
  73 gray burnished
  1 gray unburnished

Diagnostic Sherds:
Café: 2 sherds
  1 café handle
  1 café rim

Gray: 11 sherds
  1 gray body sherd
  10 gray rims

Relative % Paste:
  19% café
  81% gray

Vessel Types:
  Composite Silhouette (5 gray) 38%
  Conical Bowl (1 gray) 8%
  Hemispherical Bowl (1 gray) 8%
  Outleaning Bowl (1 café, 1 gray) 15%
  Sahumador (1 café) 8%
  Unknown (3 gray) 23%

Other Finds:
Chipped Stone:
  1 chert scraper

Shell:
  1 piece of shell
PCJ-28 Western Slopes—Group 2

Ceramic Finds: 142 sherds
Non-Diagnostic Sherds:
Café: 36 sherds
2 café burnished
34 café unburnished

Gray: 83 sherds
77 gray burnished
6 gray unburnished

Diagnostic Sherds:
Café: 0 sherds

Gray: 23 sherds
2 gray reworked sherds
17 gray rims
2 gray necks
1 gray base
1 gray body sherd

Relative % Paste:
25% café
75% gray

Vessel Types:
Composite Silhouette (5 gray) 22%
Conical Bowl (1 gray) 4%
Cup (1 gray) 4%
Hemispherical Bowl (7 gray) 30%
Olla (4 gray) 17%
Outleaning Bowl (2 gray) 9%
Reworked Sherd (2 gray) 9%
Unknown (1 gray) 4%

Other Finds:
Chipped Stone:
2 chert scrapers
PCJ-29 Western Slopes—Group 2

Ceramic Finds: 10 sherds
Non-Diagnostic Sherds:
Café: 1 sherd
0 café burnished
1 café unburnished

Gray: 8 sherds
5 gray burnished
3 gray unburnished

Diagnostic Sherds:
Café: 1 sherd
1 café handle

Gray: 0 sherds

Relative % Paste:
20% café
80% gray

Vessel Types:
Sahumador (1 café) 100%

Other Finds:
Chipped Stone:
3 chert scrapers
1 quartzite scraper
PCJ-30 Western Slopes—Group 2

Ceramic Finds: 112 sherds
Non-Diagnostic Sherds:
Café: 15 sherds
4 café burnished
11 café unburnished

Gray: 85 sherds
83 gray burnished
2 gray unburnished

Diagnostic Sherds:
Café: 0 sherds

Gray: 12 sherds
12 gray rims

Relative % Paste:
13% café
87% gray

Vessel Types:
Composite Silhouette (6 gray) 50%
Conical Bowl (2 gray) 17%
Hemispherical Bowl (4 gray) 33%

Other Finds:
Chipped Stone:
1 fine volcanic unutilized flake
2 chert unutilized flakes
1 chert scraper
2 chert perforators
1 chert core
1 jasper utilized flake
2 jasper unutilized flakes
1 jasper scraper
1 jasper core
1 jasper chunk
PCJ-31 Western Slopes—Group 2

Ceramic Finds: 227 sherds

Non-Diagnostic Sherds:
- Café: 69 sherds
  - 4 café burnished
  - 65 café unburnished
- Gray: 123 sherds
  - 118 gray burnished
  - 5 gray unburnished
- Other: 5 sherds
  - 5 gray/café mix

Diagnostic Sherds:
- Café: 3 sherds
  - 3 café rims
- Gray: 27 sherds
  - 1 gray foot
  - 21 gray rims
  - 2 gray bases
  - 1 gray neck
  - 2 gray reworked sherds

Relative % Paste:
- 32% café
- 66% gray
- 2% other

Vessel Types:
- Composite Silhouette (8 gray) 27%
- Conical Bowl (2 café, 4 gray) 20%
- Hemispherical Bowl (1 café, 6 gray) 23%
- Olla (1 café, 1 gray) 7%
- Outleaning Bowl (2 gray) 7%
- Reworked Sherds (2 gray) 7%
- Tripod Vessel (1 gray) 3%
- Unknown (1 gray) 3%
- Urn (1 gray) 3%

Other Finds:

Chipped Stone:
- 1 chert core
- 6 chert scrapers
- 2 chert unutilized flakes
- 2 jasper cores
- 3 jasper chunk/cores
- 1 jasper chunk
- 1 jasper perforator
- 1 quartzite scraper
- 1 quartzite chunk/core
- 1 quartzite chunk
- 1 sandstone adze
- 1 fine volcanic scraper

Plaster:
- 3 pieces of plaster

Shell:
- 1 piece of shell
PCJ-32 Central Slopes

Ceramic Finds: 33 sherds
Non-Diagnostic Sherds:
Café: 7 sherds
0 café burnished
7 café unburnished

Gray: 20 sherds
19 gray burnished
1 gray burnished

Other: 1 sherds
1 atzompa green

Diagnostic Sherds:
Café: 0 sherds

Gray:
5 gray rims

Relative % Paste:
21% café
76% gray
3% other

Vessel Types:
Composite Silhouette (1 gray) 20%
Hemispherical Bowl (4 gray) 80%

Other Finds:
Chipped Stone:
1 jasper core
1 jasper chunk/core
1 jasper perforator
1 chert scraper
2 chert perforators
1 chert unutilized flake
1 fine volcanic scraper
1 quartzite chunk/core
PCJ-33 Central Slopes

Ceramic Finds: 380 sherds
Non-Diagnostic Sherds:
  Café: 68 sherds
    1 café burnished
    67 café burnished
  Gray: 243 sherds
    241 gray burnished
    2 gray unburnished

Diagnostic Sherds:
  Café: 8 sherds
    7 café rims
    1 café neck
  Gray: 61 sherds
    3 gray body sherds
    41 gray rims
    8 gray reworked sherd
    5 gray necks
    1 gray base
    2 gray foot
    1 gray base with foot

Relative % Paste:
  20% café
  80% gray

Vessel Types:
  Composite Silhouette (13 gray) 19%
  Conical Bowl (4 café, 2 gray) 9%
  Cup (4 gray) 6%
  Hemispherical Bowl (1 café, 15 gray) 23%
  Olla (1 café, 5 gray) 9%
  Outleaning Bowl (2 café, 5 gray) 10%
  Reworked Sherd (8 gray) 12%
  Tripod Vessel (3 gray) 4%
  Unknown (6 gray) 9%

Other Finds:
Chipped Stones:
  1 fine volcanic scraper
  2 chert unutilized flakes
  2 chert scrapers
  1 quartzite perforator

Plaster:
  2 pieces of plaster
PCJ-34 Central Slopes

Ceramic Finds: 27 sherds
Non-Diagnostic Sherds:
Café: 5 sherds
0 café burnished
5 café unburnished
Gray: 19 sherds
16 gray burnished
3 gray unburnished

Diagnostic Sherds:
Café: 0 sherds
Gray: 3 sherds

2 gray rims
1 gray body sherd

Relative % Paste:
19% café
81% gray

Vessel Types:
Conical Bowl (2 gray) 67%
Unknown (1 gray) 33%

Other Finds:
NONE
PCJ-35 Central Slopes

Ceramic Finds: 86 sherds
Non-Diagnostic Sherds:
Café: 22 sherds
  0 café burnished
  22 café unburnished

Gray: 51 sherds
  51 gray burnished
  0 gray unburnished

Other: 1 sherd
  1 crema

Diagnostic Sherds:
Café: 2 sherds
  1 café rim
  1 café figurine fragment

Gray: 10 sherds
  8 gray rims
  1 gray reworked sherd
  1 gray body sherd

Relative % Paste:
  28% café
  71% gray
  1% other

Vessel Types:
  Composite Silhouette (3 gray) 25%
  Conical Bowl (1 gray) 8%
  Figurine (1 café) 8%
  Hemispherical Bowl (1 gray) 8%
  Outleaning Bowl (1 café, 2 gray) 25%
  Reworked Sherd (1 gray) 8%
  Unknown (2 gray) 17%

Other Finds:
Chipped Stone:
  2 chert scrapers
  1 chert unutilized flake
  1 jasper chunk/core
  1 quartzite scraper

Plaster:
  3 pieces of plaster
PCJ-36 Central Slopes

Ceramic Finds: 127 sherds
Non-Diagnostic Sherds:
Café: 21 sherds
0 café burnished
21 café unburnished

Gray: 84 sherds
82 gray burnished
2 gray unburnished

Other: 2 sherds
2 gray/café mix

Diagnostic Sherds:
Café: 0 sherds

Gray: 20 sherds
12 gray rims

1 gray base sherds
5 gray body sherds
2 gray necks

Relative % Paste:
17% café
82% gray
2% other

Vessel Types:
Composite Silhouette (8 gray) 40%
Conical Bowl (1 gray) 5%
Cup (2 gray) 10%
Hemispherical Bowl (5 gray) 25%
Olla (4 gray) 20%

Other Finds:
NONE
PCJ-37 Central Slopes

Ceramic Finds: 22 sherds
Non-Diagnostic Sherds:
Café: 0 sherds
0 café burnished
0 café unburnished

Gray: 19 sherds
14 gray burnished
5 gray unburnished

Diagnostic Sherds:
Café: 0 sherds

Gray: 3 sherds

2 gray rims
1 gray body sherds

Relative % Paste:
0% café
100% gray

Vessel Types:
Composite Silhouette (2 gray) 67%
Olla (1 gray) 33%

Other Finds:
NONE
PCJ-38 Central Slopes

Ceramic Finds: 127 sherds
Non-Diagnostic Sherds:
Café: 24 sherds
3 café burnished
21 café unburnished

Gray: 83 sherds
83 gray burnished
0 gray unburnished

Diagnostic Sherds:
Café: 2 sherds
2 café rims

Gray: 17 sherds
11 gray rims
1 gray body sherd
5 gray reworked sherds

Other: 1 sherd
1 amarillo body sherd

Relative % Paste:
20% café
79% gray
1% other

Vessel Types:
Composite Silhouette (1 café, 4 gray, 1 amarillo) 30%
Conical Bowl (1 café, 1 gray) 10%
Cup (2 gray) 10%
Hemispherical Bowl (3 gray) 15%
Olla (1 gray) 5%
Outleaning Bowl (1 gray) 5%
Reworked Sherd (5 gray) 25%

Other Finds:
Chipped Stone:
2 chert scrapers
PCJ-39 Central Slopes

Ceramic Finds: 368 sherds
Non-Diagnostic Sherds:
Café: 101 sherds
  5 café burnished
  96 café unburnished

Gray: 227 sherds
  225 gray burnished
  2 gray unburnished

Diagnostic Sherds:
Café: 5 sherds
  2 café rims
  3 café base

Gray: 35 sherds
  3 gray reworked sherds
  1 gray foot
  26 gray rims
  1 gray body sherd
  2 gray necks
  1 gray handle
  1 gray base

Relative % Paste:
29% café
71% gray

Vessel Types:
  Composite Silhouette (13 gray) 33%
  Conical Bowl (2 café, 5 gray) 18%
  Cup (1 gray) 3%
  Hemispherical Bowl (7 gray) 18%
  Olla (4 gray) 10%
  Outleaning Bowl (1 café, 1 gray) 5%
  Reworked Sherd (3 gray) 8%
  Sahumador (2 café) 5%
  Tripod Vessel (1 gray) 3%

Other Finds:
Chipped Stone:
  1 chert scraper
  1 quartzite chunk/core

Plaster:
  2 pieces of plaster
PCJ-40 Central Slopes

Ceramic Finds: 166 sherds
Non-Diagnostic Sherds:
Café: 20 sherds
  0 café burnished
  20 café unburnished

Gray: 127 sherds
  71 gray burnished
  56 gray unburnished

Diagnostic Sherds:
Café: 2 sherds
  1 café rim
  1 café base

Gray: 17 sherds
  2 gray reworked sherds
  11 gray rims
  2 gray bases
  1 gray neck
  1 gray miniature

Relative % Paste:
  13% café
  87% gray

Vessel Types:
  Comal (1 gray) 5%
  Composite Silhouette (4 gray) 21%
  Conical Bowl (3 gray) 16%
  Miniature (1 gray) 5%
  Olla (2 café) 11%
  Outleaning Bowl (4 gray) 21%
  Reworked Sherd (2 gray) 11%
  Sahumador (1 café) 5%
  Unknown (1 gray) 5%

Other Finds:
Chipped Stone:
  1 chert notched flake
PCJ-41 Central Slopes

Ceramic Finds: 611 sherds
Non-Diagnostic Sherds:
Café: 105 sherds
12 café burnished
93 café unburnished

Gray: 451 sherds
424 gray burnished
27 gray unburnished

Diagnostic Sherds:
Café: 2 sherds
2 café rim

Gray: 52 sherds
2 gray foot
7 gray body sherds
6 gray neck
9 gray reworked sherd
28 gray rims

Other: 1 sherd
1 thin orange rim

Relative % Paste:
18% café
82% gray
0.2% other

Vessel Types:
Composite Silhouette (12 gray) 22%
Conical Bowl (3 gray) 5%
Cup (1 thin orange, 1 gray) 4%
Jar (1 gray) 2%
Hemispherical Bowl (7 gray) 13%
Olla (8 gray) 15%
Outleaning Bowl (1 café, 5 gray) 11%
Reworked Sherd (9 gray) 16%
Sahumador (1 café) 2%
Tripod Vessel (2 gray) 4%
Unknown (4 gray) 7%

Other Finds:
Chipped Stone:
1 obsidian blade
1 jasper scraper
1 quartzite perforator
1 quartzite chunk
4 chert scrapers
2 chert perforator
1 fine volcanic scraper
PCJ-42 Central Slopes

Ceramic Finds: 99 sherds
Non-Diagnostic Sherds:
Café: 11 sherds
  0 café burnished
  11 café unburnished

Gray: 62 sherds
  61 gray burnished
  1 gray unburnished

Other: 1 sherd
  1 gray/café mix

Diagnostic Sherds:
Café: 2 sherds
  2 café rims

Gray: 23 sherds
  1 gray handle

5 gray necks
17 gray rims

Relative % Paste:
  13% café
  96% gray
  1% other

Vessel Types:
  Composite Silhouette (12 gray) 48%
  Conical Bowl (1 café) 4%
  Cup (1 gray) 4%
  Hemispherical Bowl (3 gray) 12%
  Olla (7 gray) 28%
  Outleaning Bowl (1 café) 4%

Other Finds:
NONE
PCJ-43 Central Slopes

Ceramic Finds: 131
Non-Diagnostic Sherds:
Café: 39 sherds
  1 café burnished
  38 café unburnished

Gray: 77 sherds
  74 gray burnished
  3 gray unburnished

Diagnostic Sherds:
Café: 1 sherd
  1 café handle

Gray: 13 sherds
  8 gray rims
  2 gray necks
  2 gray reworked sherds
  1 gray foot

Other: 1 sherd
  1 ? body sherd (?)

Relative % Paste:
  31% café
  69% gray
  1% other

Vessel Types:
  Composite Silhouette (5 gray) 33%
  Conical Bowl (1 gray) 7%
  Cup (1 gray) 7%
  Hemispherical Bowl (1 gray) 7%
  Olla (2 gray) 13%
  Reworked Sherd (2 gray) 13%
  Sahumador (1 café) 7%
  Tripod Vessel (1 gray) 7%
  Unknown (1 ?) 7%

Other Finds:
Chipped Stone:
  1 chert perforator
  1 chert scraper
  1 fine volcanic scraper
PCJ-44 Central Slopes

Ceramic Finds: 365 sherds
Non-Diagnostic Sherds:
Café: 47 sherds
0 café burnished
47 café unburnished

Gray: 268 sherds
266 gray burnished
2 gray unburnished

Diagnostic Sherds:
Café: 6 sherds
3 café rims
2 café bases
1 café neck

Gray: 44 sherds
7 gray reworked sherds
1 gray kiln waster
3 gray body sherds
5 gray neck
28 gray rims

Relative % Paste:
15% café
85% gray

Vessel Types:
Composite silhouette (18 gray) 36%
Hemispherical Bowl (1 café, 9 gray) 20%
Olla (1 café, 6 gray) 14%
Outleaning Bowl (2 café, 1 gray) 6%
Reworked Sherd (7 gray) 14%
Sahumador (2 café) 4%
Unknown (3 gray) 6%

Other Finds:
Chipped Stone:
1 chert notched flake
5 chert scrapers
1 chert chunk/core
1 chert core
2 chert unutilized flakes
1 chert perforator
1 fine volcanic perforator
1 fine volcanic biface
1 fine volcanic scraper
PCJ-45 Central Slopes

Ceramic Finds: 49 sherds
Non-Diagnostic Sherds:
Café: 2 sherds
  0 café burnished
  2 café unburnished

Gray: 42 sherds
  42 gray burnished
  0 gray unburnished

Diagnostic Sherds:
Café: 0 sherds

Gray: 5 sherds
  2 gray necks
  3 gray rims

Relative % Paste:
  4% café
  96% gray

Vessel Types:
  Composite Silhouette (1 gray) 20%
  Hemispherical Bowl (1 gray) 20%
  Olla (3 gray) 60%

Other Finds:
Chipped Stone:
  1 chert scraper
PCJ-46 Central Hilltop

Ceramic Finds: 377 sherds

Non-Diagnostic Sherds:
Café: 14 sherds
0 café burnished
14 café unburnished

Gray: 290 sherds
284 gray burnished
6 gray unburnished

Diagnostic Sherds:
Café: 11 sherds
5 café handles
1 café neck
5 café rims

Gray: 60 sherds
3 gray body sherds
1 gray base with handle
1 gray base
5 gray necks
46 gray rims
4 gray reworked sherds

Relative % Paste:
7% café
93% gray
0.5% other

Vessel Types:
Composite Silhouette (27 gray, 1 café or amarillo) 38%
Conical Bowl (3 café, 3 gray) 8%
Cup (2 gray) 3%
Flat-bottomed Bowl (1 gray) 1%
Hemispherical Bowl (6 gray) 8%
Olla (1 café, 11 gray) 16%
Outleaning Bowl (1 café, 1 gray) 3%
Reworked Sherd (4 gray) 6%
Sahumador (5 café, 1 gray) 8%
Unknown (1 café, 4 gray, 1 ?) 8%

Other Finds:
Chipped Stone: 9 pieces
3 chert cores
1 chert notched flake
3 chert scrapers
1 chert unutilized flake
1 quartzite utilized flake
PCJ-47 Central Hilltop

Ceramic Finds: 497 sherds

Non-Diagnostic Sherds:
Café: 123 sherds
6 café burnished
117 café unburnished

Gray: 289 sherds
280 gray burnished
9 gray unburnished

Other: 3 sherds
3 gray/café mix

Diagnostic Sherds:
Café: 14 sherds
1 café urn fragment
1 café handle
1 café miniature
9 café rim
2 café necks

Gray: 66 sherds
6 gray reworked sherds
7 gray bases
45 gray rims
4 gray necks
4 gray body sherds

Other: 2 sherds
2 orange body sherds

Relative % Paste:
28% café
71% gray
1% other

Vessel Types:
Composite Silhouette (30 gray) 37%
Conical Bowl (2 café, 3 gray) 6%
Cup (1 gray) 1%
Hemispherical Bowl (15 gray) 18%
Miniature (1 café) 1%
Olla (4 café, 8 gray) 15%
Outleaning (5 café) 6%
Reworked Sherd (6 gray) 7%
Sahumador (1 café) 1%
Unknown (2 orange, 4 gray) 7%

Other Finds:
Chipped Stone: 7 pieces
1 chert notched flake
1 chert scraper
3 quartzite perforators
1 quartzite biface
1 quartzite chunk/core

Plaster:
1 piece of plaster
PCJ-48 Central Hilltop

Ceramic Finds: 78 sherds
Non-Diagnostic Sherds:
Café: 14 sherds
  1 café burnished
  13 café unburnished

Gray: 41 sherds
  36 gray burnished
  5 gray unburnished

Other: 9 sherds
  7 gray/café mix
  2 crema

Diagnostic Sherds:
Café: 6 sherds
  1 café body
  4 café handles
  1 café rim

Gray: 8 sherds
  4 gray body
  4 gray rims

Relative % Paste:
  26% café
  63% gray
  12% other

Vessel Types:
  Composite Silhouette (3 gray) 21%
  Conical Bowl (1 gray) 7%
  Olla (2 gray) 14%
  Sahumador (6 café) 43%
  Unknown (1 gray) 7%
  Urn (1 gray) 7%

Other Finds:
Shell:
  1 piece of shell
PCJ-49 Western Hilltop

Ceramic Finds: 357 sherds

Non-Diagnostic Sherds:
Café: 74 sherds
1 café burnished
73 café unburnished

Gray: 226 sherds
224 gray burnished
2 gray unburnished

Other: 1 sherd
1 gray/café mix

Diagnostic Sherds:
Café: 8 sherds
7 café rims
1 café neck

Gray: 48 sherds
36 gray rims
2 gray necks
7 gray body sherds
1 gray base
2 gray reworked sherds

Relative % Paste:
23% café
77% gray
0.3% other

Vessel Types:
Bowl (1 gray) 2%
Composite Silhouette (2 café, 29 gray) 55%
Conical Bowl (3 gray) 5%
Hemispherical Bowl (6 gray) 11%
Olla (1 café, 4 gray) 9%
Outleaning Bowl (2 café) 4%
Reworked Sherd (2 gray) 4%
Tripod Vessel (1 gray) 2%
Unknown (3 café, 2 gray) 9%

Other Finds:
Chipped Stone: 7 pieces
1 chert notched flake
2 quartzite unutilized flakes
1 quartzite scraper
2 quartzite chunk/cores
1 quartzite chunk
PCJ-50 Western Hilltop

Ceramic Finds: 441 sherds
Non-Diagnostic Sherds:
Café: 130 sherds
3 café burnished
127 café unburnished

Gray: 234 sherds
230 gray burnished
4 gray unburnished

Diagnostic Sherds:
Café: 15 sherds
2 café miniatures
1 café handle
2 café body sherd
6 café rim
3 café necks
1 café base

Gray: 62 sherds
6 reworked sherd
48 gray rims
5 gray body sherds
2 gray necks
1 gray base

Relative % Paste:
33% café
67% gray

Vessel Types:
Composite Silhouette (35 gray) 45%
Conical Bowl (3 café, 2 gray) 7%
Cup (1 gray) 1%
Hemispherical Bowl (15 gray) 19%
Miniature (2 café) 3%
Olla (5 café, 4 gray) 12%
Outleaning bowl (2 café) 3%
Reworked Sherd (6 gray) 8%
Sahumador (2 café) 3%

Other Finds:
Chipped Stone: 5 pieces
1 quartzite biface
1 quartzite unutilized flake
1 chert perforator
1 chert notched flake
1 chert chunk/core
PCJ-51 Central Slopes

Ceramic Finds: 251 sherds
Non-Diagnostic Sherds:
Café: 24 sherds
0 café burnished
24 café unburnished

Gray: 192
155 gray burnished
37 gray unburnished

Other: 1 sherd
1 gray/café mix

Diagnostic Sherds:
Café: 5 sherds
1 café handle
1 café rim
2 café necks
1 café base

Gray: 29 sherds
19 gray rims

4 gray necks
3 gray body sherds
2 gray base
1 gray base with foot

Relative % Paste:
12% café
88% gray
0.4% other

Vessel Types:
Composite Silhouette (1 café, 16 gray) 50%
Conical bowl (1 café, 4 gray) 15%
Hemispherical Bowl (2 gray) 6%
Olla (2 café, 5 gray) 21%
Outleaning Bowl (1 gray) 3%
Sahumador (1 café) 3%
Tripod Vessel (1 gray) 3%

Other Finds:
NONE
PCJ-52 Central Slopes

Ceramic Finds: 228 sherds
Non-Diagnostic Sherds:
Café: 64 sherds
  0 café burnished
  64 café unburnished

Gray: 132 sherds
  120 gray burnished
  12 gray unburnished

Diagnostic Sherds:
Café: 5 sherds
  1 café neck
  4 café rims

Gray: 27 sherds
  8 gray body sherds
  2 gray neck

3 gray reworked sherds
14 gray rims

Relative % Paste:
30% café
70% gray

Vessel Types:
Composite Silhouette (1 café, 17 gray)
  56%
Hemispherical Bowl (2 gray) 6%
Olla (4 café, 3 gray) 22%
Reworked Sherd (3 gray) 9%
Unknown (2 gray) 6%

Other Finds:
NONE
PCJ-53 Central Slopes

Ceramic Finds: 129 sherds
Non-Diagnostic Sherds:
Café: 23 sherds
0 café burnished
23 café unburnished

Gray: 89 sherds
63 gray burnished
26 gray unburnished

Other: 1 sherd
1 gray/café mix

Diagnostic Sherds:
Café: 2 sherds
1 café neck
1 café body sherd

Gray: 14 sherds

9 gray rim
2 gray neck
1 reworked sherd
2 gray body sherds

Relative % Paste:
19% café
80% gray
1% other

Vessel Types:
Composite Silhouette (6 gray) 38%
Conical Bowl (1 gray) 6%
Hemispherical Bowl (2 gray) 13%
Olla (2 café, 4 gray) 38%
Reworked Sherd (1 gray) 6%

Other Finds:
NONE
PCJ-54 Central Slopes

Ceramic Finds: 98 sherds
Non-Diagnostic Sherds:
Café: 23 sherds
1 café burnished
22 café unburnished

Gray: 60 sherds
54 gray burnished
6 gray unburnished

Other: 1 sherd
1 crema

Diagnostic Sherds:
Café: 2 sherds
2 café rims

Gray: 12 sherds
8 gray rims

4 gray reworked sherds

Relative % Paste:
26% café
73% gray
1% other

Vessel Types:
Composite Silhouette (5 gray) 36%
Conical Bowl (1 café) 7%
Hemispherical Bowl (4 gray) 29%
Reworked Sherd (4 gray) 29%

Other Finds:
Chipped Stone:
2 fine volcanic unutilized flakes
1 fine volcanic perforator
PCJ-55 Central Slopes

Ceramic Finds: 113 sherds
Non-Diagnostic Sherds:
Café: 15 sherds
0 café burnished
15 café unburnished

Gray: 83 sherds
80 gray burnished
3 gray unburnished

Diagnostic Sherds:
Café: 1 sherd
1 café rim

Gray: 14 sherds
1 gray body sherd
1 gray neck
8 gray rims

4 gray reworked sherds

Relative % Paste:
14% café
86% gray

Vessel Types:
Composite Silhouette (6 gray) 40%
Cup (1 gray) 7%
Olla (2 gray) 13%
Outleaning Bowl (1 café, 1 gray) 13%
Reworked Sherd (4 gray) 27%

Other Finds:
Chipped Stone:
1 fine volcanic scraper
1 fine volcanic unutilized flake
PCJ-56 Central Slopes

Ceramic Finds: 159 sherds
Non-Diagnostic Sherds:
Café: 25 sherds
  3 café burnished
  22 café unburnished

Gray: 119 sherds
  119 gray burnished
  0 gray unburnished

Diagnostic Sherds:
Café: 2 sherds
  1 café base
  1 café body sherd

Gray: 13 sherds
  8 gray rims
  2 gray necks
  2 gray body sherds

1 gray reworked sherd

Relative % Paste:
17% café
83% gray

Vessel Types:
Composite Silhouette (3 gray) 20%
Conical Bowl (1 café) 7%
Hemispherical Bowl (6 gray) 40%
Olla (3 gray) 20%
Reworked Sherd (1 gray) 7%
Unknown (1 café) 7%

Other Finds:
Chipped Stone:
  1 chert scraper
  2 quartzite perforators
PCJ-57 Central Slopes

Ceramic Finds: 154 sherds
Non-Diagnostic Sherds:
Café: 41 sherds
1 café burnished
40 café unburnished

Gray: 81 sherds
77 gray burnished
4 gray unburnished

Diagnostic Sherds:
Café: 2 sherds
2 café rim

Gray: 30 sherds
1 gray reworked sherd
1 gray foot
19 gray rims
1 gray neck
7 gray body sherds
1 gray base

Relative % Paste:
28% café
72% gray

Vessel Types:
Composite Silhouette (11 gray) 34%
Conical Bowl (1 gray) 3%
Hemispherical Bowl (9 gray) 28%
Olla (1 café, 2 gray) 9%
Outleaning Bowl (1 café, 3 gray) 13%
Reworked Sherd (1 gray) 3%
Tecomate (1 gray) 3%
Tripod Vessel (1 gray) 3%
Unknown (1 gray) 3%

Other Finds:
Chipped Stone:
1 chert scraper
1 fine volcanic scraper
PCJ-58 Central Slopes

Ceramic Finds: 174 sherds
Non-Diagnostic Sherds:
Café: 35 sherds
  3 café burnished
  32 café unburnished
Gray: 110 sherds
  106 burnished
  4 unburnished
Other: 5 sherds
  4 Atzompa Green
  1 gray/café mix

Diagnostic Sherds:
Café: 5 sherds
  1 café base with foot
  4 café rims
Gray: 16 sherds
  1 gray reworked sherd
  14 gray rims
  1 gray body sherd
Other: 3 sherds
  2 orange rims
  1 amarillo neck

Relative % Paste:
  23% café
  72% gray
  5% other

Vessel Types:
  Comal (1 café) 4%
  Composite Silhouette (7 gray) 29%
  Conical Bowl (1 orange) 4%
  Cylinder (1 orange) 4%
  Hemispherical Bowl (7 gray) 29%
  Olla (3 café, 1 amarillo) 17%
  Reworked Sherd (1 gray) 4%
  Tripod Vessel (1 café) 4%
  Unknown (1 gray) 4%

Other Finds:
Chipped Stone:
  1 fine volcanic core
  1 fine volcanic scraper
  1 fine volcanic chunk/core
  1 fine volcanic notched flake
  1 fine volcanic perforator
  1 jasper chunk/core
  1 quartzite chunk
  1 chert scraper
  1 chert unutilized flake
  1 obsidian utilized flake
PCJ-59 Central Eastern Slopes

Ceramic Finds: 401 sherds
Non-Diagnostic Sherds:
Café: 115 sherds
  15 café burnished
  110 café unburnished

Gray: 213 sherds
  210 gray burnished
  3 gray unburnished

Other: 2 sherds
  2 café/gray mix

Diagnostic Sherds:
Café: 6 sherds
  1 café figurine fragment
  2 café necks
  2 café body
  1 café rim

Gray: 65 sherds
  19 gray body sherds
  10 gray reworked sherds
  2 gray necks
  34 gray rims

Relative % Paste:
30% café
69% gray
0.5% other

Vessel Types:
Composite Silhouette (25 gray) 35%
Conical Bowl (2 gray) 3%
Figurine (1 café) 1%
Hemispherical Bowl (18 gray) 25%
Olla (4 café, 6 gray) 14%
Outleaning Bowl (1 café, 1 gray) 3%
Reworked Sherd (10 gray) 14%
Unknown (3 gray) 4%

Other Finds:
Chipped Stone:
  1 jasper core
  1 chert core
  2 chert scrapers
  1 chert notched flake
  1 quartzite chunk/core
  1 quartzite biface
  1 quartzite chunk
  2 quartzite unutilized flakes
PCJ-60 Central Eastern Slopes

Ceramic Finds: 636 sherds

Non-Diagnostic Sherds:
Café: 43 sherds
9 café burnished
34 café unburnished

Gray: 502 sherds
460 gray burnished
42 gray unburnished

Diagnostic Sherds:
Café: 6 sherds
1 café foot
1 café handle
1 café reworked sherd
3 café rim

Gray: 85 sherds
1 gray urn fragment
2 gray foot
2 gray bases
1 gray body/neck?
13 gray body sherds
11 gray reworked sherd
48 gray rims
7 gray necks

Relative % Paste:
8% café
92% gray

Vessel Types:
Composite Bowl (37 gray) 41%
Conical Bowl (8 gray) 9%
Hemispherical Bowl (11 gray) 12%
Olla (12 gray) 13%
Outleaning Bowl (3 café, 2 gray) 5%
Sahumador (1 café) 1%
Reworked Sherd (1 café, 11 gray) 13%
Tripod Vessel (1 café, 2 gray) 3%
Unknown (1 gray) 1%
Urn (1 gray) 1%

Other Finds:
Chipped Stone:
1 chert chunk/core
1 chert scraper
1 chert utilized flake
1 jasper chunk/core
1 fine volcanic scraper
PCJ-61 Central Eastern Slopes

Ceramic Finds: 600
Non-Diagnostic Sherds:
Café: 104 sherds
12 café burnished
92 café unburnished

Gray: 413 sherds
377 gray burnished
36 gray unburnished

Other: 3 sherds
3 gray/café mix

Diagnostic Sherds:
Café: 4 sherds
1 café handle
3 café rims

Gray: 76 sherds
1 gray handle
16 gray body sherds
1 gray foot
38 gray rims
7 gray reworked sherds
10 gray necks
1 gray base with foot
2 gray bases

Relative % Paste:
18% café
82% gray
0.5% other

Vessel Types:
Composite Silhouette (33 gray) 41%
Conical Bowl (1 café, 3 gray) 5%
Hemispherical Bowl (1 café, 12 gray) 16%
Olla (1 café, 15 gray) 20%
Outleaning Bowl (2 gray) 3%
Reworked Sherd (7 gray) 8%
Sahumador (1 café, 1 gray) 3%
Tripod Vessel (2 gray) 3%
Unknown (1 gray) 1%

Other Finds:
Chipped Stone:
3 chert perforators
1 chert core
4 chert scrapers
1 chert chunk
3 chert unutilized flakes
1 jasper scraper
1 quartzite chunk/core
1 obsidian blade

Plaster:
1 piece of plaster
PCJ-62 Central Eastern Slopes

Ceramic Finds: 231 sherds
Non-Diagnostic Sherds:
Café: 27 sherds
4 café burnished
23 café unburnished

Gray: 158 sherds
135 gray burnished
23 gray unburnished

Diagnostic Sherds:
Café: 0 sherds
Gray: 46 sherds
2 gray reworked sherds
2 gray base with foot
2 gray bases
31 gray rims
1 gray handle
4 gray body sherds
4 gray necks

Relative % Paste:
12% café
88% gray

Vessel Types:
Composite Silhouette (21 gray) 46%
Conical Bowl (6 gray) 13%
Cup (1 gray) 2%
Hemispherical Bowl (6 gray) 13%
Olla (5 gray) 11%
Outleaning Bowl (2 gray) 4%
Reworked Sherd (2 gray) 4%
Tripod Vessel (2 gray) 4%
Unknown (1 gray) 2%

Other Finds:
Chipped Stone:
4 fine volcanic scrapers
2 fine volcanic notched flakes
2 fine volcanic perforators
2 chert scrapers
1 chert notched flake
1 jasper perforator
1 jasper utilized flake
2 quartzite notched flakes
Ceramic Finds: 117 sherds

Non-Diagnostic Sherds:
Café: 25 sherds
1 café burnished
24 café unburnished

Gray: 66 sherds
63 gray burnished
3 gray unburnished

Diagnostic Sherds:
Café: 7 sherds
1 café handle
5 café rims
1 café body

Gray: 19 sherds
1 gray foot
4 gray reworked sherds
3 gray body sherds
10 gray rims

1 gray neck

Relative % Paste:
27% café
73% gray

Vessel Types:
Composite Silhouette (2 café, 5 gray) 27%
Cup (2 gray) 8%
Hemispherical Bowl (4 gray) 15%
Olla (3 gray) 12%
Outleaning Bowl (2 café) 8%
Sahumador (2 café) 8%
Reworked Sherd (4 gray) 15%
Tripod Vessel (1 gray) 4%
Unknown (1 café) 4%

Other Finds:
NONE
PCJ-64 Central Eastern Slopes

Ceramic Finds: 162 sherds
Non-Diagnostic Sherds:
Café: 38 sherds
  0 café burnished
  38 café unburnished

Gray: 92 sherds
  71 gray burnished
  21 gray unburnised

Diagnostic Sherds:
Café: 9 sherds
  4 café rims
  1 café foot
  1 café neck
  1 café base
  2 café body sherds

Gray: 23 sherds
  5 gray body sherds
  1 gray reworked sherd
  1 gray foot

  12 gray rims
  3 gray necks
  1 gray base

Relative % Paste:
29% café
71% gray

Vessel Types:
Composite Silhouette (1 café, 7 gray) 25%
Conical Bowl (4 café, 5 gray) 28%
  Cup (2 gray) 6%
Hemispherical Bowl (2 café, 3 gray) 16%
Olla (1 café, 3 gray) 13%
Reworked Sherd (1 gray) 3%
Tripod Vessel (1 café, 1 gray) 6%
Unknown (1 gray) 3%

Other Finds:
NONE
### PCJ-65 Central Eastern Slopes

<table>
<thead>
<tr>
<th>Ceramic Finds:</th>
<th>33 sherds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Diagnostic Sherds:</td>
<td></td>
</tr>
<tr>
<td>Café: 9 sherds</td>
<td></td>
</tr>
<tr>
<td>0 café burnished</td>
<td></td>
</tr>
<tr>
<td>9 café unburnished</td>
<td></td>
</tr>
<tr>
<td>Gray: 19 sherds</td>
<td></td>
</tr>
<tr>
<td>17 gray burnished</td>
<td></td>
</tr>
<tr>
<td>2 gray unburnished</td>
<td></td>
</tr>
<tr>
<td>Diagnostic Sherds:</td>
<td></td>
</tr>
<tr>
<td>Café: 0 sherds</td>
<td></td>
</tr>
<tr>
<td>Gray: 4 sherds</td>
<td></td>
</tr>
<tr>
<td>1 gray rim</td>
<td></td>
</tr>
<tr>
<td>3 gray body sherds</td>
<td></td>
</tr>
<tr>
<td>Other: 1 sherd</td>
<td></td>
</tr>
<tr>
<td>1 orange body sherd</td>
<td></td>
</tr>
<tr>
<td>Relative % Paste:</td>
<td></td>
</tr>
<tr>
<td>27% café</td>
<td></td>
</tr>
<tr>
<td>70% gray</td>
<td></td>
</tr>
<tr>
<td>3% other</td>
<td></td>
</tr>
</tbody>
</table>

| Vessel Types: |
| Composite Silhouette (3 gray) 60% |
| Hemispherical Bowl (1 gray, 1 orange) 40% |

| Other Finds: |
| Chipped Stone: |
| 1 chert chunk/core |
| 1 quartzite scraper |

| Plaster: |
| 7 pieces of plaster |
PCJ-66 Central Eastern Slopes

Ceramic Finds: 623 sherds
Non-Diagnostic Sherds:
Café: 189 sherds
7 café burnished
182 café unburnished

Gray: 310 sherds
352 gray burnished
58 gray unburnished

Other: 1 sherd
1 gray/café mix

Diagnostic Sherds:
Café: 27 sherds
4 café handles
2 café body sherds
1 café base
1 café base with foot
6 café necks
13 café rims

Gray: 96 sherds
21 gray body sherds
1 gray base with foot
2 gray base
9 gray necks
4 gray handles
1 gray foot
52 gray rims
6 gray reworked sherds

Relative % Paste:
35% café
65% gray

Vessel Types:
Comal (1 café) 1%
Composite Silhouette (1 café, 30 gray) 25%
Conical Bowl (6 café, 8 gray) 11%
Cup (3 gray) 2%
Flat Bottomed Bowl (1 gray) 1%
Hemispherical Bowl (1 café, 31 gray) 26%
Jar (1 gray) 1%
Olla (9 café, 10 gray) 15%
Outleaning Bowl (1 café, 1 gray) 2%
Reworked Sherd (6 gray) 5%
Sahumador (4 café, 4 gray) 7%
Tripod Vessel (1 gray) 1%
Unknown (3 café, 1 gray) 3%

Other Finds:
Chipped Stone:
3 fine volcanic scrapers
1 fine volcanic perforator
2 fine volcanic utilized flakes
1 fine volcanic notched flake
1 chert core
1 chert scraper
1 chert notched flake
1 chert perforator
1 jasper notched flake
1 quartzite chunk/core
PCJ-67 Eastern Slopes

Ceramic Finds: 129 sherds
Non-Diagnostic Sherds:
Café: 27 sherds
0 café burnished
27 café unburnished

Gray: 79 sherds
46 gray burnished
32 gray unburnished

Diagnostic Sherds:
Café: 1 sherd
1 café neck

Gray: 22 sherds
2 gray base sherds
1 gray base with foot
2 gray reworked sherds
14 gray rims
2 gray necks
1 gray body

Relative % Paste:
22% café
78% gray

Vessel Types:
Composite Silhouette (7 gray) 30%
Conical Bowl (3 gray) 13%
Flat Bottomed Vessel (1 gray) 4%
Hemispherical Bowl (4 gray) 17%
Olla (1 café, 4 gray) 22%
Tripod Vessel (1 gray) 4%
Reworked Sherd (2 gray) 9%

Other Finds:
Chipped Stone:
1 chert core
1 fine volcanic notched flake

Plaster:
1 piece of plaster with red pigment
PCJ-68 Eastern Slopes

Ceramic Finds: 465 sherds

Non-Diagnostic Sherds:
Café: 188 sherds
6 café burnished
182 café unburnished

Gray: 217 sherds
191 gray burnished
26 gray unburnished

Other: 4 sherds
4 crema sherds

Diagnostic Sherds:
Café: 12 sherds
2 café handle
5 café rims
1 café miniature
4 café body sherds

Gray: 44 sherds
2 gray miniatures
2 gray base with foot
26 gray rims
4 gray reworked sherds
1 gray rim to base
4 gray body sherds
3 gray necks
2 gray bases

Relative % Paste:
43% café
56% gray
1% other

Vessel Types:
Bowl (1 café) 2%
Comal (1 café) 2%
Composite Silhouette (18 gray) 32%
Conical Bowl (1 café, 3 gray) 7%
Cup (1 gray) 2%
Hemispherical Bowl (1 café, 8 gray)
16%
Miniature (1 café, 2 gray) 5%
Olla (3 café, 6 gray) 16%
Reworked Sherd (4 gray) 7%
Sahumador (2 café) 4%
Tripod Vessel (2 gray) 4%
Unknown (1 café, 1 gray) 4%

Other Finds:
Chipped Stone:
1 fine volcanic scraper
1 fine volcanic notched flake
2 chert scrapers
1 chert notched flake
1 chert perforator
1 chert unutilized flake
1 jasper scraper
1 sandstone notched flake
1 quartzite scraper
1 quartzite biface
1 quartzite unutilized flake
1 obsidian blade
PCJ-69 Eastern Slopes

Ceramic Finds: 44 sherds

Non-Diagnostic Sherds:
Café: 13 sherds
1 café burnished
12 café unburnished

Gray: 24 sherds
18 gray burnished
6 gray unburnished

Diagnostic Sherds:
Café: 0 sherds

Gray: 7 sherds
4 gray rims
1 gray neck
2 gray body sherds

Relative % Paste:
30% café
70% gray

Vessel Types:
Brazier (1 gray) 14%
Composite Silhouette (4 gray) 57%
Olla (2 gray) 29%

Other Finds:
Chipped Stone:
1 chert notched flake
1 fine volcanic scraper
1 chert core
1 quartzite notched flake
PCJ-70 Eastern Slopes

Ceramic Finds: 156 sherds
Non-diagnostic Sherds:
Café: 18 sherds
2 café burnished
16 café unburnished

Gray: 109 sherds
94 gray burnished
15 gray unburnished

Other: 1 sherd
1 gray/café mix

Diagnostic Sherds:
Café: 3 sherds
1 café base with foot
2 café rims

Gray: 25 sherds
1 gray urn fragment
1 gray reworked sherd
1 gray kiln waster
14 gray rim
2 gray base with foot
2 gray necks
1 gray body sherd
2 gray bases

1 gray foot

Relative % Paste:
13% café
86% gray
1% other

Vessel Types:
Composite Silhouette (6 gray) 21%
Conical Bowl (2 café, 6 gray) 29%
Hemispherical Bowl (5 gray) 18%
Kiln Waster (1 gray) 4%
Olla (2 gray) 7%
Reworked Sherd (1 gray) 4%
Tripod Vessel (1 café, 1 gray) 7%
Unknown (2 gray) 7%
Urn/ Figurine (1 gray) 4%

Other Finds:
Chipped Stone:
1 fine volcanic unutilized flake
1 chert perforator

Plaster:
7 pieces of plaster
Marks

Mark 24
Other Finds:
Ground Stone:
1 Ground Stone 9.5 x 8 x 6 cm

Mark 112
Other Finds:
Ground Stone:
1 Ground Stone 13 x 7 x 6 cm

Mark 133
Other Finds:
Chipped Stone:
1 jasper scraper
3 chert unutilized flakes
3 chert scrapers
1 chert notched flake
1 chert perforator

Mark 141
Other Finds:
Chipped Stone:
1 chert core

Mark 160
Other Finds:
Chipped Stone:
1 Ground Stone 14 x 8 x 7 cm

Mark 215
Other Finds:
Chipped Stone:
1 chert core
Mark 221
Ceramic Finds:
Diagnostic Sherds:
1 café figurine
Mark 223
Ceramic Finds: 246 sherds
Non-Diagnostic Sherds:
Café: 21 sherds
5 café burnished
16 café unburnished

Gray: 137 sherds
79 gray burnished
58 gray unburnished

Other: 2 sherds
2 gray/café mix

Diagnostic Sherds:
Café: 17 sherds
5 café bases
2 café rims
7 café necks
2 café body sherds
1 café miniature

Gray: 68 sherds
14 gray body sherds
24 gray bases
14 gray rims
10 gray necks
5 gray reworked sherds
1 gray miniature

Other: 1 sherd
1 orange body sherd

Relative % Paste:
15% café
83% gray
1% other

Vessel Types:
Composite Silhouette (2 café, 9 gray) 13%
Conical Bowl (3 café, 22 gray) 29%
Flat Bottomed Vessel (1 café, 4 gray) 6%
Hemispherical Bowl (2 café, 3 gray) 6%
Miniature (1 café, 1 gray) 2%
Olla (9 café, 18 gray) 31%
Outleaning Bowl (3 gray) 3%
Reworked Sherd (5 gray) 6%
Unknown (2 gray, 1 orange) 3%

Other Finds:
Chipped Stone:
1 fine volcanic scraper

Mark 232
Ceramic Finds:
Diagnostic Sherds:
1 café urn/figurine
Appendix B
Collection Square Field
Documentation Forms

*Post Classic Jalieza Project SURVEY*

LOT #: _______________  AREA: ___ m. X ___ m. = ___ m²

LOCATION OF SQUARE (MAP #): __________________________

MATERIAL COLLECTED:
SHERDS ____ BAG(S):  †rims and dec. bodies, †all sherds
CHIPPED STONE ____ BAG(S)  FIGURINES ____ PIECES
POLISHED STONE ____ PIECES  OTHER __________

MATERIAL NOTED:
BODY SHERDS __________________________________________
GROUND STONE __________________________________________
OTHER _________________________________________________

DATE (d/m/y): ___ / ___ / ___  NAME: ______________________
POST CLASSIC JALIEZA PROJECT SURVEY

1. Lot #: ______________________
2. Location: Map # _____________

3. General location: ______________________________

4. Sample area:
   1. 100 m² (___ meters X ___ meters)
   2. other (specify) _______________________

5. General topographic location of sample square:
   1. Alluvium
   6. Piedmont slope
   7. Hill-top
   8. Steep ridge-top
   9. other (specify) _______________________

6. Topographic slope:
   1. Gentle (0-10°)
   6. Gentle to moderate (10-25°)
   7. Moderate (25-35°)
   8. Moderate to steep (35-45°)
   9. Steep (> 45°)

7. Erosion:
   1. Light
   6. Light to moderate
   7. Moderate
   8. Moderate to heavy
   9. Heavy

8. Present land use:
   1. Cultivated
      a. Specify what is cultivated ______________________
      b. Specify what kind of irrigation __________________
      d. Specify what kind of erosion control __________
   2. Fallow
   4. Uncultivated
      a. Type of vegetation
         1. “monte”
         5. xerophytic vegetation
         6. grass-land
         7. other (specify) ______________________
      b. Density of vegetation
         7. none
8. light
9. light to moderate
10. moderate
11. moderate to dense
12. dense

9. Nature of any additional disturbance found within sample square:
   1. Tree roots
   5. Animal burrows
   6. Looters pit(s)
   7. other (specify) ______________________________

10. Give approximate area (m²) of square that has been disturbed, or sketch location of disturbance(s) in square.

11. Sector of site:
   1. Civic-ceremonial
   5. Residential
   6. other (specify) ______________________________
   7. not applicable

12. Feature:
   1. Civic-ceremonial structure
   2. Plaza or platform
   3. Ball-court
   4. Residence
   5. Sherd scatter
   6. other (specify) _________

13. Architectural evidence:
   9. Mound or platform
   10. Mound or platform with masonry
   11. Mound or platform with plaster floor construction
   12. Mound or platform with both masonry and plaster floor construction
   13. Masonry
   14. Plaster floor construction
   15. other (specify) ______________________________
   16. none

14. Location of sample square with respect to feature described above:
   8. on feature
   9. Adjacent to feature
   10. < 10 m downslope from feature
   11. < 10 m upslope from feature
12. < 10 m on same level as feature
13. other (specify) __________________________
14. not applicable

15. Relative distribution of artifactual material within the sample square:
   4. Uniform
   5. Localized (specify) __________________________
   6. other (specify) __________________________

16. Material collected:
a. Sherds _____ bag(s)
   1. only rims and decorated body sherds (body sherd count below)
   2. all sherds
b. Chipped stone _____ bag(s)/envelope(s)
f. Figurines _____ pieces
g. Polished stone _____ pieces
h. other (specify) __________________________

17. Material noted and not saved:
a. Body sherds __________________________

b. Ground stone
   1. # of manos / mano fragments __________________________
   6. # of metates / metate fragments __________________________
   7. # of pestles / pestle fragments __________________________
   8. # of unidentifiable fragments __________________________
   9. other (specify) __________________________

c. other (specify – for example if daub, plaster fragments, etc.)
   __________________________

18. Preliminary field observations
   (based on collected material):
   1. periods present: †Monte Albán II
       †Monte Albán IIIA
       †Monte Albán IIIB-IV
       †Monte Albán V
       †other (specify)

       __________________________
3. Possible craft production-related material present:
   - kiln wasters
   - figurine/urn molds
   - obsidian core(s)/core fragments/flakes/detritus
   - chipped stone core(s)/chipping debris
   - other (specify) __________________________

19. Other comments:

Date collected (d/m/y): ____ / ____ / ____

Name: ________________________________
Appendix C: Examples of Coding Forms for Ceramic and Chipped Stone Finds

Example of Coding Form for Chipped Stone

<table>
<thead>
<tr>
<th>Prov</th>
<th>tool type</th>
<th>edge retouched</th>
<th>stone</th>
<th>color opaque</th>
<th>weight</th>
<th>dimensions</th>
<th>Photo #</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCJ-1</td>
<td>unutilized flake</td>
<td>no</td>
<td>quartzite</td>
<td>white</td>
<td>0.4 g</td>
<td>.95 cm x 1.5 cm</td>
<td>2659</td>
</tr>
<tr>
<td>PCJ-1</td>
<td>unutilized flake</td>
<td>no</td>
<td>chert</td>
<td>lt. brown</td>
<td>2.3 g</td>
<td>3.3 cm x 1.4 cm</td>
<td>2659</td>
</tr>
<tr>
<td>PCJ-2</td>
<td>unutilized flake</td>
<td>no</td>
<td>quartzite</td>
<td>white</td>
<td>0.9 g</td>
<td>1 cm x 1.5 cm</td>
<td>2660</td>
</tr>
<tr>
<td>PCJ-2</td>
<td>perforator</td>
<td>no</td>
<td>quartzite</td>
<td>white</td>
<td>0.6 g</td>
<td>1.8 cm x .9 cm</td>
<td>2660</td>
</tr>
<tr>
<td>PCJ-2</td>
<td>utilized flake-scraper</td>
<td>yes</td>
<td>quartzite</td>
<td>white</td>
<td>0.7 g</td>
<td>1.4 cm x 1.5 cm</td>
<td>2660</td>
</tr>
<tr>
<td>PCJ-2</td>
<td>unutilized flake</td>
<td>no</td>
<td>chert</td>
<td>grey-green</td>
<td>4.1 g</td>
<td>2.6 cm x 1.7 cm</td>
<td>2661</td>
</tr>
<tr>
<td>PCJ-2</td>
<td>perforator</td>
<td>yes</td>
<td>chert</td>
<td>grey</td>
<td>4.5 g</td>
<td>3.4 cm x 2 cm</td>
<td>2663</td>
</tr>
<tr>
<td>PCJ-2</td>
<td>perforator</td>
<td>yes</td>
<td>chert</td>
<td>grey</td>
<td>6.8 g</td>
<td>2.8 x 3.4 cm</td>
<td>2663</td>
</tr>
<tr>
<td>PCJ-2</td>
<td>unutilized flake</td>
<td>no</td>
<td>volcanic</td>
<td>dark gray</td>
<td>9.0 g</td>
<td>3.5 x 2.2 cm</td>
<td>2661</td>
</tr>
<tr>
<td>PCJ-2</td>
<td>utilied flake-scraper</td>
<td>yes</td>
<td>chert</td>
<td>grey-white</td>
<td>11.4 g</td>
<td>4.6 x 2.4 cm</td>
<td>2662</td>
</tr>
<tr>
<td>PCJ-3</td>
<td>core</td>
<td>no</td>
<td>chert</td>
<td>white</td>
<td>&gt; 120 g</td>
<td>3.8 x 4.0 cm</td>
<td>2661</td>
</tr>
<tr>
<td>PCJ-3</td>
<td>utilized flake-scraper</td>
<td>yes</td>
<td>chert</td>
<td>grey</td>
<td>33.0 g</td>
<td>7.3 x 3.9 cm</td>
<td>2667</td>
</tr>
<tr>
<td>PCJ-3</td>
<td>utilized flake-scraper</td>
<td>yes</td>
<td>fine</td>
<td>volcanic</td>
<td>15.3 g</td>
<td>4.9 x 2.5 cm</td>
<td>2667</td>
</tr>
<tr>
<td>PCJ-3</td>
<td>utilized flake-scraper</td>
<td>yes</td>
<td>volcanic</td>
<td>dark gray</td>
<td>5.0 g</td>
<td>2.7 x 1.9 cm</td>
<td>2667</td>
</tr>
<tr>
<td>PCJ-3</td>
<td>utilized flake-notched</td>
<td>yes</td>
<td>chert</td>
<td>light gray</td>
<td>5.3 g</td>
<td>4.8 x 2.8 cm</td>
<td>2666</td>
</tr>
<tr>
<td>PCJ-3</td>
<td>utilized flake-scraper</td>
<td>yes</td>
<td>chert</td>
<td>grey</td>
<td>14.1 g</td>
<td>3.8 x 2.9 cm</td>
<td>2667</td>
</tr>
<tr>
<td>PCJ-4</td>
<td>utilized flake-notched</td>
<td>yes</td>
<td>chert</td>
<td>white</td>
<td>7.1 g</td>
<td>2 x 3.1 cm</td>
<td>2668</td>
</tr>
<tr>
<td>PCJ-4</td>
<td>unutilized flake</td>
<td>no</td>
<td>chert</td>
<td>white</td>
<td>3.2 g</td>
<td>3.2 x 1.3 cm</td>
<td>2669</td>
</tr>
</tbody>
</table>
### Example of Coding Form for Ceramic Finds

<table>
<thead>
<tr>
<th>Prov.</th>
<th>Sherd Type</th>
<th>Paste Type</th>
<th>Surface Finish</th>
<th>Vessel Type</th>
<th>Temper</th>
<th>CB A Type</th>
<th>Photo ?</th>
<th>Draw ?</th>
<th>Detail</th>
<th>Wall Thick.</th>
<th>Rim Diam.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCJ -1</td>
<td>Handle Base</td>
<td>Café</td>
<td>Rough</td>
<td>Sahumador</td>
<td>Fine with large white inclusions</td>
<td>K8?</td>
<td>Yes</td>
<td>Yes</td>
<td>21 mm</td>
<td>Handle diam. 2 cm</td>
<td></td>
</tr>
<tr>
<td>PCJ -1</td>
<td>Miniature Café</td>
<td>Rough</td>
<td>Min. comal</td>
<td>Fine</td>
<td>Yes</td>
<td>Yes</td>
<td>4 mm</td>
<td>2.7 cm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ -1</td>
<td>Handle frag. Café</td>
<td>Rough</td>
<td>Sahumador</td>
<td>Gritty, coarse</td>
<td>Yes</td>
<td>No</td>
<td>Hollo w handl e</td>
<td>19 mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ -1</td>
<td>Handle frag. Café</td>
<td>Rough</td>
<td>Sahumador</td>
<td>Gritty, coarse</td>
<td>Yes</td>
<td>No</td>
<td>Hole for air shaft</td>
<td>17 mm</td>
<td>17 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ -1</td>
<td>Handle Café</td>
<td>Rough</td>
<td>Sahumador</td>
<td>Fine</td>
<td>Yes</td>
<td>Yes</td>
<td>Hole for air shaft</td>
<td>22 mm</td>
<td>2.2 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ -1</td>
<td>Rim Café</td>
<td>Rough</td>
<td>Olla</td>
<td>Fine with white inclusions</td>
<td>K8?</td>
<td>Yes</td>
<td>Yes</td>
<td>7 mm</td>
<td>12 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ -1</td>
<td>Rim Gris</td>
<td>Lightly burnished</td>
<td>Comp. silh.</td>
<td>Fine</td>
<td>No</td>
<td>No</td>
<td>6 mm</td>
<td>20 cm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ -1</td>
<td>Rim Gris</td>
<td>Burnished</td>
<td>Comp. silh.</td>
<td>Fine</td>
<td>G3 M</td>
<td>Yes</td>
<td>Yes</td>
<td>11 mm</td>
<td>30 cm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ -1</td>
<td>Rim Gris</td>
<td>Burnished</td>
<td>Comp. silh.</td>
<td>Fine.</td>
<td>No</td>
<td>No</td>
<td>7 mm</td>
<td>20 cm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ -1</td>
<td>Rim Gris</td>
<td>Highly burnished</td>
<td>Comp. silh.</td>
<td>Fine</td>
<td>No</td>
<td>No</td>
<td>7 mm</td>
<td>18 cm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCJ -1</td>
<td>Rim Gris</td>
<td>Highly burnished</td>
<td>Hemi. Bowl</td>
<td>Fine</td>
<td>No</td>
<td>No</td>
<td>5 mm</td>
<td>20 cm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D: Survey Maps

Overview Map of Postclassic Jalieza
Plaza and Mound

continued on Central Hilltop Map

possible mound

bedrock

retaining wall

sherd shelter

continued on Eastern Hilltop Map
Eastern Hilltop

continued on
Plaza Map
Central Eastern Slopes

continued on Central Slopes Map

continued on Eastern Slopes Map

0m  200m
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