MICHAEL LIND AND JAVIER URCID

THE LORDS OF LAMBITYECO

POLITICAL EVOLUTION IN THE VALLEY OF OAXACA DURING THE XOO PHASE

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Illustrations by Elbis Domínguez Covarrubias

With an Appendix on Calibrated Radiocarbon Dates for the Late Classic and Postclassic Periods in the Valley of Oaxaca by Robert Markens, Marcus Winter, and Cira Martínez

UNIVERSITY PRESS OF COLORADO

Published by the University Press of Colorado
5589 Arapahoe Avenue, Suite 206C
Boulder, Colorado 80303

Printed in the United States of America

The University Press of Colorado is a proud member of the Association of American University Presses.

The University Press of Colorado is a cooperative publishing enterprise supported, in part, by Adams State College, Colorado State University, Fort Lewis College, Mesa State College, Metropolitan State College of Denver, University of Colorado, University of Northern Colorado, and Western State College of Colorado.

The paper used in this publication meets the minimum requirements of the American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials. ANSI Z39.48-1992

Library of Congress Cataloging-in-Publication Data

Lind, Michael.
The lords of Lambityeco : political evolution in the Valley of Oaxaca during the Xoo phase / Michael Lind and Javier Urcid ; illustrations by Elbis Domínguez Covarrubias.
p. cm. — (Mesoamerican worlds)
"With an Appendix on Calibrated radiocarbon dates for the Late Classic and Postclassic periods in the Valley of Oaxaca by Robert Markens, Marcus Winter, and Cira Martínez."
Includes bibliographical references and index.
ISBN 978-0-87081-951-3 (hardcover : alk. paper) 1. Lambityeco Site (Mexico) 2. Excavations (Archaeology—Mexico—Lambityeco Site. 3. Zapotec Indians—Antiquities. 4. Zapotec Indians—Politics and government. 5. Social archaeology—Mexico—Oaxaca Valley. 6. Oaxaca Valley (Mexico)—Antiquities. I. Urcid, Javier. II. Title.
F1219.1.O11L55 2009
972'.74—dc22

2009044650

Design by Daniel Pratt

18 17 16 15 14 13 12 11 10 09 10 9 8 7 6 5 4 3 2 1

To the memory of John Paddock,
our teacher, mentor, and friend

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foreword

The site of Lambityeco in the Tlacolula arm of the Valley of Oaxaca is well-known to archaeologists and tourists alike for its impressive high-status residences as well as its altar complex with plaster friezes depicting several generations of ruling couples whose remains were discovered interred in a family mausoleum below the altar. Lambityeco was the focus of archaeological excavations and surface survey directed by John Paddock of the Institute of Oaxaca Studies from 1961 to 1976, followed by years of laboratory analyses. This impressive volume by two of the lead researchers on the project, Michael Lind and Javier Urcid, synthesizes major excavations focused on the Mound 195 Complex at Lambityeco. The authors present the excavation results in great detail and clarity, which allows them to trace changes in the Mound 195 Complex through the Late Classic and into the Early Postclassic and consider the implications for the Prehispanic history of the Zapotec people of the Valley of Oaxaca.

As an important demographic and political center during the Late Classic Xoo phase (ca. 650–850 CE), Lambityeco has figured prominently in debates about the Classic period collapse and the Early Postclassic Liobaa phase. Although Lambityeco was one of the largest sites in the Valley of Oaxaca and featured impressive monumental architecture, the community was dwarfed by the powerful mountaintop city and polity seat of Monte Albán, located twenty-five kilometers to the northwest. Lambityeco is

therefore crucial for understanding the political organization of the Xoo phase Monte Albán polity. Evidence for intensive salt-rendering activities as well as ceramic production and textile manufacture, among other economic activities, also makes Lambityeco an important site for developing models of economic relations in the Valley of Oaxaca.

Even more fundamental to questions of sociopolitical change during the Classic period collapse has been debate over the ceramic chronology for the Late Classic and Early Postclassic in the Valley of Oaxaca, and Lambityeco has been a focus of some of the most heated disagreements. For many years Lambityeco was considered the key site for understanding what happened in the Valley of Oaxaca during the Early Postclassic period immediately following the collapse of Monte Albán. Beginning in the late 1980s, however, researchers, including Marcus Winter and Michael Lind, began to raise questions concerning the ceramic markers that were viewed as differentiating the Late Classic and Early Postclassic. Since arguments concerning the Early Postclassic ceramic phase relied heavily on results from Lambityeco, the site figured prominently in the debate. Winter raised the most serious concerns in a 1989 article that pointed out that few radiocarbon samples from the Valley of Oaxaca dated to the Early Postclassic. At Lambityeco, six of the seven radiocarbon dates from the site fell within the Late Classic period, and the only Early Postclassic date was clearly anomalous. Recent systematic research by Robert Markens has begun to differentiate the Late Classic Xoo phase from an Early Postclassic Liobaa phase.

Needless to say, the evidence from Lambityeco figures into many of the key research problems and debates in Oaxacan archaeology, and this is one reason why *The Lords of Lambityeco: Political Evolution in the Valley of Oaxaca during the Xoo Phase* is such a welcome volume. The authors rely on the revised ceramic sequence to set the basic chronological framework for their study, which shows that most of the major occupations at the site, including the Mound 195 Complex, date to the Late Classic period rather than the Early Postclassic, as previously thought. The authors address Zapotec cultural evolution from a perspective that draws on World Systems theory along with recent considerations of agency and history, while challenging several long-held theoretical assumptions in Oaxacan archaeology. They insightfully question traditional approaches to cultural evolution that view change as episodic with long periods of relative stability punctuated by dramatic evolutionary transformations. Lind and Urcid point out that the episodic approach is in part a function of the reliance by archaeologists on ceramic phases that in Mesoamerica typically divide time into periods of several centuries' duration. Chronological frameworks built largely on

the basis of ceramic phases may predispose archaeologists to see change in an episodic fashion; yet as Lind and Urcid demonstrate, archaeologists can build more nuanced chronologies through careful attention to stratigraphy. By skillfully examining stratigraphic relationships at Lambityeco—what Lind and Urcid term the sequential integration approach—they are able to trace the history of the construction, use, alteration, and reuse of the buildings and tombs of the Mound 195 Complex during the course of a single ceramic phase. Their approach joins a growing literature on the biography of objects and places that examines the ways in which the history of places are implicated in broader changes in political relations, identity, and practice.

Another aspect of the authors' critical stance toward cultural evolution is to question the utility of archaeological indicators of a state form of political organization. For example, Lind and Urcid question traditional indicators of the state, such as four-tiered settlement hierarchies and palaces, which continue to be important in archaeological discourse in Oaxaca. The authors also join a growing number of researchers who recognize a diversity of forms of political organization within states. Instead of seeing the Late Classic period as a "golden age" when the Monte Albán polity reached its apogee as the political capital of a unified and tightly integrated state that dominated the central valleys of Oaxaca and beyond, the authors take the organization of the Monte Albán polity as an empirical question to be investigated. They consider a variety of general categories of state organization, including territorial states and city-states, using ethnohistoric and ethnographic analogies to specify how these kinds of polities may have been realized by ancient Zapotecs.

What makes this volume so effective is the authors' attention to detail in their discussion of the stratigraphic relations within the Mound 195 excavations and how the evidence relates to the broader findings from Lambityeco. This approach allows Lind and Urcid to trace the history of political and economic relations between Lambityeco and Monte Albán during the Xoo phase. The combination of archaeological, osteological, epigraphic, and iconographic evidence from Mound 195 provides an unprecedented picture of the community's ruling family. The authors trace the continuous elaboration of the ruler's residence as the wealth and influence of Lambityeco's royal family increased through the eighth century. Incredibly, friezes preserved on an altar complex and tomb depict four successive generations of royal couples who ruled the community from ca. 700 to 800 CE along with an important apical or founding ancestor. The friezes represent the genealogy of the fifth couple who ruled from ca. 775 to 800 CE, Lord 1 Lachi and Lady 10 Naa, whose portrait heads decorate the

façade of a tomb beneath the residence. These data show that Lambityeco was the political seat of a small polity in the Tlacolula arm of the valley. Although the lords of Lambityeco may have paid tribute to Monte Albán, they were gaining power throughout the eighth century.

The ascendance of the lords of Lambityeco came to an abrupt end at ca. 800 CE as Lord 1 Lachi's remains were removed from the tomb and shortly thereafter Lady 10 Naa was unceremoniously interred, indicating that the royal family was deposed and expelled from the residential compound. The authors make a compelling argument that the rebuilding of the Mound 195 Complex that followed was the result of the imposition of new rulers by Monte Albán. Their findings have major implications for models of changing relations between Monte Albán's rulers and the royal lines of other political centers in the Valley of Oaxaca. Oaxacan archaeologists are increasingly recognizing that the end of the Classic period was marked by factionalism and competition among ruling families. As Lind and Urcid note, the nature of inter-elite relations appears to have been highly variable at this time. At Lambityeco, the removal of the royal family and its replacement with a noble family from Monte Albán indicate that the status of the community changed from a semiautonomous political center to a dominated province. These findings show that just prior to the collapse of political authority at Monte Albán, the polity's rulers forcibly gained control over at least one competing royal family and its polity. This control was short-lived, however, as the rebuilding of the civic residential compound at Mound 195 was never completed, and within a few decades, ruling families and institutions collapsed at Lambityeco and throughout the valley. Although the evidence from Lambityeco directly addresses the collapse of only one political center in the Valley of Oaxaca, the implications of these data are complex and far-reaching. The authors consider a variety of factors that may have led to the political collapse, such as relations with commoners and climate change, but acknowledge that we are far from reaching a satisfactory understanding of this profound transformation in the political history of Oaxaca and Mesoamerica more generally. The Lambityeco excavations add to a growing body of evidence from sites like Monte Albán, Jalieza, and El Palmillo on the fate of Zapotec nobles and ruling institutions at the end of the Classic period.

The Lords of Lambityeco is an important contribution to Oaxacan archaeology. The authors provide a careful and detailed study of one of the most important and controversial sites in the region. They use the evidence to examine the history of one of the Valley of Oaxaca's most powerful Late Classic royal families and consider the implications of the fate of this family and the broader community for understandings of the Classic period col-

lapse. Like any insightful work, the volume raises as many questions as it answers; readers will be considering the implications of this study for many years to come.

ARTHUR A. JOYCE

preface

Without Dr. John Paddock, to whose memory this book is dedicated, the excavations at Lambityeco and this book never would have happened. In the summer of 1961, Paddock together with Dr. Charles Wicke initiated excavations in Mound 195 at Lambityeco as directors of an archaeological field school project for Mexico City College, later to become the University of the Americas. The students participating in the field school included Peggy Baird, William Bittler, Camilla Blaffer, John Carr, Emily Rabin, Marie Steadman, Ed Traverso, Natalie Turcotte, and Starr Warner. For a few days during the summer Dr. Eduardo Noguera visited the site and together with a few students excavated a stratigraphic test pit in Mound 190, ten meters directly south of Mound 195.

In 1967, Paddock obtained funding to establish the Instituto de Estudios Oaxaqueños, which he directed until his death in 1998. His first concern was to finish the Lambityeco excavations and to this end he invited a second University of the Americas archaeological field school project, directed by Dr. Evelyn Rattray and Dr. Dan Wolfman, to continue excavations in Mound 195 from January to March of 1967. Students participating in this field school included Hugh G. "Sam" Ball, Halina Cesarman, Peter Goodwin, Bob Hohl, Joe Mogor, Paul Morrissey, Emily Rabin, Kathy Ritchie, Robin Russell, and Janet Long de Solís.

Beginning in the summer of 1967, Paddock decided to continue excavations in Mound 195 and Mound 190 on a more or less fulltime basis with

a field director and his assistants carrying out the day-to-day operations in conjunction with a crew of Zapotecs from Tlacolula headed by Don Nicolás Antonio and his son, Pedro. Michael Lind was chosen to be the first field director and served from June 1967 until May 1968. During the summer of 1967 he was assisted by William Bittler and Frank Harrah and, from January to May 1968, he was assisted by Joe Mogor. Mogor served as field director from May 1968 until November 1969. He was assisted at various times by Hugh G. "Sam" Ball, Richard Crane, Ned Madonia, and Robin Russell. Mogor and Lind also worked together during July and August 1969.

Dr. Dave Peterson served as field director from November 1969 to September 1972. He was assisted at various times by Victoria Bach, Hugh G. "Sam" Ball, Richard Crane, Judy DiMaio, Steve Kowalewski, Ned Madonia, Steve Rasnik, Robin Russell, Sara Stebbins, George Thomas, and Marcia Truell. Peterson and Lind worked together from June to December 1971. David Potter served as field director from July to November 1973 and during April 1974 and was assisted by John Carroll, William Fowler, and Bob Long. All of the individuals listed above contributed to the excavations and analysis of materials from Mound 195 and Mound 190 at Lambityeco and provided the data upon which this study is based. All, except the field school students, were also financially supported by Paddock's successful efforts to obtain funding from anonymous private donors to keep the excavations going. We especially thank those anonymous private donors whose funding made the excavations possible.

Excavation, of course, is only one part of any archaeological study that requires analysis for its completion. During the 1979–1980 school year, Lind received a sabbatical from Santa Ana College in Santa Ana, California, which permitted him to focus on analysis of materials from Lambityeco for half of the year. During this time, the architectural analysis of the sequence of structures in Mound 195 was carried out with considerable assistance from the late Dr. David Peterson. During 1983, Lind received a postdoctoral fellowship from Vanderbilt University in Nashville, Tennessee, which allowed him to complete an analysis of the tomb and burial offerings and other features in and around Mound 195. Throughout this time, Paddock assisted Lind by covering the costs for the printing of photos from the excavation archives and reading and commenting on drafts of the manuscript.

The analysis of almost 100 sets of human remains and their archaeological context recovered in excavations at Lambityeco between 1961 and 1973 was conducted by Javier Urcid between October 1980 and January 1981 and during the summer of 1982, aided on both occasions by a grant from the Instituto de Estudios Oaxaqueños headed by Paddock. Subsequent

analysis of inscribed materials from Lambityeco by Urcid in 1987 was feasible thanks to a grant from the Social Science Research Council, with funds provided by the William and Flora Hewlett Foundation and the Andrew W. Mellon Foundation.

Many people over a long period of time contributed to this study. The late Dr. David A. Peterson enthusiastically shared his broad knowledge of Lambityeco and much of the analysis would not have been possible without his help. Dr. Marcus Winter of the Centro Regional INAH–Oaxaca was always available through the years to discuss and share his incomparable knowledge of Oaxaca archaeology, which aided immensely in completing this work. Dr. Robert Markens read and commented on an earlier draft of this study and made many helpful suggestions. He and his wife, Cira Martínez, have shared a great deal of unpublished information and discussed many aspects of Lambityeco that were exceedingly helpful. Robert Markens, Marcus Winter, and Cira Martínez also contributed an appendix to this book regarding the first calibrated radiocarbon dates for the Late Classic and Postclassic periods in the Valley of Oaxaca, for which we are extremely grateful.

The late Howard Leigh was always willing to discuss his considerable knowledge of past and present Zapotec culture, including Lambityeco, and some of his observations have been included in this work. Dr. Steve Kowalewski was especially gracious in providing unpublished material from his survey of the valley and from studies he did at Lambityeco and took time to discuss this material without which sections of this study would not have been possible. Likewise, Dr. Gary Feinman and Dr. Laura Finsten provided valuable unpublished materials from their studies in the valley, which were very useful. The late Cecil Welte of the Oficina de Estudios de Humanidad del Valle de Oaxaca generously provided information on the Valley of Oaxaca and surrounding areas, and some of his excellent maps have been incorporated into this study. Very constructive criticisms from an anonymous reader benefited this study immensely. We are deeply grateful to Elbis Domínguez Covarrubias for the carefully crafted figures that accompany the study. Finally, we appreciate the efforts of Darrin Pratt, Laura Furney, Daniel Pratt, and the staff and board of the University Press of Colorado for their help in seeing this work through to its completion.

Michael Lind, Santa Ana, California
Javier Urcid, Waltham, Massachusetts

THE LORDS OF LAMBITYECO

chapter one

Introduction

This study is about cultural change, specifically political evolution in the Valley of Oaxaca during the Xoo phase (ca. 650–850 CE). It also encompasses economic change insofar as it relates to political evolution. The data for this study come from the archaeological site of Lambityeco, a secondary center during the seventh to ninth centuries CE, when Monte Albán was the primary center in the Valley of Oaxaca. Lambityeco provides a perspective from a secondary center, some 25 km^1 from Monte Albán, into the rise of the capital of Classic period Zapotec civilization to its highest peak during the Xoo phase and ultimately to its collapse at the end of the same phase.

As this study concerns cultural evolution, it is appropriate to comment on our approach. Cultural evolution, and not the naïve "Laws of Cultural Evolution" proposed by some archaeologists in the 1970s, is the outcome of two universal processes: one ecological and one sociocultural. Ecological processes may bring about cultural transformations through either natural or human-engendered changes in the environment. A society affects its habitat and, in turn, is affected by it. Sociocultural dynamics both within a society and external to it may also bring about cultural change. External variables may foster change by the interaction of one society with others. Internal pressures may induce change through competition and conflicts among individuals and among groups within the society.

In recent years, archaeologists have turned to agency and ideology to explain cultural evolution, pointing out that humans are not passive respondents to cultural evolutionary processes but active agents of cultural change (Hodder and Hutson 2003). We, as well, do not view humans as passive respondents to the cultural evolutionary processes outlined above. Humans actively engage their environments and one another and, in turn, are affected by ecological and sociocultural processes. By using simultaneously two analytical levels, we do not see a conflict between agency and the cultural evolutionary processes outlined above. We do object, however, to those who consider agency and ideology the sole forces of cultural evolution. In the concluding chapter, agency in the context of broader processes will be applied to political evolution in the Valley of Oaxaca during the Xoo phase.

Although cultural evolution deals with change, it does not treat evidence of cultural continuity in the archaeological record (Hodder and Hutson 2003:139). There is archaeological evidence for long-term cultural continuity in certain practices that indicates that the ancestors of the present-day Zapotecs inhabited the Valley of Oaxaca over a long period of time. In excavations at Lambityeco and the nearby Postclassic site of Yagul (Bernal and Gamio 1974:41) bowls covered with a shallow bowl as a lid have been found interred beneath patios and room floors of houses. Present-day Zapotecs place the umbilical cord of newborns in a bowl covered with a shallow bowl as a lid and bury it beneath the courtyards or room floors of their houses (see Chapter 9). This cultural practice or "custom," then, can be followed uninterrupted at least from the Late Classic at Lambityeco through the Postclassic at Yagul to the present-day Zapotec inhabitants of the region (see also Markens, Winter, and Martínez 2008:206 for examples from Macuilxóchitl). This exemplifies the continuity of a practice over a period of at least 1,400 years despite changes in the political, social, economic, and religious organization and even the types of ceramics used by the Zapotecs who inhabit this region. This practice also has been found at the "Oaxaca barrio" in Teotihuacan during the Xolalpan phase, ca. 350–550 CE (Michael Spence, personal communication, 1994).

Although this example may seem trivial, it alerts us to the importance of taking cultural continuities into account even while studying cultural evolution. Knowing that the present-day Zapotecs have a long cultural evolutionary history in the Valley of Oaxaca strengthens the use of ethnographic analogies and ethnohistoric models that may be tested against the archaeological remains. Examples are a model of the Formative period Zapotec cosmos (Flannery and Marcus 1976), lauded by Hodder

and Hutson (2003:32–33), and Flannery's interpretation of Classic Monte Albán's political system, based on ethnohistoric documents, with regard to which he states, "I would not even attempt this reconstruction were the archaeological continuity in the Valley of Oaxaca not so remarkable" (Flannery 1983:132).

ARCHAEOLOGICAL APPROACHES TO CULTURAL EVOLUTION

Traditional archaeological undertakings of the study of cultural change involve the use of stratigraphic test pit excavations and surface or settlement pattern surveys. Long, continuous archaeological sequences are broken up into discrete blocks of time or phases on the basis of observed changes in artifact types found in stratigraphic test pits. Collections of diagnostic artifact types are used to determine the number of sites in a region and their size, complexity, and geographical spacing for each phase. The changes in these settlement patterns from one phase to the next have served as the basis for interpreting the cultural evolution of ancient civilizations.

This traditional approach might be labeled "stratigraphic or sequential segregation" because it involves the use of stratigraphically or sequentially segregated phases or time periods. Although each phase is frequently from 200 to 400 years long, archaeologists treat it as if it were a static and unchanging time period within the history of an ancient civilization. The study of cultural change, then, has meant interpreting the changes from one sequentially segregated phase to the next and, as Hodder and Hutson (2003:130) point out, "there is little notion of history as a continuous process."

In a seminal article on archaeological chronology, Michael Smith (1992: 29) has pointed out the need for recognizing different time scales for different research designs. "Studies of large-scale demographic patterns or subsistence strategies can be carried out successfully with phases of several centuries' length, while analyses of the changing social or economic conditions of states or empires require finer phases, on the order of a century or less." We know that a considerable amount of political, social, and economic change may take place in a civilization within a phase of 200 to 400 years' duration. "Archaeology needs a construct that can treat 200–400 year intervals in a dynamic, not static, framework" (Smith 1992:25). Nevertheless, few archaeologists have developed research strategies for elucidating the changes within a phase.

The archaeological approach in this study could be called "stratigraphic or sequential integration" because it focuses on transformations within

a phase. Change is revealed in the stratigraphic patterning of the archaeological remains. Stratigraphic patterning is the sequential interrelationships among features and artifacts. A simple example is house remains. A house may be built, remodeled, added to, and rebuilt. These continuous remodelings, additions, and rebuildings of the house, together with the artifacts and features associated with it, constitute stratigraphic patterning in the archaeological remains; and because the persons who effected the successive changes found in the house remains were functioning members of an ancient culture, these changes reflect the ongoing changes in their cultural system (Lind 1977, 1979, 1987). As Smith (1992:28) observes, "structures which exhibit a high degree of modification and rebuilding can produce relatively fine chronological controls."

Applying a sequential integration approach can reveal changes within a phase that a static sequential segregation strategy cannot. Archaeologists who excavate Xoo phase sites in the Valley of Oaxaca are blessed with a constellation of features that are conducive to a sequential integration approach. All Xoo phase houses, elite and commoner, have household tombs in which successive generations of married couples[2] who headed the household were interred (Winter 1974; Lind and Urcid 1983). Counting the number of interments in a tomb allows for calculating the number of generations a house—or, more commonly, a stratified series of houses—was occupied. Generally, each successive generation of married couples who headed households remodeled or rebuilt the house above the tomb. Therefore, it is usually possible to trace the ongoing cultural changes generation by generation.

Excavations in Mound 195 at Lambityeco have uncovered a series of superimposed elite houses and associated tombs dating to the Xoo phase, a time period during which the community reached its maximum size, then ceased to exist as a functioning aggregate, and was largely abandoned. During this same time period, the capital center of Monte Albán reached a peak of political and economic growth and then collapsed. Later in this study, the excavated remains from Lambityeco will be analyzed in accordance with a sequential integration approach to provide a new perspective on political evolution in the Valley of Oaxaca during these two centuries.

ANCIENT POLITIES

The question of identifying polities from archaeological remains is an important one if we are to discuss political evolution in the Valley of Oaxaca during the Xoo phase. Over the past few decades, archaeologists have used settlement pattern data to interpret the nature of ancient polities. These

interpretations are usually done on a "biggest is best" principle whereby the largest site in a region, the primary center, is viewed as the capital of a unified state, and second-, third-, and fourth-ranking sites are viewed in descending order of political importance. However, no simple one-to-one correlation exists between the size of an ancient community and its political importance.

Ethnohistoric data from the Nochixtlán Valley in the Mixteca Alta immediately north of the Valley of Oaxaca make it clear that attributing political importance to sites on the basis of gross population size or a "biggest is best" principle is an inadequate approach to interpreting the nature of ancient polities from settlement pattern data. At the time of the Conquest, the Nochixtlán Valley communities included one primary center with a population of 24,000 persons, two second-ranking towns between 4,000 and 6,000 in population, a number of third-ranking villages with populations between 1,000 and 2,000 persons, and fourth-ranking hamlets with populations of 500 persons or less (Lind 1979:5). An archaeologist using a "biggest is best" approach would conclude that the primary center was the capital of a territorial state in the Nochixtlán Valley, which included a couple of large towns that served as important "secondary administrative centers" and numerous smaller third- and fourth-ranking villages and hamlets. However, this simplistic interpretation would be incorrect.

Sixteenth-century documents do not record the presence of a territorial state headed by a primary center in the Nochixtlán Valley. Instead, the ethnohistoric data document the existence of six separate city-states. The capitals of these city-states included the primary center, the two "second-ranking" centers, and three of the "third-ranking" centers. Although the primary center was the capital of the largest city-state, the smallest "third-ranking" community was the capital of the second-largest city-state (Lind 1979:4–7).

The Nochixtlán Valley ethnohistoric data alert us to two potential problem areas in analyzing ancient settlement patterns to interpret the nature of ancient polities. First, the political importance of an ancient community cannot be determined solely by its gross population size, an observation also made by Flannery (1998:55). The capitals of Nochixtlán Valley city-states were as small as 1,200 persons and as large as 24,000 persons. As Feinman (1998:131–132) has noted, "ancient states were generally small." Second, the existence of a territorial state cannot be determined solely by the presence of an exceptionally large primary center and second-, third-, and fourth-order sites ranked on the basis of gross population size. The Nochixtlán Valley was not unified into a territorial state by its primary center despite the fact that this settlement was four times as large as the

next-largest community. Instead, six independent city-states with capitals of varying sizes coexisted in the region. Clearly, other factors must be taken into account in addition to population size when assessing the political importance of an ancient community and interpreting ancient polities from settlement pattern data.

In recent years, archaeologists have begun addressing the problem of interpreting ancient polities from these data. In the Maya region, Fox and colleagues (1996:795) have discussed the "disagreement about how autonomous, populous, and centralized such polities might have been." They note two general models of Maya polities: "Decentralized models portray kinship-based states undergirded by religion, fluctuating political alliance, and regal-ritual centers of various sizes. Centralized models portray hierarchical states with bureaucracies, urbanism, and populations with political and economic differentiation" (Fox et al. 1996:801).

Using epigraphic evidence, Martin and Grube (2000:17–21) attempted to bridge these different models, especially for the Late Classic Maya, with their concept of "overkings." Overkings were rulers of large and powerful centers who often established hegemony over leaders from some other centers, extracting tribute and labor services but leaving them in charge of their own centers. As Grube (2000:560) points out, "Even though large states such as Tikal and Calakmul managed to establish long-term 'mini-empires,' the city-state structure persisted as the principal political unit."

Hansen (2000, 2002) compiled a comparative study of city-states throughout the world and introduced the concept of city-state culture. He defines a city-state as "a highly institutionalized and highly centralized micro-state consisting of one town . . . with its immediate hinterland . . . settled with a stratified population" (Hansen 2000:19). Although most of the population lives in the town, the rest populate nucleated villages and homesteads in the hinterland that are not more than a day's walk from the town. "The urban economy implies specialisation of function and division of labor to such an extent that the population has to satisfy a significant part of their daily needs by purchase in the city's market" (Hansen 2000:19). City-states are self-governing polities but may be under the hegemony of other city-states. A city-state culture refers to a number of neighboring city-states that occupy a region and whose members generally speak the same language and have a centuries' long history of interacting with one another (Hansen 2000:16). Hansen's model of the city-state and city-state culture clearly applies to the Nochixtlán Valley data cited above and to the Postclassic Mixtecs in general (Lind 2000). It also applies to the Maya (Grube 2000), the Aztecs (Smith 2000), and the Postclassic Zapotecs (Oudijk 2002) in the Valley of Oaxaca. Indeed, city-states seem to be the

basic polity configuration throughout much of Mesoamerica (Smith and Schreiber 2006:8).

Trigger (2003:chapter 6) in an exhaustive comparison of seven early civilizations has identified two types of states—city-states and territorial states. Unlike city-states, territorial states are organized into provinces by a central government that appoints governors to rule over them (Trigger 2003:118). Also unlike city-states, territorial states control larger territories and have less populous cities, their rulers have much larger surpluses at their disposal, and there is centralized control over the economy (Trigger 2003:110–112). Trigger's examples of territorial states include ancient Egypt, northern China (Shang and Zhou), and that of the Inka.

Marcus (1998:92) suggests that territorial states are the only true states and that city-states are simply the result of the breakdown of earlier territorial states. She cites the Valley of Oaxaca as one of her examples in which she posits that Monte Albán was the capital of a territorial state that broke down in the Terminal Classic and Postclassic, resulting in numerous small principalities (Marcus 1998:68–71). Marcus (1998:92) goes on to state that "we should avoid the term 'city-state' whenever possible, substituting instead a more appropriate regional or indigenous term such as *cuchcabal*, *ahaulel*, *altepetl*, *hesp*, *nome*, *cacicazgo*, *curacazgo*, or *señorío*." Finally, she notes that archaeologists should not think that "city-states" are states "simply because their rulers drew heavily on the ideology and symbolism of their more powerful predecessors" (Marcus 1998:93). Trigger, however, disagrees with Marcus, pointing out that "the long persistence of both types in different regions of the world suggests that territorial states and city-states are stable alternatives rather than sequential stages in the development of more complex societies" (Trigger 2003:93).

Although Marcus does not address the political nature of empires, she notes that states involved "only one ethnic group (such as the Maya) and 'empires' . . . involved the conquest of foreign peoples (such as the Aztec or Inka)" (Marcus 1998:91–92). Recently, Smith and Montiel (2001) tackled the problem of identifying empires from archaeological remains, clearly distinguishing hegemonic empires, such as the Aztecs, from territorial empires, such as the Inka (Smith and Montiel 2001:251). They identify three principal archaeological criteria, each with subcategories that can be used to identify an empire: the imperial capital, the domination of a territory, and the projection of influence in a larger interregional context (Smith and Montiel 2001:247). Applying their model to the Central Highlands of Mesoamerica, they found that Teotihuacan and Tenochtitlan met the criteria for empires but Tula did not; there was no Toltec empire (Smith and Montiel 2001:269). However, they suggest the possibility that other

Central Highland empires might also have existed, among them a possible Zapotec empire with its capital at Monte Albán (Smith and Montiel 2001:270, 272).

The question of whether Lambityeco and Monte Albán were autonomous city-states that participated in a Zapotec city-state culture in the Valley of Oaxaca during the Xoo phase or Lambityeco was a provincial center of a territorial state headed by Monte Albán will be discussed in Chapter 2 and returned to in the concluding chapter. Whether Monte Albán was the imperial capital of a Zapotec empire during the Xoo phase will be discussed in the concluding chapter.

WORLD SYSTEMS AND THE CORE PERIPHERY STRUCTURE

In recent decades, there has been much discussion of world systems and core periphery structures. As Smith and Montiel (2001:250) point out, "The world-systems approach, as modified for premodern societies, provides a useful framework for viewing the role of empires within their larger international context."

Santley and Alexander (1996) applied such an approach to Classic Mesoamerica as a whole with Teotihuacan as the core. They postulated that Teotihuacan was a hegemonic empire with a dendritic political economy in which "the core dominates the periphery economically but there is little or no direct political control over it" (1996:176). They found that

> [t]he core-periphery system centered at Teotihuacan . . . was one that was probably largely oriented to Central Mexico. Spatially, its "world" was comparatively small-scale and involved the distribution of large quantities of basic goods and secondary products only within a limited radius of the city (ca. 150 km). Teotihuacan also had a secondary periphery that incorporated most of Mesoamerica. . . . Teotihuacan interests in this secondary periphery were probably mainly political in nature, although the city may have been associated with the movement of certain basic and secondary products and preciosities produced there. (Santley and Alexander 1996:194)

Smith and Berdan (2003) applied a world-systems approach to Postclassic Mesoamerica as a whole with Tenochtitlan as a core and found the model lacking. Instead, they developed a much more enriched model in which core zones, affluent production zones, resource extraction zones, unspecialized peripheral zones, exchange circuits, interregional trade centers, and style zones make up the spatial components of the world system (Smith and Berdan 2003:24–25). In the concluding chapter of this volume,

certain aspects of these models will be examined with regard to Monte Albán's "world system."

ANCIENT ZAPOTEC POLITICAL ORGANIZATION

Ancient Zapotec political organization has been characterized in the broadest, vaguest, and most general of terms. Some scholars considered Monte Albán to have been a ceremonial center ruled by priests (Bernal 1958b:3; Paddock 1966:151). Blanton's surveys (1978) demonstrated that Monte Albán was not simply a ceremonial center with a small resident ruling priesthood but a densely populated urban center with political, religious, and economic functions. However, Blanton was equally as vague as others in his characterization of ancient Zapotec political organization. He considered that, throughout its existence, Monte Albán functioned as a "disembedded political capital" ruled by a military confederacy. If we are to study political systems archaeologically, it is clear that we need better models than vaguely conceived ruling priesthoods or military juntas.

In developing such models, Mesoamerican archaeologists could benefit from a direct historical approach whenever possible (Spores 1972; Lind 1979). The Valley of Oaxaca with its long history of Zapotec occupation is an ideal setting for generating ethnohistoric models that can be tested against the archaeological data. In the sixteenth century, Spanish priests and bureaucrats recorded information on Zapotec culture as it existed at the time of the Spanish Conquest. Among these documents are the Zapotec-Spanish vocabulary compiled by Fray Juan de Córdova (1987 [1578]) in the first half of the sixteenth century in Teitipac, some 10 km west of Lambityeco and present-day Tlacolula, and the *Relaciones Geográficas*, reports produced from questionnaires ordered by King Phillip II of Spain from 1579 to 1581 CE that pertain to several Zapotec towns in the Valley of Oaxaca and beyond. Especially important, however, are the *lienzos*, or pictorial genealogies, prepared by the Zapotecs themselves (Whitecotton 1977, 1982, 1983, 1990, 2003; Oudijk 2002, 2008). In these lienzos, the Zapotecs list the genealogies of their Prehispanic rulers back as far as seventeen generations to the real or mythical founders of their royal house (Oudijk 2008:107).

At the time of the Spanish Conquest, the Valley of Oaxaca was divided into some thirteen city-states (Oudijk 2002:80–81). Each city-state, *queche* in Zapotec, was headed by a hereditary ruler, *coqui*, who resided in a palace, *quihui*, in the capital and appointed nobles, *xoana*, to rule subject communities (Oudijk 2002:77). The *Lienzo de Guevea* portrays coqui with small, pointed beards to distinguish them from the xoana (Paddock 1983b:18).

In the pictorial genealogies, each coqui is pictured together with his principal wife, who was given the title *xonaxi* (Whitecotton 1983). Coqui and xonaxi were named after their days of birth in the Zapotec divinatory calendar of 260 days. A glyph for the name of the day together with a sign for the number of the day in the calendar were recorded to give the number-day combination, or day-of-birth, name. In sixteenth-century Spanish documents, these calendar names are sometimes written in Zapotec using Spanish orthography. Thus, in one document, coqui-xonaxi couples are identified as Coqui 7 Flint and Xonaxi 12 Monkey, Coqui 7 Grass and Xonaxi 1 Flower, and Coqui 2 Reed and Xonaxi 7 Grass (Whitecotton 1983:66–67). Because only 260 number-day combinations were possible in the divinatory calendar, different individuals sometimes had the same calendar name, such as Coqui 7 Grass and Xonaxi 7 Grass, who were actually separated in time by ten generations (Whitecotton 1983:66).

The coqui and xonaxi also had personal names and birth-order names (Whitecotton 1983). Personal names recorded for xonaxi include Pink Flower and Little Jaguar, whereas personal names of coqui include Lightning and Eagle (Whitecotton 1983:66–67). The use of birth-order names shows that each coqui-xonaxi couple was very concerned that each of their children be formally identified in accordance with his or her birth-order rank (Paddock 1983b:21; Whitecotton 1990:156).

In addition to a principal wife or xonaxi, each coqui may have had secondary wives. In *Codex Tonindeye* or *Nuttall*, a Prehispanic Mixtec manuscript, two successive generations of rulers, apparently coqui of Zaachila, are each shown with two royal wives (Oudijk 2008:102–103). Although none of the known Zapotec pictorial genealogies portrays a coqui with more than one spouse, the *Relación de Guaxilotitlán* (now Huitzo) (see Fig. 2.1 for location of Huitzo) states that coqui married fifteen to twenty wives (Çarate 1581:198), and the *Relación de Tecuicuilco* (see Fig. 10.1 for location of Teocuicuilco) reports that coqui could have as many wives as they wanted but only one was the principal wife and only her children inherited from the coqui; the children of the other wives were considered bastards and did not inherit even if the principal wife had no children (Villagar 1580:93). One of the entries in Córdova (1987:52v), *xìni huàho*, means "bastard offspring" and specifically refers to the offspring of lords with commoner women. Thus, it is apparent that the secondary "wives" to whom Spanish bureaucrats referred actually may have been concubines, making it difficult to assess the extent of polygyny practiced by coqui.

The *Relación de Tecuicuilco* also states that the principal wife of a coqui had to be the daughter of another coqui (Villagar 1580:93), which means that she had to come from a different city-state than her husband. It is also

evident that she was the eldest daughter of her royal parents (Whitecotton 1990:54). The genealogy of the city-state of Macuilxóchitl names fifteen successive generations of coqui-xonaxi couples and identifies the different city-states from which each xonaxi came. As Whitecotton (1990:17) points out, these marriages were arranged to establish political alliances between city-states.

Here we would like to point to possible gender bias with regard to the ethnohistoric interpretations of Zapotec rulership, which consistently mention males as the rulers of city-states. Colonial Zapotec pictorial genealogies repeatedly depict both the coqui and the xonaxi together and both are portrayed as equal in size, suggesting that they are equal in status (Urcid, Winter, and Matadamas 1994:34). This indicates that coqui and xonaxi shared the rulership of city-states as king and queen and governed the city-state together as co-rulers. Later in this study we will present archaeological evidence that not only extends the Zapotec practice of co-equal male-female rulership back to the Xoo phase but also demonstrates that household heads among commoners as well as nobles were married couples who were coequals, and each couple included a direct descendant from the married couple who had founded the household.[3]

Whitecotton (1977:144) suggests that the Zapotecs probably had a preference for primogeniture in which a coqui was generally succeeded by his eldest son, a practice that, of course, reflects the concern with birth-order rank. With regard to a Zapotec pictorial genealogy from Etla, he reports: "In the early generations on the Etla document—where all individuals have only Zapotec names—first born males . . . always marry first born females" (Whitecotton 1990:54).[4] This indicates that the eldest son (*yobi*) of a coqui and xonaxi married an eldest daughter (*zaa*) of another coqui and xonaxi and that the married couple became co-rulers. An eldest son inherited his father's city-state, and he became co-ruler with his wife who was the eldest daughter of the coqui-xonaxi couple who ruled another city-state. Although this is technically primogeniture, such a rule places an emphasis on the role of the male. Perhaps the term "coprimogeniture" could be coined because the eldest son's eldest sister was also most likely destined to become a co-ruler of a city-state.

Following death, a coqui was generally succeeded by his eldest son.[5] Fray Pedro de los Ríos, who was in the southern mountains of Oaxaca in 1547–1548 CE (Quiñones-Keber 1995:131), noted that the Zapotecs from Coatlán (see Fig. 10.1 for location) "honored their dead in a way almost like the Spaniards for they built a tomb . . . and placed much food around it" (Quiñones-Keber 1995:254). He further states that "after the bodies had been eaten away, they unearthed the bones from the tomb and put them in

ossuaries made of mortar in the patios of their temples" (Quiñones-Keber 1995:254). However, he only reports burial practices in general and does not specify the treatment of deceased local coqui. As far as burial practices in the Valley of Oaxaca between 300 and 850 CE is concerned, there is no evidence of secondary burials and their eventual placement in masonry ossuaries within the courtyards of temples.

As mentioned above, the coqui and xonaxi appointed nobles (xoana) to rule the subject communities of the city-state (Whitecotton 1977:144). These nobles also traced their descent from a real or mythical founder of their noble house that was a secondary line of descent or cadet lineage from that of the real or mythical founders of the royal house of the coqui (Oudijk 2002:77). The coqui and xoana also "had intermediaries who collected tribute, organized the work force, controlled the fields, and were in charge of military divisions" (Oudijk 2002:77–78). The *Relación de Miguatlan* (see Fig. 2.1 for location of Miahuatlán) refers to the tribute collector and procurer of labor services as a *golave*. "The Indians of Miahuatlán . . . have golaves, which are like bosses; each golave is in charge of a barrio . . . of ten Indians, some more others less: he collects tribute . . . and assigns them the personal services to which they must attend" (Gutiérrez 1609:296; English translation by the authors).[6] Elsewhere these individuals have been referred to as *golaba* (Flannery and Marcus 1976:376; Lind and Urcid 1983).

Although the ancient Zapotecs had a hierarchical priestly organization, the extent to which priestly roles were separate from the ruling and administrative offices is unclear. The high priest was called *huíatào* (Córdova 1987:367), literally "great seer" (Burgoa 1934, II:350; Smith Stark 2002:138–139), and played an important role in the enthronement ceremonies of coqui (Córdova 1987:92v). The next echelon in the professional priestly organization was occupied by the *huezàyèche*, described explicitly by Córdova (1987:299v) as "minor priests," although the term literally means "builder of temples" (Smith Stark 2002:139–140). According to Burgoa (1934, II:168), the positions of priests were filled by the second sons (*tini*) of coqui and xoana, referring generically to these priests as *vijanas*. The *Relación de Miaguatlan* refers to these priests as *bigañas* (Espíndola 1580:128). Such a term literally means "priestly apprentice" (Seler 1904:277; Smith Stark 2002:141–142) but was evidently used metonymically in sixteenth- and seventeenth-century documents as "servants of god."

Ethnohistoric documents provide a model of ancient Zapotec political organization on the eve of the Spanish conquest that is more nuanced than vaguely conceived "ruling priesthoods" or "military confederacies." Taken together with the above discussion of ancient polities, the model suggests that if Monte Albán was a city-state that exerted hegemony over other

smaller city-states in the Valley of Oaxaca during the Xoo phase, then we would expect to find evidence of a local royal lineage of coqui and xonaxi who enjoyed a degree of political autonomy in ruling their small city-state. On the other hand, if Monte Albán had established a territorial state in the Valley of Oaxaca, we would expect to find evidence that the rulers of Monte Albán had appointed governors to rule over provincial centers like Lambityeco.

In the chapters that follow, the nature of ancient Zapotec political organization and its evolution from ca. 650 to 850 CE will be assessed with regard to the archaeological researches at Lambityeco. Lambityeco is the only Xoo phase community outside Monte Albán that has been the subject of intensive archaeological investigations. Chapter 2 provides some background on Classic period Zapotec civilization and then focuses on Lambityeco's role within the Valley of Oaxaca during the Xoo phase. Chapter 3 discusses the economic basis of Lambityeco during that time. Chapter 4 examines the structure of the community of Lambityeco. Chapter 5 presents background information on excavations at the site and discusses the most ancient structures within Mound 195—the Structures 195-6, 195-5, and 195-4 of Mound 195 Sub. Chapter 6 describes the last elite residence built atop Mound 195 Sub—Structure 195-3. Chapter 7 presents an analysis and interpretation of Tomb 6—an elite tomb associated with the last three structures of Mound 195 Sub. Chapter 8 describes the Houses of Tomb 3 and Tomb 4—two neighboring households of commoners located near the elite residences of Mound 195 Sub—and assesses their relationship to these elite households. Chapter 9 discusses the transformation of Mound 195 into a civic residential complex and describes the final structures built atop the mound, Structures 195-2 and 195-1. Finally, Chapter 10 explores the changes in Xoo phase political organization in the Valley of Oaxaca as revealed by a sequential integration approach to the successive elite residences of Mound 195. It also examines the relationship between Lambityeco and Monte Albán during that time and postulates a hypothetical model for the collapse of Lambityeco and Monte Albán at the end of the Xoo phase.

NOTES

1. All distance measurements are given in metric terms and include a number followed by an abbreviation of the metric unit: km = kilometer; m = meter; cm = centimeter; and mm = millimeter.

2. Only human skeletal remains of adult males and females occur in household tombs and they usually include approximately equal numbers of males and

females. As will become evident in subsequent chapters, it is clear that these individuals were married couples who headed the household and were buried in the household tomb.

3. No term for "a coequal male-female married couple who head a household" exists in English. Instead, we are stuck with the one-sided term "household head," which usually implies a male or paterfamilias. Although the institutionalized male household head was apparently common among Nahua groups (Carrasco 1964), there do not appear to have been institutionalized male household heads among the Zapotecs either during Postclassic / Early Colonial times or during the Late Classic Xoo phase. Wherever possible, we have been careful to use the more cumbersome "married couples who headed households" instead of using the androcentric term "household heads."

4. The Etla genealogy shows that nobles (xoana) also married eldest sons to eldest daughters (Whitecotton 1990). However, it is unclear whether or not commoners also followed this practice, although it is likely that they did whenever possible.

5. Two carved Xoo phase stones, Stela MA-VGE-2 from Monte Albán and the Noriega Stone, appear to depict xonaxi as sole rulers following the death of a coqui. In one example, the Noriega Stone, it appears that the eldest son and heir to the coqui is a child who was too young to govern (Urcid 1999). In Stela MA-VGE-2 several xonaxi are depicted in the rulership role or as legitimators in the transference of such an office (Urcid, Winter, and Matadamas 1994).

6. "Los indios de Miguatlan . . . tienen golaves, que es tanto como mandones; cada golave tiene a su cargo vn barrio . . . de diez indios, vnos mas y otros menos: este cobra el tributo . . . y les rreparte los seruicios personales a que an de acudir" (Gutiérrez 1609:296).

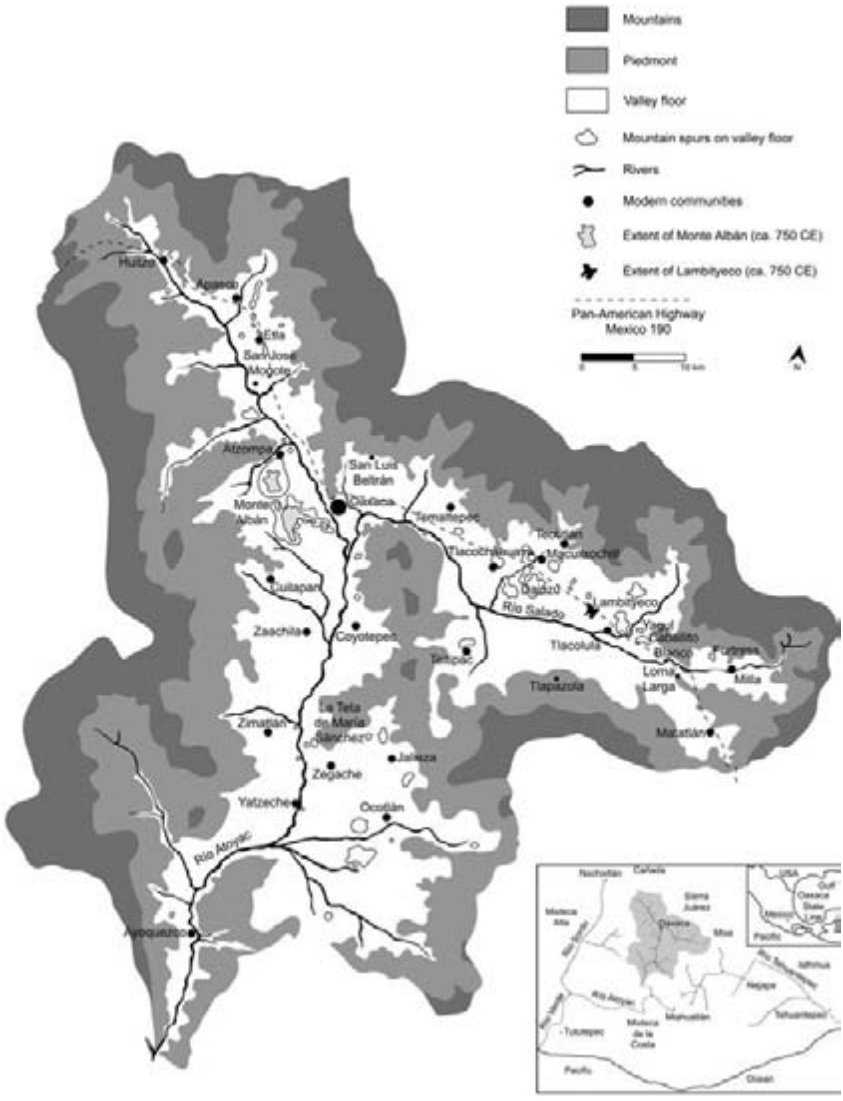
chapter two

Lambityeco in the Valley of Oaxaca

The Valley of Oaxaca, located in the southern highlands of Mexico, was the heartland of ancient Zapotec civilization. Outside the valley proper, Zapotec civilization extended into the mountainous Sierra Juárez to the northeast, along the Tehuantepec River drainage to the Pacific Coast of the Isthmus of Tehuantepec in the southeast, and through the Miahuatlán region to the Pacific Coast in the south (Fig. 2.1, inset). Zapotec is not a dead language. In 1970, there were nearly 250,000 native speakers who occupied the Valley, Sierra, Isthmus, and Miahuatlán regions (Ayre and Varese 1978: ii) and, according to the 2000 Mexican Federal Census, Zapotec is still spoken by nearly 453,000 native speakers today.[1]

In Prehispanic times, as well as today, non-Zapotec speakers have occupied areas bordering the Valley of Oaxaca. Mixe linguistic communities inhabit the mountains east of the valley, whereas speakers of Chatino and Huave occupy areas along the Pacific Coast to the south and southeast of the valley. The Mixtec language is spoken by people living in areas to the south (Mixteca de la Costa) and northwest (Mixteca Alta) of the valley. To the north of the valley, speakers of Cuicatec occupy the long, narrow canyon called La Cañada (Fig. 2.1, inset; Paddock 1966:86, map 1).

The Valley of Oaxaca proper has three arms: (1) the Etla arm in the north, drained by the Río Atoyac; (2) the Zimatlán arm, or Valle Grande, in the south, also drained by the Río Atoyac; and (3) the Tlacolula arm



2.1. ***The Valley of Oaxaca (redrawn and modified from Welte 1965)***

in the east, drained by the Río Salado. The large Zimatlán arm is usually divided into two sectors that are partially separated from one another by a long, narrow piedmont ridge ending in a prominent peak known as La Teta de María Sánchez. The northern sector of the Zimatlán arm is referred to as the Zaachila region and the more southerly sector as the Ocotlán region.

Within each arm of the valley, three main geological zones occur: (1) an alluvial valley floor ranging between 1400 m and 1700 m above sea level and punctuated by mountainous spurs rising at times between 300 m and 400 m above the valley floor; (2) a piedmont, or foothill, zone that is transitional between the valley floor and the mountains that surround the valley; and (3) a rugged mountainous zone with elevations more than 3000 m above sea level.

The present-day state capital, Oaxaca de Juárez, is centrally located at a point where the three arms of the valley converge to form the Valle Central, or "Central Valley." The ancient Zapotec capital of Monte Albán is located on two huge mountain spurs that rise more than 300 m above the valley floor at the edge of the modern city of Oaxaca. Like its modern counterpart, ancient Monte Albán was the largest city in the Valley of Oaxaca in Prehispanic times and served as the major center of Formative and Classic period Zapotec civilization.

Within each of the three arms of the valley are present-day market centers. Etla is the local market center for the Etla arm of the valley, whereas Ocotlán, Zimatlán, and Zaachila are the local market centers for the Zimatlán arm.[2] Tlacolula is the local market center for the Tlacolula arm of the valley. The ancient Zapotec town of Lambityeco is located on the valley floor about 2 km west of present-day Tlacolula. Like its modern counterpart, ancient Lambityeco was an important center in Prehispanic times.

THE VALLEY OF OAXACA CHRONOLOGY

Archaeological excavations indicate that human occupation of the Valley of Oaxaca dates back to at least 9,000 BCE. Meager traces of hunting and gathering bands who occupied the valley as early as 8,900 BCE and who were beginning to utilize domesticated plants between 5,000 and 3,000 BCE have been recovered by Flannery (1970, 1985). Most of the archaeological research of Flannery, however, has focused on the time span from 1,400 to 550 BCE when numerous tribal farming villages were established in the valley (Flannery 1976). Within this time span, Flannery has traced the course of development leading to the emergence of chiefdoms and eventually the rise of Zapotec civilization (Table 2.1).

Between 1931 and 1958, Alfonso Caso and his colleagues, Ignacio Bernal and Jorge R. Acosta, undertook archaeological excavations at Monte Albán (Caso, Bernal, and Acosta 1967). On the basis of their excavations, Caso and his associates defined five major phases that have served as general chronological guidelines for studying the cultural evolutionary history of ancient Zapotec civilization for the time span from 550 BCE to 1521

TABLE 2.1. The Valley of Oaxaca chronology

Approximate dates[1]	*Phase names*[2]	*Phase numbers*[3]	*Phase numbers*[4]
1200–1521 CE	Chila	Monte Albán V	Monte Albán V
1000–1200 CE	Late Liobaa		
850–1000 CE	Early Liobaa		Monte Albán IV
650–850 CE	Xoo	Monte Albán IIIB-IV	Monte Albán IIIB
550–650 CE	Peche	Transición IIIA-IIIB	
350–550 CE	Pitao	Monte Albán IIIA	Monte Albán IIIA
200–350 CE	Tani	Transición II-IIIA	
100 BCE–200 CE	Nisa	Monte Albán II	Monte Albán II
300–100 BCE	Pe	Monte Albán Ic	Late Monte Albán I
550–300 BCE	Danibaan	Monte Albán Ia	Early Monte Albán I
700–550 BCE	Rosario		
850–700 BCE	Guadalupe		
1150–850 BCE	San José		
1400–1150 BCE	Tierras Largas		
1600–1400 BCE	Espiridión		
±2000 BCE	Martínez		
3300–2800 BCE	Blanca		
5000–4000 BCE	Jícaras		
8900–6700 BCE	Naquitz		
±10,000 BCE	Pleistocene		

Notes:
1. Peche through Chila phases based on calibrated radiocarbon dates (see Appendix 1).
2. Phase names Danibaan through Chila proposed by Lind (1991–1992), Markens (2004, 2008), and Urcid (2003, 2005); phase names Pleistocene through Rosario proposed by Flannery Marcus, and Kowalewski (1981).
3. Phase numbers used by Caso, Bernal, and Acosta (1967).
4. Phase numbers used by the Valley of Oaxaca Survey Project (Kowalewski et al. 1989:2, table 1.1).

CE. The five major phases were each designated by a Roman numeral and then subdivided, combined, and modified through time as refinement of the ceramic sequence progressed (Caso, Bernal, and Acosta 1967:17). As a result, no simple series of phase designations from I to V now exists as was the original intent.

In the 1980s, Valley of Oaxaca survey projects (Blanton 1978; Blanton et al. 1982; Kowalewski et al. 1989) further modified the chronology by eliminating some of Caso, Bernal, and Acosta's phases (Transición II-IIIA and Transición IIIA-IIIB) and incorrectly separating another (IIIB-IV) into two phases IIIB and IV. The problems with the Monte Albán chronology as employed by Valley of Oaxaca survey projects have been discussed in detail elsewhere (Winter 1989a; Lind 1991–1992, 2008; Herrera

2000; Martínez et al. 2000; Markens and Martínez 2001; Flannery and Marcus 2003:x; Markens 2004, 2008; Markens, Winter, and Martínez 2008). Members of Valley of Oaxaca survey projects have acknowledged the difficulties in separating IIIB and IV, conceding that their distinction might not be chronological but spatial, and state that those who disagree with the distinction are free to combine IIIB and IV into a single phase (Kowalewski et al. 1989:251–254). That has been done in this study where Monte Albán IIIB-IV is called the Xoo phase. Recently, Flannery and Marcus (2003:x) also have suggested that IIIB and IV be a single phase.

Because of the problems inherent in inserting newly defined phases into numerically ordered sequences, archaeologists have abandoned this method of designating phases in favor of naming, instead of numbering, them. For this reason, Flannery has named each of his phases. Because no new series of phase names had been proposed to replace Caso's pioneer chronology and because revisions by Valley of Oaxaca survey projects (Blanton 1978; Blanton et al. 1982; Kowalewski et al. 1989) contain inaccuracies, a new series of phase names is presented here. These new phase names from 550 BCE to 1521 CE and their dates were proposed by Lind, Markens, Martínez, Urcid, and Winter during a meeting in Cuilapan, Oaxaca, in the summer of 2003 (Urcid 2003; Markens 2008). However, Valley of Oaxaca radiocarbon dates have never been calibrated to bring them in line with modern radiocarbon dating technology. Here, for the first time, Robert Markens, Marcus Winter, and Cira Martínez (see Appendix 1) present calibrated radiocarbon dates for the Peche, Xoo, Liobaa, and Chila phases, which are incorporated as absolute dates in our most recent chronology for the Valley of Oaxaca (Table 2.1).

MONTE ALBÁN AND THE EVOLUTION OF ZAPOTEC CIVILIZATION

Caso's excavations at Monte Albán revealed that the city was founded during the Danibaan phase around 550 BCE. Soon after, its inhabitants embarked on a construction program involving the building of a series of monumental structures, at least one of which was built with more than 300 orthostats carved with human figures (dubbed "danzantes") and corner blocks rendering hieroglyphic inscriptions. Blanton (1978), who completed an extensive survey and mapping project at Monte Albán, estimates a maximum population of 5,000 persons during the Danibaan phase (Blanton et al. 1981:70). In the subsequent Pe phase, Monte Albán grew to an estimated maximum population of 17,000 persons, making it one of the first urban centers in Mesoamerica (Blanton et al. 1981:75)

Following the Pe phase, Monte Albán experienced what Blanton and his colleagues call a "mini-collapse" (Blanton et al. 1981:83). The population declined by 16 percent from its Pe phase peak to an estimated maximum population of 14,500 persons in the Nisa phase (Blanton et al. 1981:86). In the succeeding Tani and Pitao phases, Monte Albán experienced some growth although its estimated maximum population of 16,500 persons still fell below its earlier Pe phase peak (Blanton et al. 1981:88). Archaeological evidence indicates a great deal of interaction between Monte Albán and the Valley of Mexico's large urban center of Teotihuacan during the Tani and Pitao phases with a probable Teotihuacan takeover of Monte Albán (Winter 1998, 2001). Martínez (1994:25–26) has labeled this archaeological evidence at Monte Albán the Dxu' complex and obtained an uncalibrated radiocarbon date of 200±70 CE (Beta-63235) in association with the ceramics.

Population reached its highest level ever at Monte Albán during the Xoo phase when an estimated 25,000 persons occupied the ancient city (Blanton et al. 1981:94). Caso's excavations over a seventeen-year period succeeded in uncovering the center of the city—a Main Plaza about 350 m long and 200 m wide that was lined with Xoo phase temples, palaces, and other monumental structures. The great North Platform, which occupied the entire north side of the Main Plaza, was the administrative and ritual locus from which the rulers of Monte Albán governed their state (Marcus and Flannery 1996:179; Flannery 1998:34). North of the Main Plaza was an elite residential area consisting of elegant and spacious multiroom houses with elaborate masonry tombs beneath their floors. It is estimated that 70 percent of the 173 household tombs excavated by Caso at Monte Albán correspond to the Xoo phase. Caso's excavations made it clear that the Xoo phase was the greatest period of monumental construction activity at Monte Albán and Blanton and colleagues (1981:31) calculate that during this phase Monte Albán had more than 900,000 cubic meters of mounded constructions.

Blanton's surveys of Monte Albán indicate that the city covered 650 hectares, or 6.5 km^2, during the Xoo phase. Within this area, he identified fifteen probable barrios or neighborhoods. The Main Plaza, or center of the city, and the adjacent residential area north of it constitute one of these barrios. Each of the other fourteen barrios within the city had at its center a "civic ceremonial complex" composed of elite residences and a probable temple and neighborhood marketplace. These civic ceremonial complexes were surrounded by residences of the commoners who occupied each barrio. Most of the barrios had workshops for producing one or more special commodities, such as pottery, stone axes, obsidian tools, and shell ornaments (Blanton et al. 1981:94–95). Monte Albán was clearly the larg-

est and most populous city in the Valley of Oaxaca during the Xoo phase and served as the major political, religious, and economic center of Classic period Zapotec civilization.

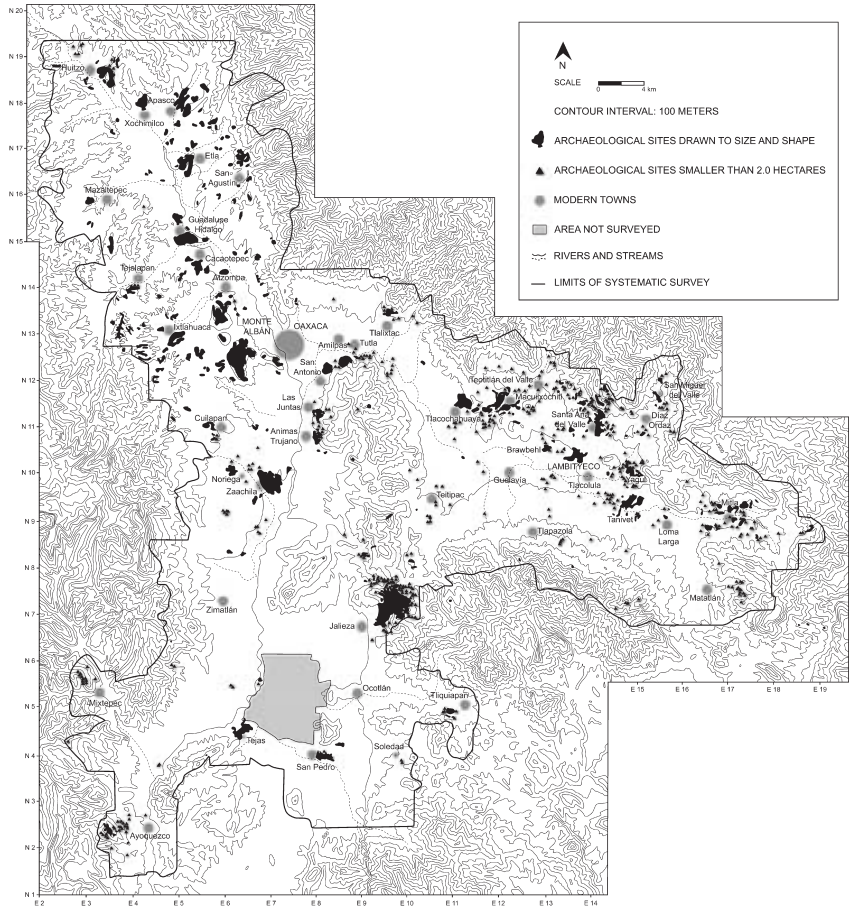
Kowalewski and his colleagues completed an archaeological survey and mapping project of the entire Valley of Oaxaca. They recorded evidence for more than thirty large towns and nearly ninety smaller villages within the valley during the Xoo phase (Kowalewski et al. 1989:260–261, 287). The towns had 1,000 or more inhabitants each, whereas most of the villages had populations of less than 500 persons. Within the valley, Lambityeco was the tenth-largest town with regard to population size. All told, the Xoo phase population of the Valley of Oaxaca must have stood at nearly 130,000 persons (Fig. 2.2; Table 2.2).

Virtually all economic specialization, such as pottery production, was centralized in the valley's large towns, although not all the large towns were centers of economic specialization (Blanton et al. 1981:97). Those large towns that were, however, served as market centers that supplied the communities around them with specialized products. Some, but not all, of these market towns also had a considerable amount of public architecture, including temples, civic buildings, and other structures. In addition to being market centers, these large towns were also important political and religious centers within the valley. Among them was Lambityeco, which from the degree of its economic specialization and the enormous volume of its architecture relative to other large towns, was one of the most important political, religious, and economic centers in the Valley of Oaxaca.

At the end of the Xoo phase, around 850 CE, there was a dramatic drop in population at Monte Albán and the city was largely, although not totally, abandoned (Winter 2003). Most of the larger communities in the valley were also largely abandoned at this time, including Lambityeco. It is evident that the political system headed by Monte Albán in the Valley of Oaxaca had collapsed and with it several of the elite aspects of Zapotec civilization (Winter 2003). During the subsequent Liobaa phase, the valley's population was seemingly greatly reduced. When the Spaniards arrived in 1521 CE at the end of the Chila phase, the valley contained numerous city-states (Oudijk 2002), and the urban center of Monte Albán had ceased to exist as a functioning community for nearly three-quarters of a millennium.

XOO PHASE POLITIES

In analyzing their settlement pattern data from the Valley of Oaxaca, Blanton and his colleagues (1981:30–32) considered the political importance



2.2. ***Xoo phase settlements in the Valley of Oaxaca (redrawn and modified from Kowalewski et al. 1989:maps 6 and 7)***

of an ancient community to be reflected not only by its gross population size but also by the volume of mounded architecture that included the remains of public buildings. Laura Finsten (1983), in particular, made a detailed study of the relationships between population size and volume of mounded architecture for Xoo phase settlements. When these settlements are ranked with regard to gross mound volume, it becomes clear that there is no simple one-to-one correlation between gross population size and volume of mounded architecture (Table 2.3).

Monte Albán has far and away the greatest volume of mounded architecture, as would be expected for the most important demographic and

TABLE 2.2. Largest Xoo phase settlements in the Valley of Oaxaca: Ranked by estimated population[1]

Archaeological site	*Estimated population*
1. Monte Albán	25,000
2. Jalieza	16,000
3. Macuilxóchitl	6,200
4. Tlacochahuaya	5,300
5. Guadalupe Hidalgo (Loma del Trapiche)	4,500
6. Ayoquezco (El Choco)	4,000
7. Huitzo (Suchilquitongo)	3,900
8. Santa Ana del Valle	3,600
9. San Agustín Etla	2,900
10. Lambityeco	**2,700**
11. Reyes Etla	2,500
12. Apasco	2,400
13. Mitla	2,300
14. Zaachila	2,100
15. Santa Cecilia Jalieza	1,900
16. Tutla (Loma de la Montura)	1,900
17. San Pedro	1,800
18. Cacaotepec	1,700
19. Ixtlahuaca West (El Mirador)	1,600
20. Ixtlahuaca	1,600
21. Tanivet	1,600
22. Mixtepec	1,500
23. Tejalapan	1,500
24. San Antonio de la Cal (Cerro de la Mesita)	1,500
25. Tejas	1,200
26. Mitla Fortress	1,200
27. Yagul	1,200
28. Animas Trujano	1,100
29. Xochimilco (Tlaltinango)	1,100
30. San Miguel del Valle	1,100
31. Ixtlahuaca South (Acapixtla)	1,100
32. Tlalixtac	1,000

Note:
1. Estimated population after Kowalewski et al. (1989:260–261, 287).

political center in the valley. However, the second, fourth, sixth, and eighth most populous communities—Jalieza, Tlacochahuaya, Ayoquezco (El Choco), and Santa Ana del Valle—lack the volume of mounded architecture

TABLE 2.3. Largest Xoo phase sites in the Valley of Oaxaca: Ranked by estimated mound volumes[1]

Archaeological site [population]	*Mound volumes in cubic meters*
1. Monte Albán [25,000]	900,000
2. Reyes Etla [2,500]	163,200
3. Guadalupe Hidalgo–Loma del Trapiche [4,500]	126,300
4. Macuilxóchitl [6,200]	116,500
5. Lambityeco [2,700]	**85,900**
6. Huitzo–Suchilquitongo [3,900]	78,600
7. Zaachila [2,100]	50,000
8. San Pedro [1,800]	38,000
9. Ixtlahuaca [1,600]	38,000
10. San Agustín Etla [2,900]	37,100
11. Jalieza [16,000]	33,500
12. Xochimilco-Tlaltinango [1,100]	27,600
13. Yagul [1,200]	25,000
14. Apasco [2,400]	24,400
15. Animas Trujano [1,100]	18,000
16. Tlalixtac [1,000]	17,700
17. Tanivet [1,600]	16,400
18. Tutla–Loma de la Montura [1,900]	16,200
19. Ayoquezco–El Choco [4,000]	15,100
20. Tejalapan [1,500]	11,000
21. Tejas [1,200]	9,400
22. Mitla [2,300]	8,600
23. Ixtlahuaca West–El Mirador [1,600]	7,200
24. Mixtepec [1,500]	7,000
25. Tlacochahuaya [5,300]	6,600
26. Santa Cecilia Jalieza [1,900]	3,400
27. Ixtlahuaca South–Acapixtla [1,100]	3,000
28. Mitla Fortress [1,200]	2,200
29. San Miguel del Valle [1,100]	1,900
30. Santa Ana del Valle [3,600]	1,100
31. San Antonio de la Cal–Cerro de la Mesita [1,500]	900
32. Cacaotepec [1,700]	0

Note:
1. Estimated mound volumes after Kowalewski, personal communication, 1986.

that would be expected of important political centers, whereas the tenth and eleventh most populous communities—Lambityeco and Reyes Etla—rank within the top five with regard to volume of mounded architecture and were clearly important regional settlements.

These data demonstrate that Monte Albán was the primary center in the Valley of Oaxaca during the Xoo phase. However, six other coeval communities had exceptionally large volumes of mounded architecture that clearly set them apart from other valley communities and point to their roles as important "secondary" centers. These six communities, with volumes of mounded architecture nearly double than that of any other valley community, include Reyes Etla, Guadalupe Hidalgo, Macuilxóchitl, Lambityeco, Huitzo (Suchilquitongo), and Zaachila. However, the question arises as to whether Monte Albán was the capital of a territorial state with the six "second"-ranking communities serving as provincial centers in the valley, or whether one or more of these "secondary" centers was the capital of a city-state independent from Monte Albán during the Xoo phase.

Virtually all experts, from Caso on, have assumed that Monte Albán was the capital of a territorial state in the Valley of Oaxaca during the Xoo phase. This assumption is based largely on Monte Albán's status as the biggest site with the greatest amount of monumental architecture in the valley. The only evidence offered in support of Monte Albán's being the capital of a territorial state in the valley, however, has been limited to observations that pottery types and writing appear to be very uniform throughout the valley during the Xoo phase.

Feinman (1980) undertook a detailed study of the distribution of pottery types based on more than 3,000 collections from the surfaces of sites throughout the valley. Ethnohistoric data document the presence of a number of independent city-states in the valley during the Chila phase, which ended with the Spanish Conquest. Feinman discovered considerable diversity in the distribution of Chila phase pottery types, which would appear to support the idea that diversity in the distribution of pottery types relates to the presence of independent city-states.

On the other hand, Feinman's studies support observations concerning valley-wide uniformity in pottery types during the Xoo phase. Feinman found that during this phase pottery was produced only at Monte Albán and the larger centers. Because ceramic types are highly standardized and the items somewhat shoddily made, Feinman concluded that Xoo phase pottery was mass-produced in government workshops located at Monte Albán and the larger provincial centers.

Feinman's study would tend to support the idea that Monte Albán headed a territorial state in the Valley of Oaxaca during the Xoo phase. Furthermore, because pottery production and also other economic specializations appear to have been carried out only in government workshops at Monte Albán and the larger centers, Feinman suggested that the political

system was heavily involved in managing the Zapotec economy, a factor that Trigger (2003:111–112) considers characteristic of territorial states.

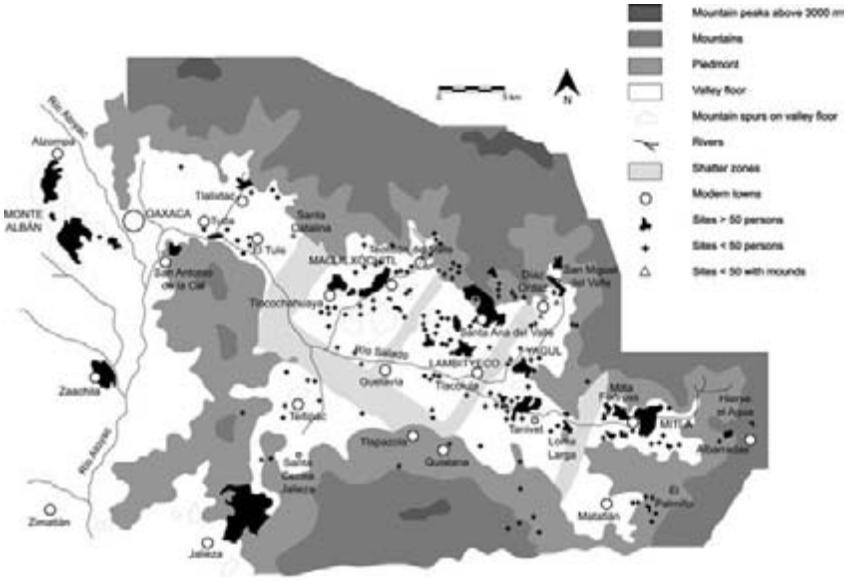
However, the results of Feinman's analysis could also reflect what Minc (2006:86) calls a complex interlocking market system or hierarchically integrated market network. In this type of market system, goods move among local market centers and between them and the regional market center (Minc 2006:85, fig. 1). "Because goods move both vertically and horizontally between centers, distribution patterns are geographically widespread and create a higher degree of similarity in consumer goods throughout the regional system" (Minc 2006:87). Therefore, "if the regional economy was organized as a complex interlocking system, the distribution of artifact types should reflect a pattern of widespread, relatively uniform distribution throughout the region served by the market system" (Minc 2006:87), as was indicated by Feinman's study. Minc (2006:85, table 1) considers this type of market system to be "coterminous with a regional polity."

Although Feinman's study of the distribution of pottery types seemingly supports the idea that Monte Albán was the capital of a territorial state in the Valley of Oaxaca during the Xoo phase, recent studies on the organization of ceramic production in the Valley of Oaxaca during that time do not support his inferences. Markens (2004:367–421) studied Xoo phase ceramic production at Monte Albán and other sites in the Valley of Oaxaca. He presents considerable evidence that ceramic production was organized at the level of the individual household and not in government workshops.

The problem of whether Monte Albán headed a territorial state or was one of several city-states in the valley, however, clearly points out the inadequacies of a sequential segregation approach to ancient polities. The Xoo phase lasted at least 200 years (ca. 650–850 CE) and a considerable amount of change may take place in polities over such a span of time. Monte Albán may have headed a territorial state in the valley at certain times during the Xoo phase and not at others. If history tells us anything, it tells us that political systems and their corresponding polities are dynamic, not static.

LAMBITYECO IN THE TLACOLULA ARM OF THE VALLEY

To understand Lambityeco's role as an important political center, it is necessary to begin by studying its relationship to other settlements in the Tlacolula arm of the valley. Surveys have resulted in the discovery of 231 Xoo phase archaeological sites in the Tlacolula region. Around forty-six of these sites are estimated to have had resident populations of more than fifty persons. Another thirty-three sites, larger than two hectares, were



2.3. ***Xoo phase settlements in the Tlacolula arm of the valley (base map and locations of modern towns redrawn and modified from Welte 1965; site locations redrawn from Kowalewski et al. 1989:maps 6 and 7)***

probably small hamlets with resident populations of less than fifty persons. An additional 152 sites were smaller than two hectares. Some of these may have been isolated homesteads inhabited by one or more families, whereas others were probably specialized activity sites with no resident population. The combined population of the 231 sites in the Tlacolula arm of the valley must have been between 35,000 and 40,000 persons. Among these settlements, Lambityeco ranked fourth-largest in population (Fig. 2.3; Table 2.4).

Only thirty-five Xoo phase communities in the Tlacolula arm of the valley manifest mounded architecture. Again, no simple correlation existed between the population size of an ancient community and the volume of its mounded architecture. Tlacochahuaya and Santa Ana del Valle, the second and third most populous communities, ranked twelfth and twenty-fourth with regard to volume of mounded architecture. On the other hand, San Lorenzo Albarradas and Jalieza #35, which ranked thirteenth and forty-third with respect to population size, had the fourth- and seventh-greatest volumes of mounded architecture. Lambityeco and Macuilxóchitl, which had far and away the greatest volumes of mounded architecture—more than triple that of the next largest site—were clearly

TABLE 2.4. Xoo phase settlements in the Tlacolula arm of the Valley of Oaxaca: Ranked by estimated population[1]

Archaeological site	*Population*	*Archaeological site—contd.*	*Population*
1. Macuilxóchitl	6,222	24. Tutla	176
2. Tlacochahuaya	5,352	25. Macuilxóchitl #60	176
3. Santa Ana del Valle	3,590	26. Yagul #184	169
4. Lambityeco	**2,702**	27. Teotitlán del Valle #195	165
5. Mitla	2,354	28. San Juan Teitipac	158
6. Santa Cecilia Jalieza	1,942	29. Jalieza #39	158
7. Tanivet	1,584	30. Teotitlán del Valle #131	150
8. Mitla Fortress	1,208	31. Mitla #262	146
9. Yagul	1,197	32. Mitla #288	144
10. San Miguel del Valle	1,091	33. Macuilxóchitl #77	142
11. Tlalixtac	1,008	34. El Tule	140
12. Díaz Ordaz	802	35, Mitla #258	125
13. San Lorenzo Albarradas	632	36. Díaz Ordaz #243	122
14. Lambityeco #103	574	37. Santa Catalina	109
15. Mitla #263	514	38. Macuilxóchitl #9–12	106
16. Santa Ana del Valle #124	495	39. Yagul #200	102
17. Santa Ana del Valle #122	486	40. Santa Ana del Valle #149	87
18. Matatlán–El Palmillo	405	41. Santa Ana del Valle #144	76
19. Teotitlán del Valle #115	390	42. Macuilxóchitl #78	76
20. Teotitlán del Valle #120	381	43. Jalieza #35	75
21. Lambityeco #153	317	44. Tanivet #204	69
22. Loma Larga	269	45. Loma Larga #259	63
23. Santa Ana del Valle #128	198	46. Teotitlán del Valle #117	56
Total estimated population of the Tlacolula arm of the valley			36,5032

Notes:
1. Estimated populations after Kowalewski et al. (1989:260–261, 287).
2. Total estimated population does not include 185 sites with populations of 50 persons or less.

the two most important political centers in the Tlacolula region during the Xoo phase (Table 2.5).

Although gross volumes of mounded architecture are adequate as general indicators of a site's political importance, they are less than reliable indicators for sites with fewer than 20,000 cubic meters of mounded architecture. Sites with volumes of mounded architecture greater than 20,000 cubic meters always include large mounds that are remains of monumental architecture. However, sites with volumes of mounded architecture less than 20,000 cubic meters do not always have large mounds that could be interpreted as public architecture. For example, Tanivet has 16,500 cubic

meters of mounded architecture but not one of the mounds is over 2 m high and none can be interpreted as public architecture. On the other hand, Mitla has only 8,600 cubic meters of mounded architecture, which includes several large mounds up to 9 m high that most certainly represent public architecture. Therefore, although it has only half the gross volume of mounded architecture of Tanivet, Mitla was probably a much more important political center.[3]

IDENTIFYING SECONDARY CENTERS

Because most of the sites in the Tlacolula arm of the valley have less than 20,000 cubic meters of mounded architecture, a new approach was needed to determine their relative political importance. Excavations at Lambityeco have provided information on the general nature of mounds within various height ranges. At least five mounds 1 m high or less have proven upon excavation to be the houses of commoners. One excavated mound in the 2–3 m height range turned out to be the remains of an elite residence. Another mound in the 4–6 m height range, which was partially excavated, was another elite residence. To date, no mounds in the 7–12 m height range have been explored at Lambityeco. However, it is generally assumed that these mounds are the ruins of large temples. At Monte Albán, Caso and his colleagues excavated and restored seven Xoo phase temples that were mounds in the 8–11 m height range including temples Q, P, G, H, and I and the temples of Systems IV and M.

Although no simple correlation exists between the height of a mound and what it may represent, mounds in the 1 m and 2–3 m range generally represent domestic architecture whereas those in the 4–6 m range and 7–12 m range tend to represent public architecture. A ranking based on mound heights, then, represents a somewhat more refined approach over gross mound volume for determining a site's relative political importance because it is more indicative of a site's public architecture (Table 2.6).

When ranked on the basis of mound heights, only five sites in the Tlacolula arm of the valley have mounds in the 7–12 m height range. One of these sites (Jalieza #35) had an estimated population of only seventy-five persons, whereas the other four had populations greater than 1,000. Although it would hardly seem to be an important political center, Jalieza #35 may very well have been the locus of an important shrine with a small resident priesthood. An apparent temple 8 m high stood there, and three smaller mounds in the 2–3 m height range are consistent with the known height range for mounds representing the ruins of elite residences of nobles who conducted priestly activities at Lambityeco.

TABLE 2.5. Xoo phase settlements in the Tlacolula arm of the Valley of Oaxaca: Ranked by estimated mound volumes[1]

Archaeological site[2] [population]	*Mound volumes in cubic meters*
1. Macuilxóchitl [6,222]	115,557
2. Lambityeco [2,702]	**85,961**
3. Yagul [1,197]	25,082
4. San Lorenzo Albarradas [632]	17,798
5. Tlalixtac [1,008]	17,772
6. Tanivet [1,584]	16,473
7. Jalieza #35 [75]	8,996
8. Mitla [2,354]	8,668
9. Macuilxóchitl #9-12 [106]	7,222
10. Díaz Ordaz #243 [122]	7,221
11. Mitla #288 [144]	6,906
12. Tlacochahuaya [5,352]	6,636
13. Lambityeco #103 [574]	5,826
14. Santa Cecilia Jalieza [1,942]	3,455
15. Macuilxóchitl #60 [176]	3,132
16. Díaz Ordaz [802]	2,861
17. Santa Ana del Valle #124 [495]	2,505
18. Mitla Fortress [1,208]	2,239
19. San Miguel del Valle [1,091]	1,894
20. Lambityeco #153 [317]	1,837
21. Díaz Ordaz #240 [<50]	1,589
22. Teotitlán del Valle #120 [381]	1,488
23. Santa Ana del Valle #128 [198]	1,440
24. Santa Ana del Valle [3,590]	1,147
25. San Juan Teitipac [158]	930
26. Santa Catalina [109]	927
27. Jalieza #39 [158]	817
28. Tutla [140]	770
29. Loma Larga [269]	742
30. Díaz Ordaz 134 [<50]	679
31. Mitla #262 [146]	553
32. Mitla #258 [125]	437
33. Teotitlán del Valle #115 [390]	346
34. Quialana [<50]	194
35. Matatlán–El Palmillo [405]	97

Notes:
1. Estimated mound volumes after Kowalewski, personal communication, 1986.
2. All remaining sites lack mounded architecture.

TABLE 2.6. Xoo phase settlements in the Tlacolula arm of the Valley of Oaxaca: Ranked by mound heights[1]

Archaeological sites[2] *[population]*	*2–3 m*	*4–6 m*	*7–12 m*
1. Macuilxóchitl [6,222]	14	12	3
2. Lambityeco [2,702]	20	10	2
3. Yagul [1,197]	4	2	2
4. Mitla [2,354]	2	2	1
5. Jalieza #35 [75]	3	—	1
6. San Lorenzo Albarradas [632]	8	4	—
7. Díaz Ordaz #234 [122]	3	3	—
8. Lambityeco #103 [574]	**1**	**3**	**—**
9. Macuilxóchitl #9–12 [106]	5	2	—
10. Tlacochahuaya [5,352]	7	1	—
11. San Miguel del Valle [1,091]	2	1	—
12. Tlalixtac [1,008]	10	—	—
13. Díaz Ordaz [802]	9	—	—
14. Santa Ana del Valle #124 [495]	8	—	—
15. Tanivet [1,584]	5	—	—
16. Santa Cecilia Jalieza [1,942]	4	—	—
17. Tutla [140]	3	—	—
18. Santa Catalina [109]	3	—	—
19. Díaz Ordaz #240 [<50]	3	—	—
20. Santa Ana del Valle [3,590]	2	—	—
21. Teotitlán del Valle #120 [381]	2	—	—
22. Santa Ana del Valle #128 [198]	2	—	—
23. Macuilxóchitl #60 [176]	2	—	—
24. Jalieza #39 [158]	2	—	—
25. Mitla #288 [144]	2	—	—
26. Díaz Ordaz #134 [<50]	2	—	—
27. Teotitlán del Valle #115 [390]	1	—	—
28. Lambityeco #153 [317]	1	—	—
29. San Juan Teitipac [158]	1	—	—
30. Mitla #262 [146]	1	—	—

Notes:
1. Mound heights after Kowalewski, personal communication, 1986.
2. All remaining sites have mound heights of 1 m or less.

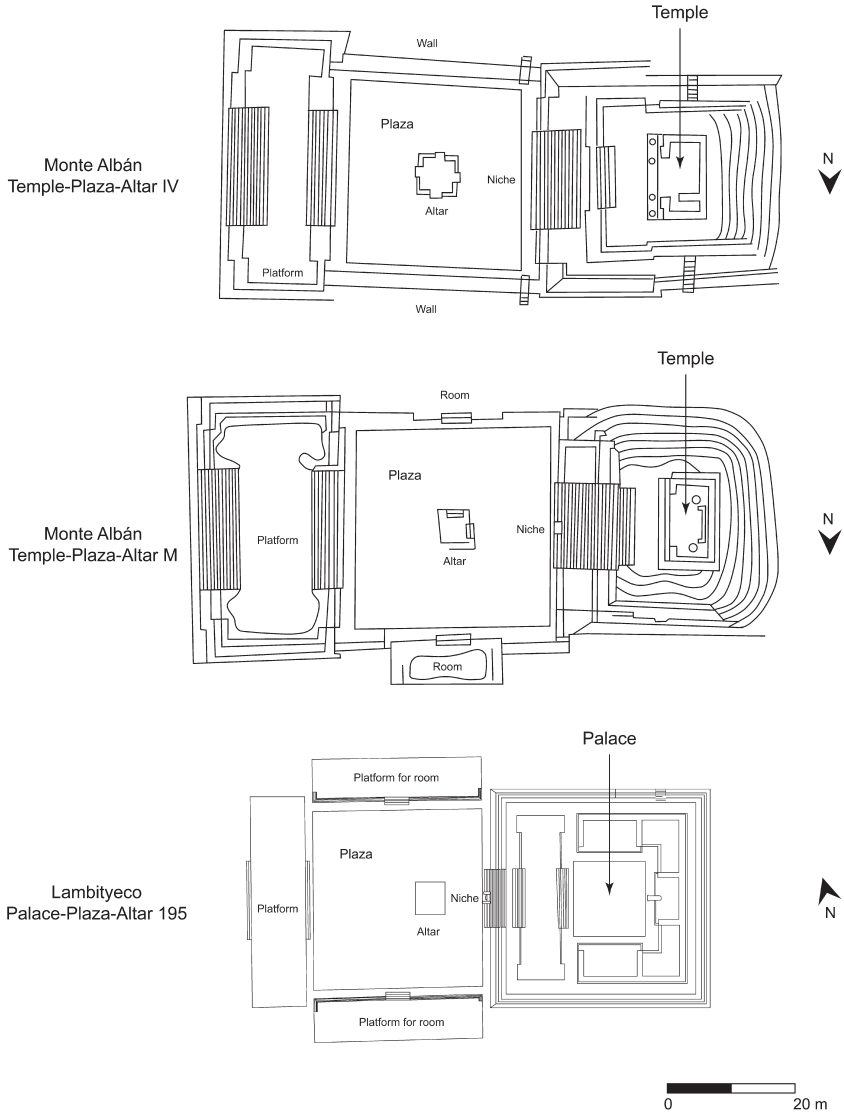
The four larger communities—Macuilxóchitl, Lambityeco, Yagul, and Mitla—were all important political centers as indicated by a combination of factors. Each was a large population center with more than 1,000 inhabitants; and, unlike Jalieza #35, which lacked mounds in the 4–6 m height range, each of these larger communities had a full complement of

the largest mounds of any site in the Tlacolula arm of the valley. This included mounds in the 7–12 m range, which are the probable ruins of large temples; mounds in the 4–6 m range, at least some of which may have represented the elite residences of political officials like the one known from excavations at Lambityeco (Mound 195); and mounds in the 2–3 m range, some of which may be the ruins of elite residences like the one known from excavations at Lambityeco (Mound 190). In addition, three of these four large centers, excepting Mitla, were the three top-ranking sites in the Tlacolula region with regard to gross volume of mounded architecture (Table 2.5).

Apart from occurring singly, mounds also exist in groups to form complexes. At least two such complexes are present at Lambityeco and one has been excavated. Winter (1986) was the first to show that these complexes can be formally recognized and defined as hallmarks of late Xoo phase public architecture (Fig. 2.4). The complexes are formed by four mounds enclosing a plaza. Three of the mounds are low structures, whereas the fourth is a very large and tall structure. The latter is in the form of a truncated pyramid or platform whose flat top supports either a temple or an elite residence that is reached from the plaza by a broad staircase. Of the other three low structures enclosing the plaza, the one opposite the pyramid is in the form of a broad platform with wide staircases that provide access into and out of the plaza. This large platform is usually higher and wider than the two low structures flanking the other sides of the plaza, which are either thick walls or in the form of low, narrow platforms supporting enclosures with small staircases giving access from the interior of the plaza. Within the plaza, usually near its center, is a small rectangular or square platform frequently referred to as an "altar."

Winter (1986) has suggested that complexes that have temples atop their large pyramids, such as Systems IV and M at Monte Albán, be called temple-plaza-altar complexes, or TPA, and that they represent formal Xoo phase temple complexes. On the other hand, complexes that have elite residences atop their large pyramids, such as Structure 195-1 at Lambityeco, might be called civic residential complexes or PPA (palace-plaza-altar) and probably represent formal Xoo phase government buildings that also included the residence of a top-ranking political official (Lind 1994). Although the existence of TPAs and PPAs at some Tlacolula sites is known, the survey data available list mounds singly and do not include the positive identification of architectural complexes.

Nevertheless, a final factor supporting the idea that Macuilxóchitl, Lambityeco, Yagul, and Mitla were the top-ranking political centers in the Tlacolula arm of the valley is that, with the possible exception of Yagul,



2.4. ***Xoo phase monumental architectural complexes at Monte Albán and Lambityeco (Temple-Plaza-Altar complexes at Monte Albán redrawn from Peeler 1994)***

each has at least two probable temple complexes (TPA) and/or civic residential complexes (PPA). A civic residential complex and a probable temple complex occur at Lambityeco. The civic residential complex, Structure 195-1, was fully excavated and included a 6 m high mound which supported

a large and elaborate residence (Fig. 2.4). The probable temple complex has not been excavated but includes a 12 m high mound, Mound 155, that may have supported a temple. Two probable Xoo phase complexes also occur at Mitla—the South Group, which may have been a civic residential complex (PPA), and the Adobe Group, which may have been a temple complex (TPA). Both complexes include mounds in the 7–12 m range.[4] Recently, two Xoo phase complexes have been identified at Macuilxóchitl, a PPA and a TPA (Markens, Winter, and Martínez 2008:202, 206; Faulseit 2008). Finally, Winter (1986:57–58) suggests that Patio 4 at Yagul may include a Xoo phase TPA although the dating is uncertain.

The presence of TPAs and PPAs in at least three of the four centers and their apparent absence at other sites in the Tlacolula region may be the result of the incomplete nature of our information on possible complexes at other Tlacolula sites. However, even if complexes are identified at other sites, none could include mounds in the 7–12 m range and therefore none could be as large as the largest complexes at Macuilxóchitl, Lambityeco, Mitla, and possibly Yagul. Each of these top-ranking communities seemingly had a large civic residential complex (PPA) and a large temple complex (TPA), marking them as the political and religious centers of their districts.

XOO PHASE POLITIES IN THE TLACOLULA ARM OF THE VALLEY

With the largest mounds of any site in the Tlacolula arm of the valley, with temple complexes and government buildings, and with populations over 1,000 persons, Macuilxóchitl, Lambityeco, Yagul, and Mitla were very likely the most important political centers in the Tlacolula region during the Xoo phase. However, the question remains, were these four top-ranking communities the capitals of autonomous city-states or provincial centers for Monte Albán? To attempt to answer this question, it is necessary to begin by defining the "districts"[5] headed by each of these top-ranking communities.

Surveys of the Tlacolula arm of the valley show breaks in settlement distribution between each of the top-ranking centers. The breaks are represented by bands or zones from 1 to 2 km wide that stretch for about 10 km or more across the valley floor. These bands or "shatter zones," as Blanton and colleagues (1981:27) call them, are "no-man's-lands" devoid of occupation. Significantly, each of the shatter zones begins near the halfway point between each top-ranking center and its neighboring top-ranking center (Fig. 2.3).

The shatter zone between Macuilxóchitl and Lambityeco is more than 1 km wide and begins 4 km west of Lambityeco—the halfway point between the two communities. The shatter zone between Lambityeco and Yagul is about 1 km wide and spans the 2 km halfway point between the two sites. The shatter zone between Yagul and Mitla is about 2 km wide and begins about 5 km east of Yagul near the halfway point between the two centers. South of Lambityeco and Macuilxóchitl, a 3 km wide shatter zone separates these two districts from a possible Jalieza district. Because Jalieza included areas in both the Zimatlán and the Tlacolula arms of the valley, it will not be treated as one of the Tlacolula centers. West of Macuilxóchitl, a 4 km wide shatter zone separates Macuilxóchitl from an area that includes Tutla and Tlalixtac. Because this area is more properly part of the Valle Central, which includes Monte Albán, it will not be treated here as one of the Tlacolula districts.

Blanton and colleagues (1981:29) view the presence of "shatter zones" as evidence for the existence of independent polities. The reasoning is logical. Unoccupied no-man's-lands or open contested space might be expected to exist as boundaries between competing city-states. The presence of shatter zones, then, would appear to support the idea that each of the top-ranking centers was the capital of an independent city-state in the Tlacolula arm of the valley and not a provincial center for Monte Albán.

However, although the shatter zones exist across the valley floor, they do not extend up into the piedmont zones. The proposed shatter zone between the Lambityeco and Macuilxóchitl districts, for example, breaks down and ceases to be a shatter zone at its northern extreme. Settlements are continuously distributed between the Macuilxóchitl and Lambityeco districts in this northern area along the piedmont zone. Likewise, the shatter zone between the Lambityeco and Yagul districts breaks down in both its northern and southern extremes with settlements being continuously distributed in the piedmont between the Lambityeco and Yagul districts. This partial shatter-zone permeability would seem more characteristic of provinces within a territorial state than independent city-states. Despite this partial permeability, the shatter zones on the valley floor do serve to define districts within the Tlacolula region. Each of the top communities is the highest-ranking center within the district defined by its shatter zones. Furthermore, most of the sites in a district are closer to the top-ranking center than to any neighboring center—that is, they are pulled toward their center and away from the neighboring center.

Blanton and colleagues (1981:33) also have proposed a "demographic center of gravity" model to assess political integration in the Valley of Oaxaca. This model, a construct developed by geographers, measures the

interaction potential among communities. A high interaction potential is seen as relating to a strongly integrated system, whereas a low interaction potential relates to a weakly integrated system (Finsten 1983:68–106). The model predicts that if a center served as a secondary administrative center for a territorial state, then it should be drawn geographically toward the state capital to reduce the distance involved in carrying out the necessary transactions between the capital and its secondary administrative centers. On the other hand, if the center is the capital of an independent city-state, then it should be located at the center of its region to reduce the distance involved in carrying out transactions that are necessary between the capital and its subject communities.

Assuming that the four districts in the Tlacolula arm of the valley have been adequately defined by the shatter zones, if Macuilxóchitl, Lambityeco, Yagul, and Mitla were provincial centers for Monte Albán, each center should be pulled geographically toward Monte Albán instead of being at the center of its district. The results, however, are not consistent. Macuilxóchitl is near the center of its district. Lambityeco is in the eastern part of its district—pushed geographically away from Monte Albán. Yagul is in the western part of its district—pulled geographically toward Monte Albán. Mitla is in the northern part of its district. The "demographic center of gravity" model, then, fails to solve the problem of whether these top-ranking communities were provincial centers for Monte Albán or the capitals of independent city-states.

However, the model may be applied on another level. Instead of assessing the locations of top-ranking communities in their districts, the locations of the districts themselves may become the units of analysis. In a highly integrated state, districts with the largest concentrations of population would be expected to occur closer to the state capital to reduce the distances involved in the dealings between a capital and its populace. Viewed in this context, the district with the largest and densest population would be expected to occur geographically closer to the state capital. In the case of the Tlacolula region, this is exactly what occurs. The Macuilxóchitl district is closest to Monte Albán and has the largest population with the highest population density. The Lambityeco district is the next closest to Monte Albán and has the second-largest population and second-highest population density. The Yagul and Mitla districts are the most distant from Monte Albán and have the smallest populations and the lowest population densities (Table 2.7).

The distribution of population sizes and densities, then, tends to support the idea that each of the top-ranking communities in the Tlacolula arm of the valley was a provincial center for Monte Albán. About two-

TABLE 2.7. A comparison of Xoo phase districts in the Tlacolula arm of the Valley of Oaxaca: Populations, areas, and population densities

District	*Population*	*Area*	*Density*
Macuilxóchitl	13,216	90 km^2	147
Lambityeco	**8,525**	**90 km^2**	**95**
Yagul	5,468	110 km^2	49
Mitla	5,528	110 km^2	50

thirds of the Xoo phase population of the Tlacolula region lived in the Macuilxóchitl and Lambityeco districts—the two districts nearest to Monte Albán. However, it might be argued that intervening variables, such as ecological factors, would have affected population sizes and densities in the four districts. Perhaps the district with the largest population size and density had the best agricultural land and thus could support greater concentrations of people. This is not the case in the Tlacolula arm of the valley. The Yagul district has the best farmland and yet it has the lowest population size and lowest population density of the four districts. Indeed, the productivity of farmlands in at least two (Lambityeco and Mitla) of the other three districts was insufficient to support the populations there (Kirkby 1973:139). This is especially true of the Lambityeco district, which has the poorest agricultural land in the entire Valley of Oaxaca yet contained a substantial population—8,500 persons—with a high population density—ninety-five persons per km^2.

Two factors, then, lead to the hypothesis that Macuilxóchitl, Lambityeco, Yagul, and Mitla served as provincial centers in a territorial state headed by Monte Albán. First, the shatter zones partially break down in sections where sites are continuously distributed between districts. This partial "shatter zone" permeability might be expected to occur between provinces of a territorial state. Second, the population sizes and densities of the districts are consistent with a high interaction potential for strongly integrated states. Fully two-thirds of the Xoo phase population of the Tlacolula arm of the valley was concentrated in the two districts nearest Monte Albán—Macuilxóchitl and Lambityeco.

However, the data are not entirely conclusive. The expectations of a demographic center-of-gravity model in a highly integrated state do not yield the desired result of the centers being drawn toward the capital. Furthermore, the shatter zones do exist across the valley floor, and most communities within each district are drawn closer to the center than to neighboring centers. An alternative hypothesis is that during the Xoo phase Monte Albán was a regional polity that exerted hegemony over these

smaller semiautonomous city-states. These alternative hypotheses evoke the problem with the static sequential segregation approach used by scholars in their interpretation of settlement pattern data. During the 200 years of the Xoo phase, there may have been considerable change. Monte Albán may have been a regional polity exerting hegemony over smaller semiautonomous city-states in the valley at one point and established a territorial state at another. Only a sequential integration approach to excavated remains can determine if and when during the Xoo phase Monte Albán imposed provincial governors at these centers or if and when during this span of time these centers were semiautonomous and ruled by local elite.

DISTRICT SETTLEMENTS

Macuilxóchitl, Lambityeco, Yagul, and Mitla probably served as the political, religious, and economic centers for the Xoo phase communities in their respective districts. Within each district were seven to ten sites, excluding the center, with populations greater than fifty persons (Table 2.8). From one to three sites in each district have mounds in the 4–6 m range, which may have included the elaborate residence of a high-ranking noble and/or a small temple. Each of these sites also exhibits mounds in the 2–3 m height range, which may have included the residence of a noble. These communities—which included Tlacochahuaya and Site #9-12 in the Macuilxóchitl district; Site #103 in the Lambityeco district; San Miguel del Valle, Site #243, and Site #240 in the Yagul district; and San Lorenzo Albarradas in the Mitla district—may have had a resident high-ranking noble appointed by the top-ranking political authority of the district center to administer the community.

An additional two to four sites in each district have mounds in the 2–3 m height range. These include Site #115, Site #120, and Site #60 in the Macuilxóchitl district; Santa Ana del Valle, Site #124, Site #153, and Site #128 in the Lambityeco district; Tanivet, Díaz Ordaz, and Site #134 in the Yagul district; and Site #262 and Site #288 in the Mitla district. Although none of these communities had any public architecture, the small mounds within them may have included the residences of nobles who administered the community.

One unique aspect of the settlement patterns in each district is of special interest. Each district center had very near it—not more than 1–2 km away—a very large population center, the first or second largest in the entire district, that lacked significant monumental architecture. These largest nearest neighbors included Tlacochahuaya, about 1 km west of Macuilxóchitl; Santa Ana del Valle,[6] about 2 km north of Lambityeco;

TABLE 2.8. A comparison of Xoo phase districts in the Tlacolula arm of the Valley of Oaxaca: Settlement populations and mound heights

District settlements	*Population*	*2–3 m*	*4–6 m*	*7–12 m*
Macuilxóchitl District				
1. Macuilxóchitl–District Center	6,222	14	12	3
2. Tlacochahuaya	5,352	7	1	—
3. Site #115	390	1	—	—
4. Site #120	381	2	—	—
5. Site #60	176	2	—	—
6. Site #195	165	—	—	—
7. Site #131	150	—	—	—
8. Site #77	142	—	—	—
9. Site #9-12	106	5	2	—
10. Site #78	76	—	—	—
11. Site #117	56	—	—	—
Lambityeco District				
1. Santa Ana del Valle	3,590	2	—	—
2. Lambityeco–District Center	2,702	20	10	2
3. Site #103	574	1	3	—
4. Site #124	495	8	—	—
5. Site #122	486	—	—	—
6. Site #153	317	1	—	—
7. Site #128	198	2	—	—
8. Site #149	87	—	—	—
9. Site #144	76	—	—	—
Yagul District				
1. Tanivet	1,584	5	—	—
2. Yagul–District Center	1,197	4	2	2
3. San Miguel del Valle	1,091	2	1	—
4. Díaz Ordaz	802	9	—	—
5, Loma Larga	269	—	—	—
6. Site #184	169	—	—	—
7. Site #243	122	3	3	—
8. Site #200	102	—	—	—
9. Site #204	69	—	—	—
10. Site #259	63	—	—	—
11. Site #240	–50	3	—	—
12. Site #134	–50	2	—	—
Mitla District				
1. Mitla–District Center	2,354	2	2	1
2. Mitla Fortress	1,208	—	—	—
3. San Lorenzo Albarradas	632	8	4	—
4. Site #263	514	—	—	—
5. Matatlán–El Palmillo	405	—	—	—
6. Site #262	146	1	—	—
7. Site #288	144	2	—	—
8. Site #258	125	—	—	—

TABLE 2.9. Comparison of district centers with largest nearest neighbor: Populations, mound volumes, and mound heights

District neighbors	*Population*	*Mound volumes in cubic meters*	*2–3 m*	*4–6 m*	*7–12 m*
Macuilxóchitl–Center	**6,222**	**115,557**	**14**	**12**	**3**
Tlacochahuaya	5,352	6,636	7	1	—
Lambityeco–Center	**2,702**	**85,961**	**20**	**10**	**2**
Santa Ana del Valle	3,590	1,147	2	—	—
Yagul–Center	**1,197**	**25,082**	**4**	**2**	**2**
Tanivet	1,584	16,473	5	—	—
Mitla–Center	**2,354**	**8,668**	**2**	**2**	**1**
Mitla Fortress	1,208	2,239	—	—	—

Tanivet, about 2 km south of Yagul; and the Mitla Fortress, about 1 km west of Mitla (Fig. 2.3; Table 2.9).

The presence of these large neighboring population centers raises some questions. Were these large centers occupied for only a short time during the Xoo phase and does this account for their lack of significant mounded architecture? Were they occupied only very early in the Xoo phase and did their populations shift to found the district center? Were they occupied only at the termination of the Xoo phase and represent remains left by the populations who abandoned the district center to settle temporarily nearby? Were they wholly or partly contemporaneous with the district center? Do they represent a population of laborers who served the district center in some way but resided apart? Only excavations and a sequential integration analysis at these sites can help answer these questions.

DISTRICT ECONOMIC SPECIALIZATION

Anne Kirkby (1973) carried out a study of the agricultural potential and utilization of the Valley of Oaxaca for both modern and Prehispanic times. Kirkby notes that the Etla arm of the valley is the richest agricultural area because of relatively abundant water resources. The Zimatlán arm is the next most important area for agriculture, and the Tlacolula arm of the valley, especially in its eastern sector where Lambityeco is located, is the poorest agricultural area because it has the least abundant water resources (Kirkby 1973:19, fig. 8).

Using the data she gathered on agricultural productivity, Kirkby predicted where the district centers should be if they were centrally located with respect to the most productive agricultural areas in the valley. With regard to present-day market centers, Kirkby (1973:139) notes that Etla, Zaachila, and Ocotlán are all located as predicted by the central place hierarchy model—at the center of the most productive agricultural areas.

With regard to the Tlacolula region, however, Kirkby (1973:139) states: "[I]n the Tlacolula Valley, the central place of an exclusively agricultural economy would be at San Juan Guelavía—actually it is farther east, at Tlacolula. Indeed, much of the settlement in the eastern Tlacolula Valley can be regarded as anomalous, because agriculturally it is a very marginal area but it supports several large towns which were also important archaeological sites."

The only area of highly productive farmland in the eastern Tlacolula arm of the valley is located in the Yagul district, south of the modern town of San Miguel del Valle and north of the archaeological site of Yagul (Kirkby 1973:66, fig. 25). Apart from this, the eastern Tlacolula region is, as Kirkby (1973:139) reports, a very marginal agricultural area and most communities do not produce enough corn to meet their needs. As a result, the inhabitants of these communities have craft specializations that help them earn money to buy additional corn and other basic necessities.

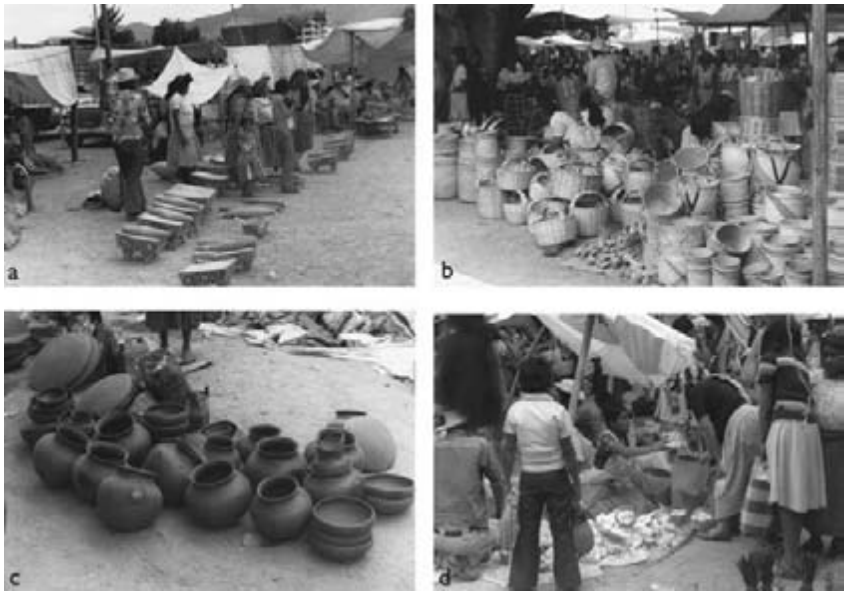
People from San Lorenzo Albarradas produce woven sleeping mats (Fig. 2.5a). Teotitlán del Valle is famous as a center of blanket weaving (Fig. 2.5b). The inhabitants of other villages also practice weaving, such as Santa Ana del Valle, where ponchos and woven bags are manufactured (Fig. 2.5c), and Mitla, where shawls and embroidered blouses, skirts, and shirts are produced (Fig. 2.5d). San Juan Teitipac is an important center for the manufacture of manos, metates, and *molcajetes*, or grater bowls (Fig. 2.6a). The residents of San Juan Guelavía specialize in the production of baskets (Fig. 2.6b), and those from San Marcos Tlapazola craft pottery (Fig. 2.6c). In the recent past, Matatlán was an important supplier of lime used in processing corn to make tortillas (Fig. 2.6d).[7] Tlacolula, itself an important center of producers of mezcal—an alcoholic beverage distilled from the juices of the maguey—is the regional market center for each of these communities (see Fig. 2.3 for their locations).

Laura Finsten (1983) undertook studies of craft specialization that include information from surveys of all 231 Xoo phase sites in the Tlacolula arm of the valley. None of the sites in the Yagul district exhibits evidence for craft specialization. However, sites in each of the other three districts—Macuilxóchitl, Lambityeco, and Mitla—do show evidence for craft and other economic specializations. Furthermore, with very few exceptions,

2.5. ***Products sold in the Tlacolula market***

almost all economic specialization was confined to the district center or to sites very near it.

Two sites in each of the three districts were centers of pottery making. In the Macuilxóchitl district, the center of Macuilxóchitl and the nearby site of Tlacochahuaya had ceramic workshops. In the Lambityeco district, the center of Lambityeco and nearby Site #103 produced pottery. In the Mitla district, the center of Mitla and the distant site of El Palmillo—about 7 km south of Mitla—were producers of ceramics. No other sites in any of these districts, nor indeed in the entire Tlacolula arm of the valley, had ceramic workshops. Therefore, these ceramic-producing centers must have supplied all or most of the pottery used by the inhabitants of their district. Furthermore, all the inhabitants of the Yagul district must have obtained most or all of their ceramic artifacts from one of the neighboring districts—probably Lambityeco, which was the pottery-producing center closest to the communities of the Yagul district. As Paddock (1983a:204), who excavated at both Yagul and Lambityeco, noted: "The pottery and figurines from this time [Xoo phase at Yagul] are utterly indistinguishable from those at Lambityeco." Finsten (1983:145) reports that Lambityeco and Macuilxóchitl show evidence for large-scale ceramic production. Lambityeco is about 7 km north of San Marcos Tlapazola, the only present-



2.6. ***Additional products sold in the Tlacolula market***

day community of pottery producers in the Tlacolula arm of the valley (Fig. 2.3).

Workshops for manufacturing ground-stone tools, such as manos and metates, occur in only two districts. In the Macuilxóchitl district, the center of Macuilxóchitl produced ground-stone tools that were probably distributed to the inhabitants of its district and those of the neighboring district of Lambityeco, which lacked ground-stone-tool workshops. Macuilxóchitl is about 8 km north of San Juan Teitipac, the present-day community of ground-stone-tool producers for the Tlacolula arm of the valley. In the Mitla district, the people who lived in the Mitla Fortress, next to the center of Mitla, produced ground-stone tools that were probably distributed to the inhabitants of the Mitla district and to those of the neighboring Yagul district, which lacked ground-stone-tool workshops.

Salt production, an important industry in ancient Mesoamerica (Kepecs 2003b), occurs in the Lambityeco district. The center of Lambityeco was a major supplier of salt for the Tlacolula arm of the valley and even the entire Valley of Oaxaca. A smaller salt-producing site, Hierve el Agua, in the mountains east of Mitla outside the Valley of Oaxaca proper, may have supplied some of the salt used by the inhabitants of the Mitla district (Peterson 1976), as reported by the *Relación de Tlacolula y Mitla* (Canseco 1580:150).

However, Neely and colleagues (1990) contend that Hierve el Agua was a site in which irrigation, not salt production, was practiced.

Lime production occurs in the Mitla district. El Palmillo, about 7 km south of Mitla, was probably a major supplier of lime for the Tlacolula region. Lime was used in solution to soak corn and soften it into nixtamal, or corn dough, so that it could be made into tamales or tortillas. Lime was also used to make plaster to cover the floors and walls of houses and other buildings. El Palmillo is located near Matatlán, which fifty years ago was the principal supplier of lime to the Tlacolula market. During the Xoo phase, some of the communities in the Macuilxóchitl district may have obtained lime from San Antonio de la Cal (Cerro de la Mesita), which was in the Valle Central and therefore closer to the communities of Macuilxóchitl than was El Palmillo (Fig. 2.3).

The apparent absence of craft specialization in the Yagul district may be explained by its agricultural importance. As commented before, the Yagul district had the best farmland in the Tlacolula region and probably produced a substantial surplus of corn. The other three districts, in particular Lambityeco and Mitla, did not produce enough corn to meet the needs of their inhabitants and therefore may have relied on all or some of the surplus produced by the Yagul district. In return, the Yagul district most likely received the specialized products of its neighboring districts—ceramics and salt from the Lambityeco district and manos, metates, and lime from the Mitla district.

A study of craft and other economic specializations makes it apparent that there was economic interdependence among the four districts of the Tlacolula arm of the valley that extended to the basic needs of every Xoo phase household. These basic necessities included corn, salt, lime, manos, metates, and ceramic utensils. It is also evident that no one district in the Tlacolula region produced all of these basic household necessities. Therefore, each district was to an extent dependent on the other districts to supply the basic commodities that it lacked. It would appear that, at least in the Tlacolula arm of the valley, the local district market centers were interdependent and hierarchically interlocked with the primary center at Monte Albán in what Minc (2006:86) called a complex, interlocking market system or a hierarchically integrated market network.

THE DISTRICT CENTERS

Compared to the other sites in their districts, Macuilxóchitl, Lambityeco, Yagul, and Mitla had certain distinctive features that set them apart. Each of these centers was one of the two largest communities in its district,

the other one being a large nearby community that lacked monumental architecture. Together, the district center and its large neighbor formed a demographic core.

The district center was probably the focus of local economic exchange and, with one exception (Yagul), manifested economic specialization. Goods produced by the district center or other communities in its district were probably channeled through the district market center for distribution to the populace of the district and for export to other district market centers. Imports from other district centers were probably distributed to the populace of a district through its market center.

The district center was either the largest or second largest site in its district with regard to gross volume of mounded architecture, and it was the only community in its district to have monumental architecture represented by mounds in the 7–12 m height range. These large mounds were probably temples, and at least one may have formed part of a temple complex (TPA) at the district center. The temple complex (TPA) marked the district center as the locus of religious authority and ceremony within the district.

The presence of civic residential complexes (PPA) at Lambityeco and Macuilxóchitl makes it seem likely that civic residential complexes occurred at the other district centers as well. The palace atop this complex was the residence of the highest-ranking political official in the district. The presence of a civic residential complex at the district center probably marked it as the locus of political authority within the district.

LAMBITYECO AS A DISTRICT CENTER

Lambityeco stands as the only Xoo phase district center in the Tlacolula arm of the valley, and indeed in the entire Valley of Oaxaca, that has been the subject of intensive archaeological investigations. Our knowledge about most other probable Xoo phase district centers is limited to inferences from superficial surveys and deductions from models of settlement systems. To what extent Lambityeco may be unique and in what ways it may conform to other coeval district centers remains to be determined by excavations at those centers.

Lambityeco, like Monte Albán, has been intensively surveyed and mapped to determine its maximum extents for different time periods. David Peterson (1976) located and mapped 206 mounds within the 1.17 km^2 area covered by Lambityeco. A comparison of the areas covered by Monte Albán and Lambityeco for each phase of occupation is presented in Table 2.10.

Not all of the Lambityeco mounds date to the same phase. The most ancient habitation of the site predates the founding of Monte Albán and

TABLE 2.10. Monte Albán and Lambityeco: Size by phase

Phase[1] (Phase number)	*Monte Albán[2] (Hectares)*	*Lambityeco[3] (Hectares)*	*Size ratio Monte Albán / Lambityeco*
Guadalupe[4]	—	—	—/—
Rosario[5]	—	2.25	—/—
Danibaan (Early MA Ia)	255	6.50	40/1
Pe (Late MA Ic)	440	13.00	34/1
Nisa (MA II)	416	8.00	52/1
Pitao (MA IIIA)	475	6.75	70/1
Xoo (MA IIIB-IV)	650	63.75	10/1
Chila (MA V)	91	18.25	5/1

Notes:
1. The Tani, Peche, and Liobaa phases had not been defined at the time of these surveys.
2. Monte Albán data after Blanton (1978).
3. Lambityeco data after Peterson (1976).
4. Two Guadalupe phase artifacts occur at Monte Albán and one at Lambityeco.
5. No Rosario phase occupation is known at Monte Albán.

includes eight mounds corresponding to the Rosario phase. In the subsequent Danibaan phase, when Monte Albán was founded, Lambityeco grew in size to include twenty-eight mounds. Lambityeco continued to increase in size during the succeeding Pe phase to include fifty-five mounds. Pe phase Lambityeco was an important center in the Valley of Oaxaca (Kowalewski, personal communication, 1985).

Lambityeco appears to have been largely abandoned during the Nisa and Pitao phases when the center was most likely moved 4 km eastward to Caballito Blanco (Fig. 2.1). Lambityeco was resettled as a district center in the Xoo phase. At this time, the settlement reached its maximum size with 147 of the 206 mounds showing evidence of occupation and the area of habitation covering about sixty-four hectares. In the succeeding Liobaa and Chila phases, Lambityeco was largely abandoned and population once again shifted about 4 km eastward to Yagul. Yagul was occupied at the time of the Spanish Conquest and is the site that the people of Tlacolula still refer to as their "Pueblo Viejo," or Old Town.

The history of Lambityeco and Monte Albán shows some interesting parallels. Both reached an early peak in the Pe phase followed by a decline in the subsequent Nisa and Pitao phases. In the succeeding Xoo phase, both reached the highest level of population growth in their history. At this time, Monte Albán spread across an area of 650 hectares and had a population of 25,000 and Lambityeco covered an area of nearly sixty-four hectares with a population of 2,700. Following the Xoo phase, Monte Albán and Lambityeco apparently ceased to exist as functioning communities. Both

sites were largely, but not totally, abandoned during the Liobaa phase and subsequent Chila phase. Few, if any, residences occur and no monumental structures are evident at either site during these phases. The areas occupied represent mostly burials and ritual activities at Monte Albán (Winter 2003) and salt production activities and a few burials at Lambityeco.[8]

The collapse of Monte Albán at the end of the Xoo phase certainly generated a lot of political instability in the Valley of Oaxaca. Macuilxóchitl, Yagul, and Mitla were all located in defensible positions on or near mountains or mountain spurs rising from the valley floor. Lambityeco was not. Its location on the valley floor with no nearby defensible position made it an extremely vulnerable community in times of political unrest.

Lambityeco, then, was sensitive to political change in the Valley of Oaxaca. In times of political stability, as evidently occurred during the Danibaan and Pe phases—when Monte Albán probably represented a unifying force in the Valley of Oaxaca—Lambityeco thrived. During the Nisa and Pitao phases, when Monte Albán suffered a "mini-collapse" and political instability occurred in the Valley of Oaxaca, evidently generated by Teotihuacan, Lambityeco was largely abandoned whereas Macuilxóchitl (the Dainzú component), Yagul (the Caballito Blanco component), and Mitla prospered in their defensible positions. In the Xoo phase, when Monte Albán once again developed the strong political authority to ensure valley-wide stability, Lambityeco was resettled and prospered as never before. With the collapse of Monte Albán, Lambityeco was largely abandoned and never again became an important center, whereas Macuilxóchitl, Yagul, and Mitla were important centers at the time of the Spanish Conquest. Lambityeco remained virtually abandoned until after the Spanish Conquest when it was resurrected as nearby Tlacolula and began to prosper under the stability generated by the strong Spanish political authority. Lambityeco's role as a district center and its responsiveness to political stability and instability at Monte Albán make it an indicator of political change in the Valley of Oaxaca and an ideal site in which to explore political evolution during the Xoo phase.

NOTES

1. http://www.inegi.gob.mx (accessed 2008).

2. Many towns in the Valley of Oaxaca have the same name, being distinguished only by the presence of the name of a saint or modern hero. Etla exemplifies this best. There are sixteen Etlas, all in the Etla arm of the valley and all near one another. The Etla referred to here and on the map (Fig. 2.1) is San Pedro y San Pablo Etla. There are also eight Ocotláns in the Ocotlán region of the Zimatlán

arm of the valley and all near one another. The Ocotlán referred to here and on the map (Fig. 2.1) is Ocotlán de Morelos.

3. The low volume of mounded architecture for Xoo phase Mitla may be more apparent than real. The present-day town of Mitla covers much of ancient Xoo phase Mitla, which makes it difficult to achieve accurate surface survey information. For example, surveys of Mitla by the Valley of Oaxaca Survey Project show no Xoo phase remains in the vicinity of the Mitla *zócalo*, or main plaza. However, in 1968, Lind had a hole dug to place a septic tank in a house only 30 m away from the Mitla zócalo. This hole, which reached a depth of 2 m, revealed abundant Xoo phase artifacts. Many Xoo phase mounds at Mitla may have been destroyed in later times, just as their destruction is coming about today. Robles (1986), for example, traced the destruction of archaeological mounds in the town as it expanded from the sixteenth century to the present.

4. It is unclear whether neither or only one of these complexes was included by the Valley of Oaxaca Survey Project. The survey data list one mound 9 m high for Xoo phase Mitla, which may be the tall mound in the Adobe Group. A 12 m high mound occurs in the South Group (Robles 1986:18). Caso's excavations in the South Group show it to have been built initially during the Pitao phase with modifications during the Xoo and Chila phases.

5. Because it is uncertain if the secondary centers are semiautonomous city-states or provinces of a territorial state, the more neutral term "district" has been selected to refer to the territories over which they ruled.

6. In 2003 Urcid encountered a large palace at Santa Ana del Valle where a carved lintel with a Peche or Xoo phase Zapotec style annual date, now in the community museum, was found. The palace is perched on a piedmont spur above the present-day community. Covered by thick vegetation, it consists of a large patio, probably a bit smaller than the patio of the PPA at Lambityeco, surrounded by four large rooms. The amount of debris indicates that these structures were made out of stone, and a fair amount of the fallen blocks show evidence of having been carefully chiseled.

7. Alejandro Aguilar, a Tlacolula Zapotec, informed Lind that Matatlán had been the principal supplier of lime for the Tlacolula market until the 1940s when the Pan-American Highway was built. At that time, San Antonio de la Cal gained access to the Tlacolula market and is the principal supplier today. Matatlán's role as a supplier of lime is discussed by Taylor (1972), Whitecotton (1977), and Finsten (1983:279–283). The Xoo phase site of El Palmillo, near Matatlán, is currently being excavated by Gary Feinman and may have been the Xoo phase supplier of lime for the Tlacolula arm of the valley

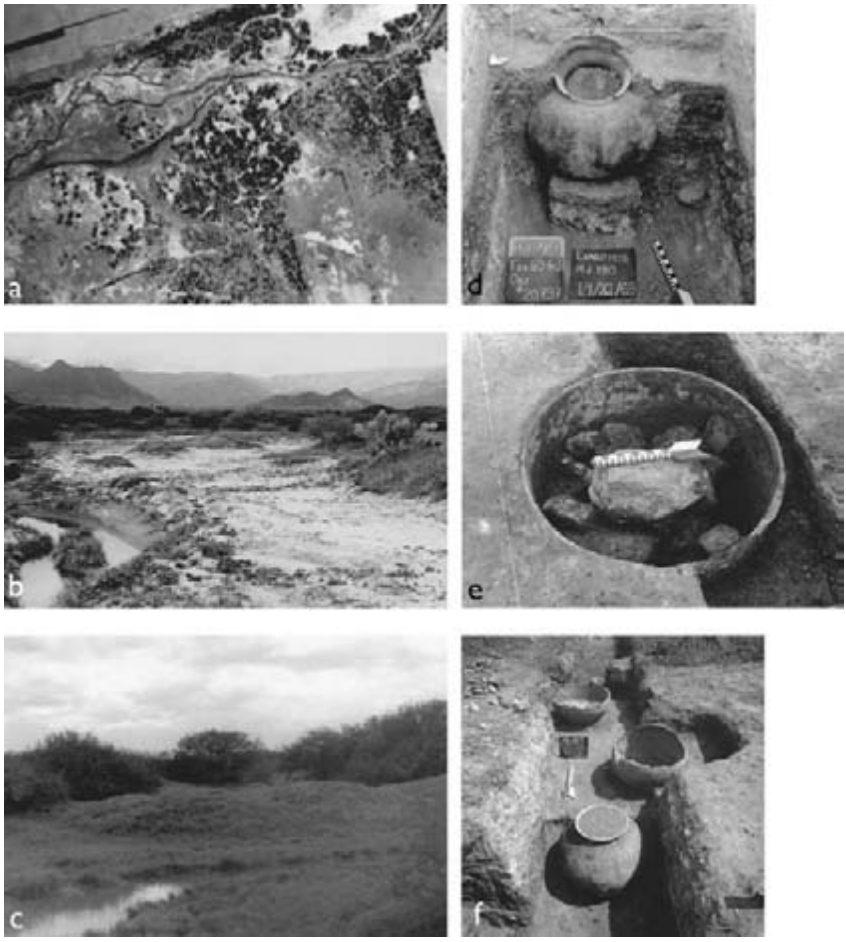
8. Interestingly, the Liobaa flexed burials from both Monte Albán and Lambityeco are very unusual for the Valley of Oaxaca, which normally has extended burials, and probably constitute a diagnostic of the Liobaa phase (Winter 2003; Lind 2008).

chapter three

Lambityeco: The Economic Basis

Lambityeco's economic role as an important Xoo phase district center in the Tlacolula arm of the Valley of Oaxaca may best be understood by first assessing its ecological setting. The lands surrounding Lambityeco are, for the most part, poor for agriculture, especially when considered in conjunction with the exceedingly low rainfall in the area. Kowalewski (1982:155–157) has noted that, in the absence of some type of irrigation, an area must receive at least 700 mm of rainfall per year to ensure an adequate harvest of corn. He cites records showing that the area surrounding Lambityeco receives less than 700 mm of rainfall per year seven out of every ten years, with an actual average of 600 mm of rainfall per year (Kirkby 1973:19, fig. 8). Because there is no evidence in the environs of Lambityeco of an infrastructure for water management and assuming that similar climatic conditions to the present one prevailed in the past, this means that corn planted in the area failed to yield adequate harvests most of the planting seasons.

The site is located partially on alluvial fan gravels and partially on alluvial clay soils. Today many of the fields in and around Lambityeco are planted with maguey, which, of course, grows in thin soil and requires little water to survive. The maguey is processed by Tlacolula distilleries to produce mezcal. In a study of land use in the area of Lambityeco, Kirkby (1973:165–168) estimated that nearly 20 percent of the alluvial clays around



3.1. ***Ancient and modern salt production at Lambityeco (photos a, b, and e courtesy of David Peterson)***

the site were unsuitable for farming because they are heavily saline (Kirkby 1973:166, fig. 62).

Most of the saline soils are located along the swampy southern edge of the site. The extensive salt deposits can be seen in an air photo (Fig. 3.1a) and from the ground (Fig. 3.1b). Peterson (1979:1) noted that the swamp is "not the result of surface drainage into that area. Instead, it comes from an underground or flowage system which is heavy in salt. In the area . . . the flowage meets the surface and forms a salty swamp." Although saline soils are useless for agriculture, they are obviously important as a source

of salt, and access to these salt deposits was the principal determinant of Lambityeco's location within its district.

SALT PRODUCTION AT LAMBITYECO

"Salt is a perfect commodity: production and distribution are easy to control since sources are localized, yet demand is broad" (Kepecs 2003b:126). Kepecs (2003b:127) identifies two basic kinds of salt produced in ancient Mesoamerica—pure salt from coastal estuaries and *tequisquites* (impure salt) from salt playas. Emal on the north coast of Yucatán obtained pure salt produced by solar evaporation along the Río Lagartos estuary and was the largest salt-producing center in Prehispanic Mesoamerica (Kepecs 2003a:264–265; 2003b:128).

Tequisquites from the Lambityeco salt playas was being produced in the early Colonial period (Canseco 1580:147) and sold in the Tlacolula market. During this time salt was purchased by communities as far away as Tlalixtac in the Valle Central (Del Río 1580:181) (see Fig. 2.3 for location). As recently as 1945, about fifteen families from Tlacolula still extracted salt from Lambityeco to sell in the Tlacolula market and thirty-seven modern mounds of filtered earth still stand as a testimony to their activities (Fig. 3.1c).

Peterson (1976) carried out a detailed study of salt production at Lambityeco and other sites in the Valley of Oaxaca. There were eight salt-producing sites operational in the valley during the Xoo phase (Peterson 1976:115). At this time, Lambityeco reached its maximum size and salt workers were producing an average of 21,850 kilos of salt each month (Peterson 1976:110). The Lambityeco salt workers produced enough salt to meet the needs of 90 percent of the valley population. The other seven valley salt-producing sites contributed the remaining 10 percent of the valley's salt needs (Peterson 1976:113–115). Lambityeco clearly became the valley's major salt-production center during the seventh to ninth centuries CE.

From his excavations in salt-production areas, Peterson (1976:101–103) has defined the various methods used to obtain salt. In the early Xoo phase, brine was either obtained directly from the salt marsh or was mixed with salty soil to enrich it. Mixing increases salinity and enhances yield from about ten grams of salt per liter of unmixed brine to about fifty grams per liter of enriched brine (Peterson 1974b:10). The salt was produced by boiling the brine in large ceramic ollas, called salt boilers, over an open fire (Fig. 3.1d). Late in the Xoo phase, a new technique was introduced. This involved mixing salty earth with brine in ceramic tubs to enhance its salinity (Fig. 3.1e) and then boiling the brine in salt boilers that were placed in ovens (Peterson 1974a:13; 1974b:7).

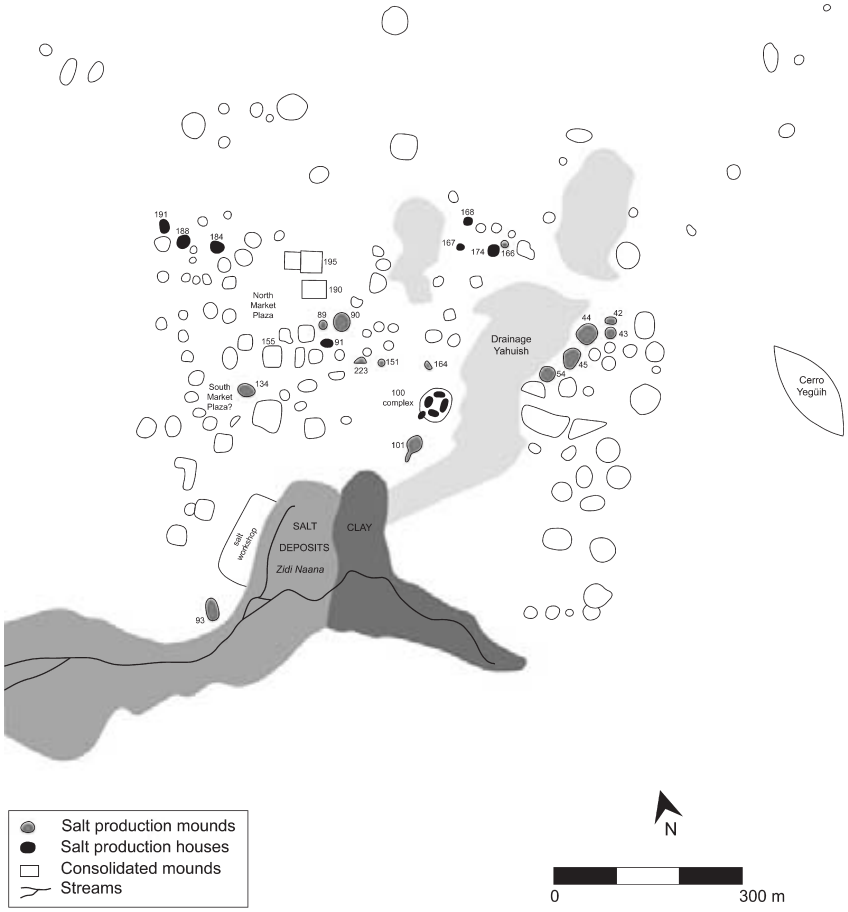
Peterson (personal communication, 1979) determined that fifteen families from Tlacolula extracted about 2,880 kilos of salt each month from Lambityeco in 1945. If fifteen families produced that amount of salt per month, then it must have taken about 110 to 120 families to produce the 21,850 kilos of salt extracted from Lambityeco each month during the Xoo phase. Taking Kowalewski's estimate of 2,700 persons, or about 500 families, as Lambityeco's population during that time, this means that nearly one-fourth of the population was directly engaged in salt production.

THE ORGANIZATION OF XOO PHASE SALT PRODUCTION

Following a sequential segregation approach, archaeologists have generally characterized the organization of production relative to phases. Thus, Feinman (1982) has suggested that ceramic production was organized in government workshops in the Valley of Oaxaca during the Xoo phase but was an individual enterprise during the Chila phase. In the same way, following a sequential segregation approach, the question could be asked, Was salt production an individual enterprise at Lambityeco during the Xoo phase, or was it organized in government workshops? To phrase research problems in these terms of sequential segregation, however, is to ignore any possible change in the organization of salt production during the Xoo phase. It assumes that throughout the 200 years of that phase, salt production was either organized in one way or another. Here a sequential integration approach is taken and the research question becomes, Was there any change in the organization of salt production during the Xoo phase at Lambityeco?

Peterson (1979) located twenty-three Xoo phase mounds at Lambityeco that showed clear evidence for salt-production activities. He sampled twelve of these mounds with a posthole digger to search for the presence or absence of house floors. Two mounds were excavated—one partially (Mound 100 Complex that includes Mounds 96, 97, 98, 99, and 100) and one extensively (Mound 91)—whereas subsurface remains were revealed by roadcuts, plowing, or holes dug by looters in a number of others. At least nine of the twenty-three mounds showed that salt production was directly associated with the houses of commoners.

An examination of the distribution of the mounds representing the houses of salt producers and those showing evidence of salt-production activities demonstrates that the mounds are scattered about the site (Fig. 3.2). This indicates that salt production was not confined to a workshop. It also indicates that salt producers were not concentrated in a specific bar-



3.2. ***Xoo phase salt production at Lambityeco***

rio. Instead, the scattered distribution makes it appear that salt production was an individual-household enterprise at Lambityeco. The fact that salt producers' houses are those of commoners, are widely scattered throughout the community (ranging from as near as 150 m to as far as 500 m away from the salt deposits), are not grouped in a barrio, and do not occur in clusters around government buildings or elite houses lends support to the idea that they were communal property. However, local authorities may have charged a fee for access to the salt deposits or taxed them on their sales in the marketplace.

The location of salt producers' houses suggests that salt production was a profitable enterprise for commoners. It would take about twenty liters of

enriched brine to produce a kilo of salt. Inquiries among Tlacolula residents revealed that a hearty individual can carry two twenty-liter ollas of water with a pole across the shoulders and ropes attached to the ends of the pole and wrapped around the ollas to support them. This load, however, was considered a maximum and it was stated that more often two ten- or twelve-liter containers are used.

Because salt boilers are found in thick layers of ash in direct association with salt producers' houses, it is clear that the process of boiling the brine to obtain salt was carried out within domestic compounds. Therefore, salt producers must have trekked the distance between their homes and the salt deposits to obtain the brine, dig up the saline soil and mix it with the brine to enrich it, and trudge back loaded with ollas of enriched brine to be poured into the salt boilers. Because the salt boilers associated with producers' houses were often greater than twenty liters (many ranged between twenty-five and ninety liters), the brine must have been transported in smaller containers—twenty liters or less. Considering the energy expended in obtaining, enriching, and transporting brine alone, salt production must have been a relatively profitable enterprise for commoners.

Although data from Peterson's surveys and excavations of mounds showing evidence of salt production suggest that salt production was a specific household enterprise, additional surveys and excavations in a 7,500 m^2 area near the salt deposits—where no visible mounds occur—yielded apparently contradictory evidence. Peterson (1974a:6) ran survey transects across this area adjacent to and including the northernmost sector of the salt deposits. Surface collections from these transects revealed the highest density of sherds (190 per square meter) from salt boilers of any area of the site.

Excavations by Peterson and Donovan Clark in the southern part of this area exposed the presence of large ceramic tubs, 80 cm in diameter and 60 cm deep (Fig. 3.1d), used to mix salty earth with brine to enhance the salinity (Peterson 1974b:7). In addition, the remains of several ovens, at least one of which (Horno #2) had only Xoo phase sherds associated with it, were found (Peterson 1974a:table IX). The salt production area, then, with mixing tubs, ovens, and salt boilers may have been a sector of workshops established during the Xoo phase (Fig. 3.2).

Peterson (1974a:13) undertook studies to determine changes through time in Xoo phase salt production at Lambityeco. His study of salt boilers revealed two types of changes. First, he noted that salt boilers from stratigraphically earlier contexts in the Xoo phase were larger in size than those from later stratigraphic contexts. Second, he observed that there was an increase over time in the amount of mica inclusions in the clay body or "paste" of salt boilers. Salt boilers from the earliest stratigraphic contexts

contained virtually no or very little mica, whereas those from later stratigraphic contexts contained greater amounts of mica. John Carroll (1974), who completed an analysis of the ceramics from Lambityeco that was unrelated to Peterson's work and based on William Fowler's (1974) stratigraphic test pit project at Lambityeco, independently observed evidence for a decrease in size and increase in the mica content of salt boilers through time.

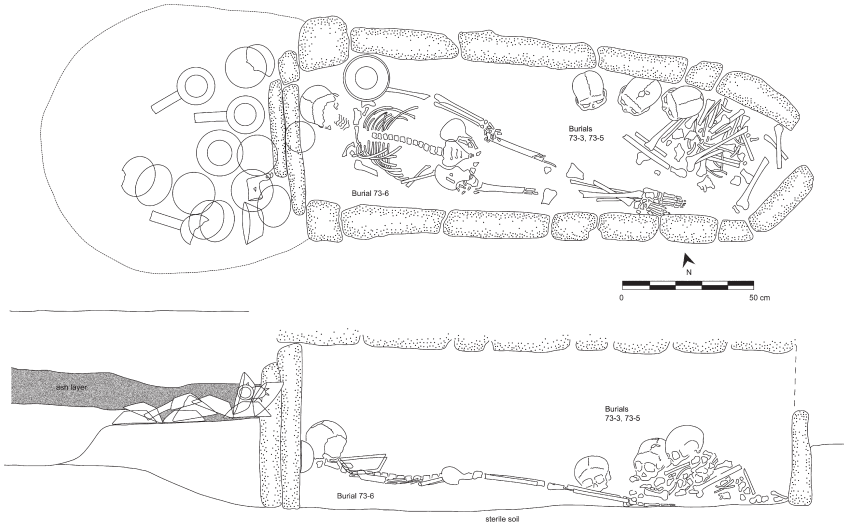
The decrease in size of salt boilers may have correlated with the introduction of ovens late in the Xoo phase. Instead of boiling brine in large salt boilers over open fires, a number of smaller salt boilers may have been placed together in an oven. Their smaller size combined with greater heat retention in the oven probably led to more rapid evaporation and greater efficiency in salt production. Peterson (1976:95) reports that in the 1940s, five or six salt boilers were placed in each oven and were even smaller than the archaeological salt boilers from the Xoo phase.

The reason for the increase in mica content is unknown although it serves as a convenient temporal marker. Peterson (1979:table IX) compared sherds from salt boilers associated with the houses of salt producers (Mound 91) with sherds from salt boilers associated with the Xoo phase oven (Horno #2) in the probable workshop area and found that the salt boiler sherds from the latter context contained higher mica contents. This evidence indicates, therefore, that salt production was being carried out at a later date in the workshop sector and at an earlier date in association with individual households.

As a working hypothesis, then, it may be suggested that during the earlier part of the Xoo phase (ca. 650–800 CE) salt production was spatially dispersed and an individual-household enterprise, whereas in the last years of the Xoo phase (ca. 800–850 CE) salt production was spatially nucleated and organized in a workshop area. An initial test of this hypothesis will be made by applying a sequential integration approach to the stratified remains of houses of salt producers uncovered in a mound at Lambityeco located some 275 m north of the salt deposits.

HOUSES OF SALT PRODUCERS IN MOUND 91

Mound 91, less than 1 m high, was partially excavated by David Peterson and Bert Gerow in the summer of 1972. Later, in the fall of 1972 and spring of 1973, the excavation was expanded by a team headed by William Swezey (Peterson 1974b:15–17). Although Swezey (1975) interpreted the remains found in Mound 91 as a ceramic workshop in which salt boilers were made, Peterson (1974b:15–17) clearly demonstrated that the remains correspond to salt production.



3.3. ***Plan and profile of Tomb 9 in Mound 91 at Lambityeco***

The initial excavation consisted of a 1 m wide trench running north to south across the eastern third of the low mound and uncovered two burials and a number of salt boilers in situ in a thick layer of ash (Fig. 3.1f). Swezey expanded the excavations in a series of 4 m by 4 m pits crossing the mound in an east-west direction and uncovered additional salt boilers in situ and the stratified remains of houses, including a tomb (Tomb 9) with seven adults buried in it (Fig. 3.3).

Using a sequential integration approach, Urcid (1983:117–133) analyzed the features exposed in Mound 91 as part of his study of the Lambityeco tombs and burials. Although the mound was only partly excavated and the excavations were not designed to fully determine the stratigraphic patterning essential to a more thorough sequential integration analysis, Urcid was able to detect evidence for four superimposed phases of construction at the locality. The presence of seven adults buried in Tomb 9 suggests that the superimposed houses were successively occupied over a period of four generations, or approximately 100 years.[1]

The stratified house remains from top to bottom within Mound 91 all correspond to the Xoo phase with no earlier or later phases present. The last or most recent house (House 91-1) was probably occupied during the last generation leading up to Lambityeco's abandonment around 825–850 CE. The initial or most ancient household (House 91-4) in the Mound 91 sequence, then, was seemingly built and occupied around 750–775 CE.

Little is know of the oldest household (House 91-4) because of limited exploration. Only a section of an adobe wall was found but not followed out. Perhaps the wall corresponded to a room with a compact earthen floor—although no floor was reported by excavators. However, evidence for salt production in association with this house is clear as shown by a cluster of three salt boilers. It was possible to calculate the volume of one of these salt boilers at twenty-seven liters (Peterson 1976:106, table V). The other two salt boilers were too incomplete for accurate estimates of their capacities. Tomb 9 was probably constructed in association with House 91-4 and the married couple who headed the household was most likely buried in it. The tomb was not a masonry construction but simply a hollow excavated in the tepetate, or natural hardpan soil.

The next structure in the sequence, House 91-3, had at least one room with a plaster floor located in the eastern sector of the house. The room was special because it was built above Tomb 9. Like other "tomb rooms" at Lambityeco, it probably served as a locus of the shrine for the family ancestors buried in the tomb beneath its floor. The married couple who headed House 91-3 was buried in Tomb 9. Other family members, Burial 73-8 (a child nine to twelve years old) and Burial 73-9 (an infant two to six months old), were buried outside the tomb along the west side of the room. Again, salt production associated with this house is evidenced by the presence of five salt boilers. It was possible to calculate the capacities of four of these at 91 liters, 36 liters, 23 liters, and 16 liters (Peterson 1976:106, table V).

The next structure in the sequence, House 91-2, included a plaster patio floor west of the ancestral shrine room and the construction of a second plaster patio floor north of it. This second patio may have had one or more residential rooms around it. Whether the presence of the two patios should be interpreted as indicative of a joint family household is uncertain. However, the close proximity of the patios and the absence of a tomb associated with the north one probably preclude the existence of two separate and unrelated households.

The married couple who headed the household was buried in the household tomb, and other family members—Burial 73-2 (an adolescent female ten to fifteen years old) and Burial 72-1 (an adult male twenty to thirty years old)—were buried, respectively, to the north and south of the ancestral shrine room. The presence of three salt boilers in association with House 91-2 provides evidence that the household was engaged in salt-production activities. It was possible to calculate the capacities of all three (Peterson 1976:106, table V). Two were twenty liters and one was nine liters. These salt boilers are clearly smaller than those associated with the earlier houses.

The final generation occupied House 91-1, which was probably little changed from House 91-2. The north patio of the house was resurfaced with a new plaster floor and evidence for a raised walkway occurs along its east side. The south patio was also resurfaced and Tomb 9 was remodeled, turning it into a simple masonry construction (Fig. 3.3). It included walls without niches built of small unworked stones and sherds stuck together with adobe mortar, an irregularly leveled packed earthen floor, a flat roof of several unworked stones of varying sizes, and an entrance framed by the stones of the walls and roof that were painted red on the exterior with several bands and dots (Urcid 1983:128).

The wife of the fourth-generation married couple who headed the household evidently preceded her spouse in death because the last burial in the tomb was an adult female. The man continued to occupy the house until it was abandoned sometime before his death, probably around 850 CE. Other family members were buried under different areas of the house. Burial 73-7 (a child one to three years old) was interred beneath the raised walkway in front of the east room of the north patio. Burial 72-9 (an adolescent male fifteen to eighteen years old) was placed along the north side of the south patio, and Burial 73-1 (a boy seven to eleven years old) was buried along the east side of the same patio in front of the ancestral shrine room. Interestingly, no evidence of salt production occurs in association with House 91-1.

The family of salt producers occupied the successive house remains within Mound 91 over four generations. The characteristics of the household tomb and the quantity and quality of the offerings placed in it are typical of the households of commoners at Lambityeco. The thirty-three objects composing the offerings for the seven individuals buried in the tomb conform to the average of about five objects per individual buried in the tombs of commoners, which is well below the average of twenty to thirty objects per individual for the tombs of the Lambityeco elite (Lind and Urcid 1983). No elaborate ceramic offering, not even a ceramic effigy vessel, was placed in the salt producers' tomb.

CHANGES IN SALT PRODUCTION

The analysis of the stratified remains of salt producers' houses in Mound 91 at Lambityeco supports the hypothesis that salt production was an individual-household enterprise in the earlier years of the Xoo phase (ca. 650–800 CE) and changed to become organized in a workshop area during the last years of the Xoo phase (ca. 800–850 CE). Three salt boilers were associated with the oldest house (House 91-4), five with House 91-3, three

with House 91-2, and none with the most recent house (House 91-1). The association of salt boilers with the oldest three houses demonstrates that salt production was carried out by individual households earlier in the Xoo phase. On the other hand, the absence of salt boilers in association with the last, or most recent, house (House 91-1) suggests that salt production was confined to a workshop area during the later years of the Xoo phase.

It could be argued that the absence of salt boilers in association with House 91-1 is the result of sampling error, but the extensive coverage of the excavations makes this unlikely. That new occupants, unrelated to the earlier occupants of the house and nonsalt producers, may have taken over House 91-1 is also improbable because the family tomb continued in use and new occupants hardly would have maintained and used a tomb built for and containing the remains of the ancestors of an unrelated family. The scenario of salt producers abandoning their profession in the last generation and undertaking a new occupation is also unlikely given their tradition as salt producers over several generations. In light of Peterson's survey and excavation data that indicate a change in the organization of salt production, the most parsimonious explanation for the absence of salt boilers in association with House 91-1 is that the salt producers changed the locus of their salt production activities to a workshop area directly south of their house.

By grouping salt-production activities in a workshop bordering the salt deposits, the need to carry enriched brine over distances was eliminated. Ovens were introduced to conserve fuel and speed up the evaporation process. Salt boilers may have been standardized to around twenty liters in capacity. The smaller-size ollas could be filled with enriched brine at the mixing tubs and transported directly to nearby ovens, thereby eliminating the need for smaller transport ollas used to fill salt boilers larger than twenty liters. The twenty-liter salt boilers could be accommodated more easily in ovens and their smaller size would lead to more rapid evaporation than with the larger salt boilers. Perhaps twenty-liter salt boilers were placed in groups of five or six, as was practiced in the 1940s, with each small salt boiler yielding a kilo of salt and each oven yielding about five or six kilos of salt per evaporation period. If each oven produced about five kilos of salt per day, at least 150 ovens would have been required in the workshop area to produce the 750 kilos of salt per day needed to achieve the average of about 22,000 kilos, which Peterson (1976:110) estimates as Lambityeco's monthly output during the Xoo phase.

The organization of salt production in a workshop area was most likely carried out by governmental authorities as a way to streamline salt production—making it more efficient and, perhaps, more easily controlled. Additional excavations both in the workshop area and in mounds showing

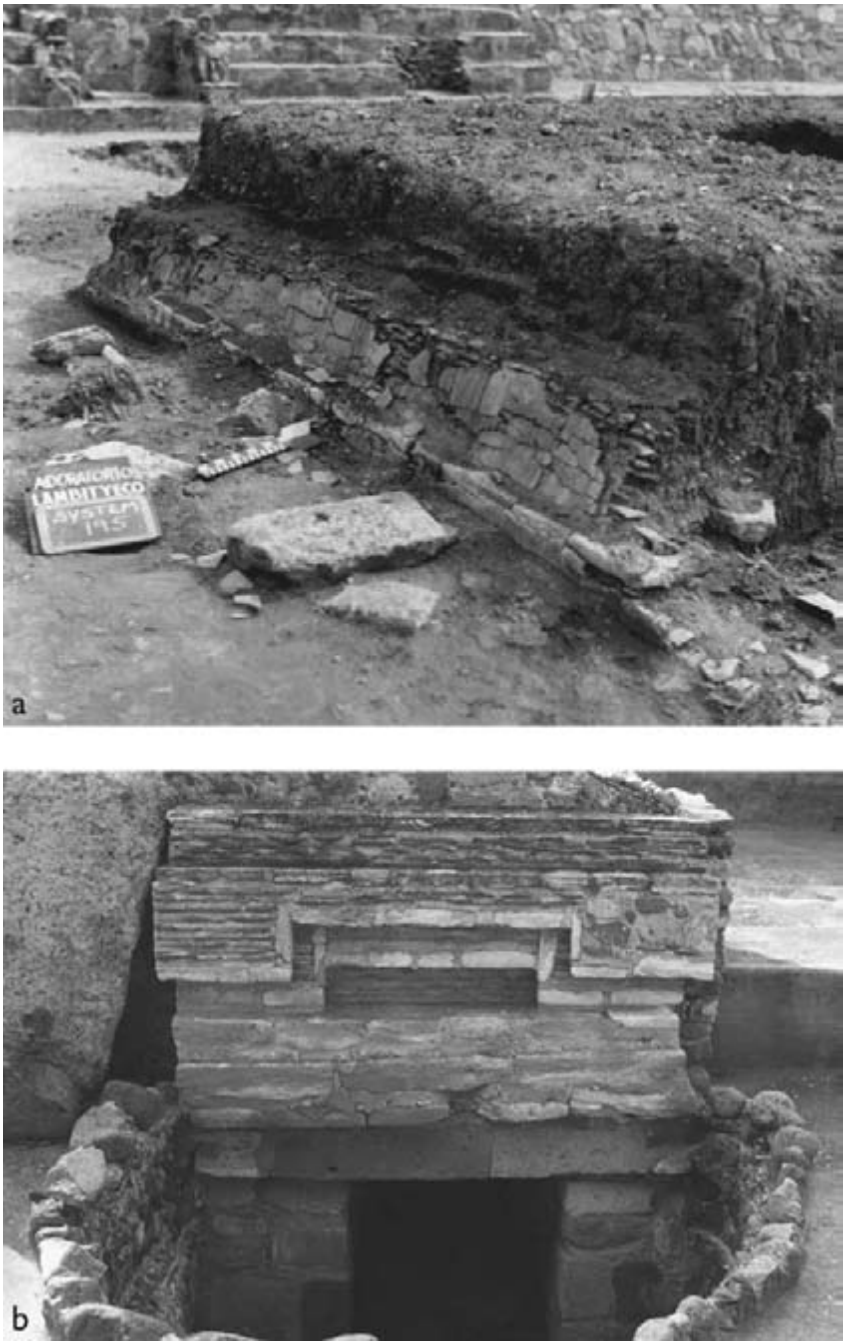
evidence of household salt production are needed to flesh out the particulars of the change in salt production from an individual-household enterprise in the earlier part of the Xoo phase to government-organized workshops in the latter part of the phase. Nevertheless, this change appears well-established based on the survey and excavation data at hand. Government organization of salt production at Lambityeco, however, may have been only part of the more general and wide-sweeping establishment of government control of a variety of economic activities in the Valley of Oaxaca during the latter part of the Xoo phase—including the control of ceramic production as proposed by Feinman (1982).

CERAMIC PRODUCTION AT LAMBITYECO

Apart from salt production, evidence also points to pottery production at Lambityeco (Payne 1970; Feinman 1980). An enormous amount of broken pottery occurs at Lambityeco. From randomly controlled surface collections, Peterson (1976:86) was able to estimate that more than 65 million potsherds occur on the surface of the site alone. Excavations revealed large numbers of rim sherds used in the construction of structure walls—one "altar" had its walls almost entirely built of rim sherds placed horizontally on top of one another, set in adobe mortar, and covered by a thick layer of plaster (Fig. 3.4a); and the façade of a tomb, Tomb 2 in Mound 190 (Paddock, Mogor, and Lind 1968), was also largely composed of rim sherds (Fig. 3.4b). The use of sherds in construction reveals both their abundance during the occupation of the site and the absence of a nearby source of suitable building stone.

A great number of the sherds at Lambityeco, of course, are by-products of the salt industry, which used numerous large salt boilers that fragmented into hundreds of sherds when broken. Peterson (1976:96) was informed by Tlacolula Zapotecs who worked the Lambityeco salt deposits in the 1940s that a single salt boiler had a use-life of about one week. If as many as 120 families were involved in salt production at Lambityeco during the Xoo phase and each family used several salt boilers a week, it is no surprise that the surface of the site should be covered with millions of sherds. The demand for as many as 600–750 salt boilers a week and the difficulty of transporting such large numbers of these big twenty-liter pots over any distance points to the existence of a support industry of potters who specialized in producing salt boilers.

As commented before, the discovery of the remains of a number of salt boilers located in situ in a thick and extensive layer of ash led Swezey (1975) to interpret Mound 91 as a ceramic workshop in which salt boilers were



3.4. ***Rim sherd construction at Lambityeco***

produced. Swezey, following Payne (1970:4), noted that present-day potters from San Marcos Tlapazola—located 7 km south of Lambityeco—do not fire ceramics in kilns. Instead, they arrange pots in a corral-like circle on the ground. Fuel, usually dried maguey leaves, is placed inside and around the outside of the corral-like circle and on top of the pots. The fuel is then ignited to create a bonfire. Thus, Swezey (1975:181) interpreted the remains in Mound 91 as an ancient "bonfire kiln" in which pots to be used as salt boilers were fired.

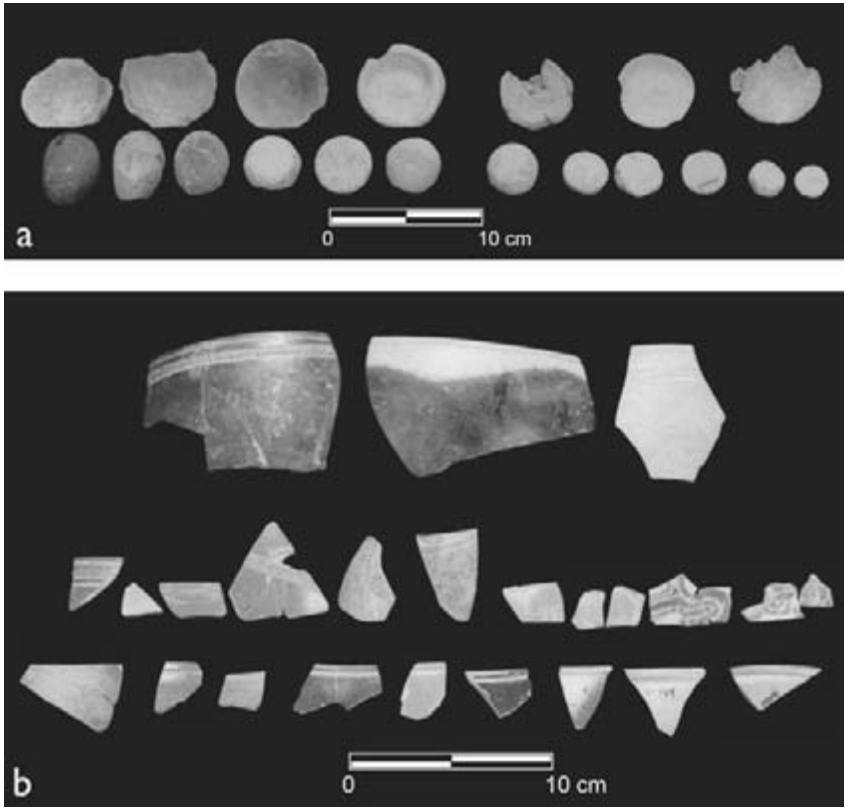
Despite Swezey's contention, Peterson (1974b:15–17) clearly demonstrated that Mound 91 was a salt-production locus, noting that salt was produced by boiling brine in salt boilers placed over open fires, which would account for the thick layer of ash. Furthermore, ceramic production at San Marcos Tlapazola involves placing the ollas to be fired mouth down, not mouth up as they were found in situ in Mound 91 and as they would be used in salt production (Fig. 3.1f). However, the clinching argument in Peterson's critique of Swezey is that the salt boilers found in Mound 91 were not new but showed evidence of use. Each contained carbonate laminations on its interior surface indicating that it had held brine.

Although ceramic-production loci in which salt boilers were made almost certainly occur at Lambityeco, to date none has been located and excavated. Interestingly, the only other Xoo phase site in the Lambityeco district that shows evidence of ceramic workshops, Site #103, located 3 km directly west of Lambityeco, was a site in which salt production was also important (Peterson, personal communication, 1987). The ceramic workshops were probably established at Site #103 to produce salt boilers for the salt workers there.

ARCHAEOLOGICAL EVIDENCE FOR POTTERY PRODUCTION

Payne (1970), an expert ceramic technologist, undertook studies of pottery making at Lambityeco. Near the salt deposits along the southern edge of the site, he located the source of the warm-brown-color clays used in the production of pottery at Lambityeco. Much of the clay deposit had been exhausted by potters who evidently scraped up the clay with broken pieces of pottery as evidenced by the worn sherds in the area. Using clay from the source, Payne was able to produce duplicates of archaeological pottery found in excavations at Lambityeco, demonstrating that many other types, beside salt boilers, were produced at the site.

The precise location where Payne obtained his clay sample is uncertain. However, Peterson (1974b:17) believed they were taken from an area



3.5. ***Evidence of ceramic production at Lambityeco***

directly east of the saline clays because potters from San Marcos Tlapazola and several other pottery-producing villages in the Valley of Oaxaca informed him that saline clays would not be suitable for pottery production. To determine the easternmost extent of saline clays, Peterson (1974b:13) obtained and analyzed a series of twelve soil samples from the area. In this manner, he was able to determine the boundaries between the saline clays and the saline-free clays. The latter were most certainly those exploited by the potters of Lambityeco for ceramic production (Fig. 3.2).

Ample archaeological evidence for pottery production occurs at Lambityeco. Numerous stones used to burnish pots were discovered in excavations (Fig. 3.5a). Swezey (1975:182) showed examples from excavations to potters from San Marcos Tlapazola who identified them as burnishing stones and showed him virtually identical stones they use to burnish pots today. Small, thick, crude saucer-like ceramic objects found in excavations at Lambityeco were identified by Payne (1970:3) as base pats around which

concentric rings of clay were placed to form the walls of shallow food-serving bowls of the ubiquitous G-35 type, which occur by the thousands at Lambityeco (Fig. 3.5a). Kiln wasters were uncovered in excavations and are especially evident among G-35 bowls.

One type of pottery of particular interest to archaeologists working at Lambityeco was Balancán or Z Fine Orange. Robert Smith (1958:151) first defined this type in the Maya region. Like the Balancán Fine Orange from that region, the Lambityeco vessels are decorated by incising and plano relief carving. However, whereas the Maya Balancán Fine Orange has a variety of vessel shapes, including deep and shallow bowls and barrel-shaped vases (Smith 1958:152, fig. 1), all the Lambityeco examples are barrel-shaped vases (Fig. 3.5b).

Smith examined the Balancán Fine Orange sherds from Lambityeco. Because they were so well-made, included the same barrel-shaped vases (Smith 1958:152, fig. 1f), and had virtually identical types of incised and plano relief carved motifs to examples from the Tabasco region, he concluded that the Lambityeco examples may have been imports from Tabasco (Paddock, personal communication, 1978). Samples of the Lambityeco Balancán Fine Orange sherds were submitted to Garman Harbottle of the Brookhaven National Laboratory for neutron-activation analysis. The results revealed that the Balancán Fine Orange was made from the same local clays at Lambityeco as the shoddily produced G-35 grayware serving bowls (Paddock, personal communication, 1978).

It would seem that either exceptionally skilled potters from Lambityeco learned to duplicate Balancán Fine Orange or some potters from Tabasco (or other parts of the Maya region) settled at Lambityeco and produced Balancán Fine Orange from local clays. But the procurement of Balancán Fine Orange over several generations by elite households at Lambityeco argues against itinerant potters from the Maya region occasionally visiting Lambityeco and instead points to some permanently settled producers, either immigrants from the Maya region or local potters who learned to duplicate Balancán Fine Orange.

Lambityeco is probably the source for most examples of Balancán Fine Orange found at Monte Albán and other sites within the Valley of Oaxaca, especially the Tlacolula and Zimatlán arms. However, until neutron-activation analysis is done on samples from sites other than Lambityeco, this remains hypothetical. At Monte Albán both plano relief carved motifs (Caso, Bernal, and Acosta 1967:361, fig. 299b) and incised motifs identical to those from Lambityeco occur on barrel-shaped vases (Martínez et al. 2000:218; plate 43; 219–220; figure 99). The Monte Albán vases have rim diameters from 12 cm to 18 cm with a mean of 14 cm (Martínez et al.

2000:218), and although no height measurements were obtainable, Smith (1958:152, fig. 1f) cites a height of 14 cm for the barrel-shaped vase he illustrates from the Maya region. It is possible that Lambityeco produced these Balancán Fine Orange vases as elite chocolate drinking vessels and distributed them through gifting, tribute, or market exchange to members of the nobility at Monte Albán and other sites in the Valley of Oaxaca.

No estimate has been made of the number of families at Lambityeco that specialized in the production of salt boilers and other ceramic artifacts. The demand for as many as 600 to 750 salt boilers a week would surely have kept at least fifteen to twenty families of potters busy because each would have to produce from thirty to forty salt boilers a week to meet the demand. However, the Lambityeco potters also had to meet the demands of the estimated 500 households at Lambityeco, another 1,000 households among the communities of the Lambityeco district, and possibly an additional 1,000 households in the Yagul district who were probably supplied by Lambityeco potters. The demands of these estimated 2,500 households for food-serving bowls, water jars, comales, molcajetes, cooking pots, ladles, and ritual items (such as figurines and the ubiquitous ladle censers found in association with virtually every household) would call for an additional forty to fifty families of potters. A conservative estimate of fifty to seventy-five families, or about 10 to 15 percent of Lambityeco's population, may have been directly engaged in pottery production.

THE ORGANIZATION OF CERAMIC PRODUCTION

Feinman (1980, 1982) studied Valley of Oaxaca ceramics using a production step model. He argues that if potters are competing for sales in markets, ceramics are produced more carefully and involve more production steps and labor input. Likewise, potters tend to locate themselves away from administrative centers, or on their fringes, to avoid taxation. On the other hand, when potters are organized in government workshops, they produce pots in rapid succession with a minimum of production steps to economize labor input because their "markets" are ensured. Furthermore, workshops tend to be located in administrative centers where they are under government control and supervision.

Feinman's studies revealed that the highly standardized and shoddily made Xoo phase ceramics involved the fewest number of steps for their production than ceramics from any other phase in the valley's history. This indicates that pots were "mass-produced" in government workshops with a minimum amount of labor input. Furthermore, Feinman discovered that most Xoo phase ceramic workshops were located in large administrative

centers. Among these was the district center of Lambityeco, which had the lowest overall average production step measure for the entire Valley of Oaxaca (Feinman 1982:199). Feinman's study, then, suggests that Lambityeco potters may have been organized in government workshops instead of functioning as individual entrepreneurs.

Recently, Markens (2004:chapter 7) has questioned Feinman's contention that Xoo phase pottery production was confined to government workshops. From his studies of pottery production at Monte Albán, he states: "During the Late Classic Period . . . there is little direct evidence indicating that pottery production was directly organized and managed by a bureaucratic elite. On the contrary, the absence of pottery production sites from the area of the Main Plaza and their dispersal throughout the city suggests that pottery production was decentralized or independent" (Markens 2004:421).

Feinman's and Markens's hypotheses, however, must be tested by excavations and further analysis before they can be generalized to include the entire Xoo phase. Pottery production, like salt production at Lambityeco, may have been an individual-household enterprise in the earlier years of the Xoo phase. Later, near the end of the Xoo phase, it is possible that potters were organized in government workshops.

Impressionistic observations, made independently by a number of investigators who have studied ceramic artifacts from offerings made during earlier and later years of the Xoo phase at Lambityeco, reveal a marked decline in the quality of those ceramic artifacts made near the end of the Xoo phase. This subjective assessment can be made more objective by comparing G-35 bowls from Tomb 6 with those from Tomb 1. Because both tombs occur in Mound 195, which contains a series of superimposed elite residences, there is no question of comparing offerings from different socioeconomic contexts.

The Tomb 6 offering covers three human generations spanning at least seventy-five years from ca. 725 to 800 CE (a calibrated radiocarbon date of 800 CE is associated with the next to last offering placed in Tomb 6). The stratigraphically later Tomb 1 occurs in a structure with three associated calibrated radiocarbon dates of 825, 830, and 830 CE. A comparison of the decoration of G-35 bowls found in the tombs, which involves burnished designs on the interior bases, shows that 74 percent of the Tomb 6 examples are decorated, but only 42 percent of the Tomb 1 examples manifest decoration and even these are decorated only with the simplest of burnished designs.

The obvious differences in quality between G-35 bowls made between ca. 725 and 800 CE and those made between ca. 800 and 850 CE may be indicative of possible changes in the organization of pottery production at

Lambityeco. The lower frequency of pattern burnishing on the interior bases of later G-35 bowls certainly represents the reduction of a "non-economical" production step in their manufacture. Likewise, the obvious carelessness with which these bowls were made is suggestive of rapid production for an "ensured" market. The trends in the production of G-35 bowls, then, implies a possible change in the organization of ceramic production from an individual-household enterprise earlier in the Xoo phase to a government-organized activity in the latter part of the phase.

A second trend also points to possible changes in the organization of ceramic production through time at Lambityeco. The change from producing large and variable-size salt boilers earlier in the Xoo phase to smaller, more standardized salt boilers with high mica contents in their paste late in the Xoo phase may also reflect a shift from ceramic production as an individual-household enterprise to production in government workshops. The higher mica content may have resulted from the nature of the clays in the area in which the government decided to situate the workshop—perhaps the area east of the salt-production workshop, which would be ideally located to supply salt producers with the numerous salt boilers they needed on an ongoing basis (Fig. 3.2).

Perhaps the production of pottery, like salt production, was an individual-household enterprise in the earlier years of the Xoo phase and organized into a workshop area by the government during the later years of the Xoo phase. "Bonfire kilns," like "bonfire" salt boiling, may have characterized the production of pottery by individual households scattered throughout the community during the early part of the Xoo phase. The government may have introduced pottery workshops with kilns in the later years of the Xoo phase. Kilns were certainly in use at Monte Albán during the latter part of the Xoo phase (ca. 800–850 CE) as excavations by Winter and Payne (1976) have clearly revealed, although there is no evidence for their use earlier in the Xoo phase (Winter, personal communication, 1987). The Monte Albán kilns were associated with specific households but households appear to have been grouped in a potters' barrio (Winter and Payne 1976:40), which would have facilitated government control of ceramic production. Although changes in G-35 bowls and salt boilers may be indicative of possible changes in the organization of ceramic production at Lambityeco during the Xoo phase, they are not proof of such a change. Likewise, the presence of kilns in association with households in a possible potters' barrio at Monte Albán during the latter years of the Xoo phase and their apparent absence during the earlier part of the phase are also suggestive—but not proof—of a change in the organization of ceramic production at Monte Albán. Until it can be shown that pottery

making was first an individual-household enterprise and that potters were later provided with kilns in government workshops, any proposed change in the organization of ceramic production during the Xoo phase remains an untested hypothesis.

TEXTILE PRODUCTION AT LAMBITYECO

During surveys and excavations, a number of spindle whorls were found at Lambityeco (Fig. 3.6a). Their presence suggests that Lambityeco, like some of the present-day communities near it—Teotitlán del Valle and Santa Ana del Valle—was involved in textile production. Indeed, the *Relación de Tlacolula y Mitla* reported that the people of Tlacolula engaged in weaving woolen cloaks in the sixteenth century (Canseco 1580:147).

The spindle whorls from excavations at Lambityeco range between 2.6 cm and 5.7 cm in diameter and are from 3 mm to 11 mm thick. Most (80 percent) are relatively small, thin, and lightweight with diameters between 2.6 cm and 3.7 cm and thicknesses from 3 mm to 7 mm. According to Mary H. Parsons (1972), small lightweight spindle whorls were used for spinning cotton fibers into fine thread as opposed to larger and heavier types, which functioned to spin maguey fibers into coarse thread. Although no cotton is grown in the region today, the *Relación de Tlacolula y Mitla* (Canseco 1580:150) reported that cotton was grown in the Mitla district in the sixteenth century and woven into cotton cloaks. Excavating in the Guilá Naquitz cave near Mitla, Flannery (1970:15) recovered cotton bolls in Xoo phase deposits. Also, the presence of boll weevils in these samples of cotton shows that Xoo phase cotton farmers had to contend with this predictable pest (Warner and Smith 1968).

Evidence for spinning comes from offerings in a tomb and a burial at Lambityeco. Two nearly identical and unusual neckless ceramic jars, or *tecomates*, covered by conical bowl-like lids were found as offerings in Tomb 6 of Mound 195 and Burial 69-1 of Mound 190. Inside each tecomate were spindle whorls. The association of spindle whorls with these distinctive vessels in two separate offerings in two different mounds led to the idea that the bowls might have constituted spinning kits.

Elsie Clews Parsons (1936:43–45) found that Zapotec women from Mitla spun fibers into thread by twirling the spindle inside a ceramic bowl. Reasoning that twirling spindles inside ceramic bowls might leave pitted surfaces on the interior bases, Lind examined the bases and found that the interiors of the conical bowl-like lids covering the tecomates did show pitting (Fig. 3.6b). From this it was concluded that the tecomates with lids did constitute spinning kits.

3.6. ***Tools for textile production from Lambityeco***

The cotton fibers were probably stored in the tecomates together with the spindles and spindle whorls and covered with the lid to keep the cotton clean. Three small strap handles on the tecomates and lids must have had a cord passed through them to fix the lid tightly to the tecomate to keep dust from entering and settling on the cotton fibers. When spinning the fibers into thread, the lid was removed and inverted and the spindle twirled inside it. The spinning kits placed as offerings in the tomb and burial may have originally contained cotton fibers and wooden spindles with the ceramic spindle whorls. Their lids may have been secured by cords. The cords, wooden spindles, and cotton fibers would have disintegrated, leaving only the ceramic spindle whorls inside as they were found in the offerings.

In addition to spindle whorls, the tecomate in the Tomb 6 offering also had two small manos (grinding stones) and a double cup inside it. The manos were too small for grinding corn. An examination of their grinding surfaces revealed traces of red pigment, perhaps hematite. These stones, then, may have been used to grind red mineral pigment into powder to make red dye with which to tint cotton threads. The function of the

double cup is unknown. It seems unlikely that it held different colored dyes used to tint the threads because the interiors showed no signs of having contained pigments (Fig. 3.6b).

Tomb 6 contained the skeletal remains of both males and females; therefore, it was not possible to determine whether the spinning kit was intended as an offering for a male or female. However, Burial 69-1 in Mound 190 was an adult female and the spinning kit was placed as an offering for her. Thus, it seems evident that spinning was a female activity during the Xoo phase, like it was in the recent past among the Zapotecs.

Although spinning was until recently a female activity among the Zapotecs, weaving is not. Men in Teotitlán del Valle, Santa Ana del Valle, and Mitla are the weavers today, although this may reflect a shift in the gender of producers with the introduction of Spanish mechanized wooden looms; weaving was evidently a female activity in Prehispanic Mesoamerica. Bone battens used as weaving implements have been found in offerings in Tomb 2 and Tomb 6 at Lambityeco (Fig. 3.6c). However, because these tombs contained both males and females, it was impossible to determine if the battens were contained in offerings associated with males or females. Therefore, although archaeological evidence for weaving occurs, it is not feasible to assign this activity to either gender on the basis of the extant data.

The extent of textile production at Lambityeco remains unknown. The evidence at hand is limited to the spinning of cotton and weaving and is restricted to elite households. However, given the extent of weaving in the area today and in the past, it seems likely that Lambityeco was a center for textile production. Also, considering the extent of maguey cultivation in the region today it seems probable that maguey, as well as cotton, textiles would have been produced at Lambityeco. The *Relación de Tlacolula y Mitla* reported that cotton cloaks were restricted to the elite, whereas maguey-fiber garments were the lot of commoners (Canseco 1580:146, 149). At least 20 percent of the spindle whorls recovered at Lambityeco were large and most likely used to spin maguey fibers into coarse threads that were woven into maguey-fiber cloaks. A careful study designed to search for evidence of textile production at Lambityeco would be welcome.

SHELL WORKING

Peterson (1976:94) reports that at least some of the raw material used to make shell artifacts at Lambityeco came from both the Gulf and Pacific coasts. Cira Martínez and Robert Markens (personal communication, 2004) excavated a commoner household east of Mound 195 that was in-

volved in the manufacture of shell artifacts. At this time it is uncertain whether or not the shell working was a household enterprise producing for the market or done under the patronage of the local elite. A shell pendant, a shell bead, and a shell disk have been found in the Tomb 6 offering in Mound 195 (see Fig. 7.19). In addition, Burial 61-1 in Mound 190 had an offering that included two small shell disks with concentric grooves. Also, Burial 68-3, placed above Tomb 2 in Mound 190, originally had as an offering some kind of wooden mask, probably representing the rain god, whose eyes, made of bone, had shell inlays as irises and whose mouth had a protruding forked serpent tongue also made from shell. Finally, Burial 69-2, also from Mound 190, had as an offering a shell pendant made from a *Latirus ceratus* specimen.

LAMBITYECO IMPORTS

With nearly half of Lambityeco's population engaged in nonagricultural specialization and because of its location in an area with among the poorest farmlands around it and the lowest rainfall in the valley, its major import must have been the corn needed to feed its populace. Using Kowalewski's (1982:158) estimate of an average of 225 kilos per person per year, the 2,700 persons at Lambityeco would have required about 600 metric tons of corn for their sustenance. Much of this corn would need to be imported.

There are at least two sources for corn imports. The large Xoo phase community of Santa Ana del Valle, 2 km directly north of Lambityeco, is situated in the piedmont zone where rainfall is higher, averaging more than 700 mm per year. Kowalewski (1982:155) noted that communities in these piedmont zones may be expected to have produced a successful harvest yielding on the average between 0.4 and 2.0 metric tons of corn per hectare each year. He suggested that during the Xoo phase, Monte Albán adopted a piedmont farming strategy to augment corn supplies necessary to support its urban populace (Kowalewski 1982:203). The same strategy may have been used to help support Lambityeco and this may account for the large population of Santa Ana del Valle. However, this piedmont strategy is risky since crop failures may occur because of local variations in rainfall from year to year (Kowalewski 1982:155–156). Crop failures would mean that not only the urban population of Lambityeco would have suffered but also the many farmers in the piedmont. More secure sources for corn imports, then, would have been desirable.

A more reliable source is the high-quality irrigated farmland in the Yagul district. Kowalewski (1982:151) reports that these irrigated farmlands produced between 2.0 and 2.8 metric tons of corn per hectare each

year without the risk of crop failure. As noted in Chapter 2, there is no evidence for craft specialization in the Yagul district and the people there must have imported salt, textiles, and most of their ceramics from Lambityeco. Whether or not Yagul was able to produce enough surplus to feed the entire population of Lambityeco is uncertain. However, it is likely that enough corn yields were produced to supply much of the 600 metric tons needed by the people of Lambityeco each year. Therefore, an exchange network may have been established that permitted the inhabitants of Lambityeco to obtain much of the corn they needed annually from the Yagul district.

Lambityeco, then, probably relied on a combination of corn import strategies. One involved the secure supplies from the Yagul district, and the other involved a riskier piedmont strategy centered at Santa Ana del Valle. Because the question of feeding the population of Lambityeco is an important one, investigating the possible development of a piedmont strategy at Santa Ana del Valle is needed. Certainly, from carefully planned excavations there it could be determined how early in the Xoo phase a possible piedmont strategy was developed and, perhaps, how dependent upon such a strategy Lambityeco became during the course of the Xoo phase.

CRAFT IMPORTS

Although economic specialization at Lambityeco included salt production, pottery making, textiles, and at least some shell working, there is a notable lack of evidence for certain types of craft specialization. In particular, no evidence exists for the production of obsidian tools or for the production of manos and metates (Lind 1971; Bach 1971). Obsidian tools and manos and metates occur as finished products at Lambityeco, indicating that they were imported by the inhabitants of the site. The probable source that supplied Lambityeco with obsidian tools and manos and metates was the neighboring district center of Macuilxóchitl, located 8 km west of Lambityeco.

Finsten's (1983) surveys of Macuilxóchitl revealed the presence of Xoo phase obsidian workshops. In 1980, Kowalewski and Lind made a comparison of obsidian from the Macuilxóchitl workshops with finished products from Lambityeco. The obsidian in both instances included a dense black variety and a gray-streaked variety. Peterson (1976:92) sent samples of the Lambityeco obsidian to Jay Johnson at Southern Illinois University for source determination. Johnson's analysis revealed that the gray-streaked obsidian came from Pico de Orizaba, Veracruz, and the black obsidian from Altotonga, Veracruz (Peterson, personal communication, 1983). The obsidian was probably obtained from the Veracruz sources through Monte Albán's long-distance trade connections and some chan-

neled to Macuilxóchitl for processing and distribution to communities in the Tlacolula arm of the valley, such as Lambityeco.

Macuilxóchitl is only 8 km directly north of San Juan Teitipac, the present-day center for the production of manos, metates, and molcajetes. Finsten's (1983) surveys of Macuilxóchitl also revealed workshops for producing ground-stone tools, such as manos and metates. Lambityeco probably imported these items from the Macuilxóchitl workshops. The source of one extremely large mano, however, may have been Monte Albán, where Blanton (1978:83, 86) found a probable workshop that produced what he called "monster manos." The very large mano was found in a tomb offering at Lambityeco.[2]

Another item, greenstone beads, was almost certainly imported into Lambityeco from Monte Albán. Peterson (1976:92, 94) reported that nearly half of the greenstone beads uncovered in excavations at Lambityeco were made from chrysocolla, or copper-stained chert, which occurs in the mountains around the valley. No workshops specializing in the production of greenstone beads have been found at Lambityeco. However, Blanton (1978:77) found evidence for workshops at Monte Albán that specialized in producing greenstone beads and these workshops may have been the suppliers of the greenstone beads found at Lambityeco.

THE LAMBITYECO MARKET PLAZAS

"Ethnohistoric and ethnographic sources indicate that markets were an important economic institution throughout Mesoamerica in pre-Hispanic times" (Hirth 1998:452). As a district center with economic specializations, Lambityeco might be expected to have had a market plaza where goods could be exchanged on a daily and/or periodic basis. However, as Hirth (1998:453) has pointed out, the archaeological identification of marketplaces is difficult. Unfortunately, his distributional approach, based on how households were provisioned in Xochicalco, was published long after the Lambityeco surveys were conducted and therefore was not available to investigators. Instead, a less desirable configurational approach (Hirth 1998:453) bolstered by some anecdotal artifactual evidence and comparative data from surface surveys has been employed in an attempt to identify market plazas at Lambityeco.

Evidence for a possible market plaza was first discovered in 1968 by Lind and Joseph Mogor, who were investigating a looted tomb near Mound 134. About 10 m from the tomb, Lind found a stone with a circular hole in its center that reminded him of similar stones used to anchor awning ropes or to support awning poles in the present-day Tlacolula market. According

to Peterson (1976:83, plate 18), Diskin, who has made an intensive ethnographic study of the Tlacolula market, refers to these support stones as "sun stones" because of their use in erecting awnings to protect vendors and their products from the sun. The area in which the "sun stone" was found, west of Mound 134, was flat with no evidence of mounds and covered some 100 m north to south by 50 m east to west—an area roughly the size of a football field. Although no intensive study of this area has been done, it is a possible market plaza area and therefore will be referred to as the "south market plaza" (see Fig. 3.2).

THE NORTH MARKET PLAZA

During his surveys of Lambityeco, Peterson (1974a:14) located a large, flat, moundless area north of Mound 155 that he thought might be a market plaza. The area measures roughly 50 m east to west and 65 m north to south and "was bounded by large high structures on three sides (north, south, and west)" (Peterson 1976:90). Unlike the hypothetical south market plaza, this area has been the subject of intensive systematic survey and limited excavations.

From a carefully designed systematic survey, Peterson (1974a:14; 1974b: 23; 1976:83–84) demonstrated that the surface materials in this area were clearly distinct from surface materials found in the salt workshop area and from surface materials in areas of domestic habitation. As would be expected in a space used as a market, this area had the highest standard deviation and greatest coefficient of variations of all three areas sampled, reflecting the diversity of activities carried out there (Peterson 1974a:9). In addition, there was a very low frequency of ladle censers fragments. Because these items were used in ritual practices, their sparse representation would rule out its use as an area for religious ceremonies (Peterson 1974a:16).

Peterson (1974a:16) concluded that the survey data supported the hypothesis of a north market plaza. In further support of his hypothesis, he located two "sun stones" there (Peterson 1976:83). He also noted that the north market plaza had the highest density of G-35 bowl fragments of all three areas sampled. These bowls are known to be of graded sizes, and in the absence of a system of weights in Prehispanic Mesoamerican markets, Peterson (1976:91–92) hypothesized that they were used as systems of graded measures, thereby accounting for their high density in the north market plaza.

Although unrelated to Peterson's work and not designed to test this area as a possible market plaza, William Fowler (1974) excavated thirty 2 m by 2 m stratigraphic test pits in the area as part of his random sample strati-

graphic test pit project at Lambityeco. Fowler uncovered numerous small holes filled with sherds and ash scattered throughout the area. Peterson (1976:91) has pointed out that these types of mini-middens are what would be expected in a market plaza:

> The small ash-filled depressions . . . bear a striking resemblance to similar areas used by transient vendors and buyers at modern markets in the Valley of Oaxaca. Here, the individuals dig a small hole in the ground . . . and start a fire. The edges of such depressions support metal rods or wooden rods and staves which support ollas, by their handles or necks, over the fires. Such ash filled depressions are used by transients to cook their meals (or food to sell) while they sell or buy in markets. (Peterson 1974a:15)

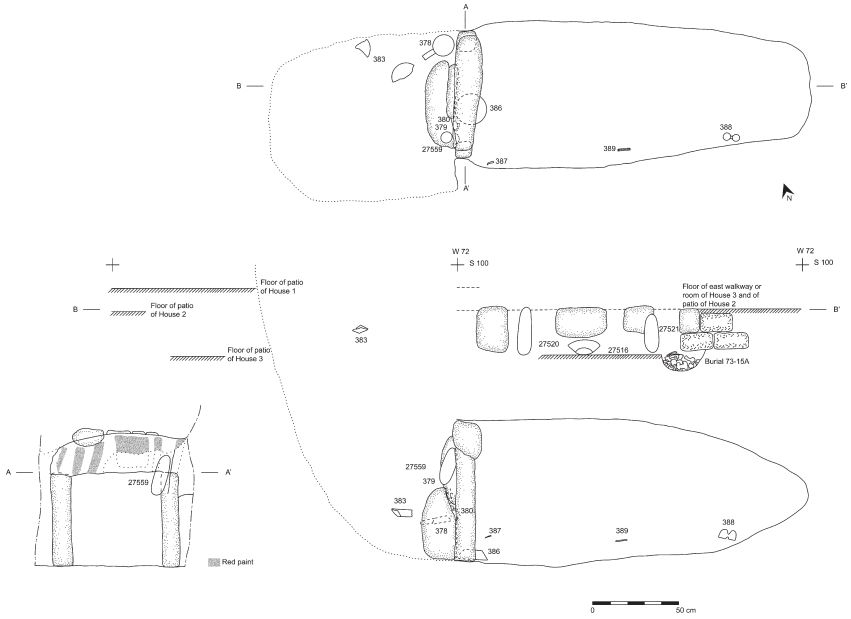
In contrast to these mini-middens, Peterson noted that the household middens of permanent residences at Lambityeco were distinctive. "Surface studies of other areas of the site . . . suggest that a single large probably shared trash area or areas may have been used at Lambityeco by permanent residents" (Peterson 1974a:15).

Fowler's stratigraphic test pits also revealed the presence of house floors within the sampled area (Peterson 1976:91). Peterson (1974a:15) reported that none of these floors appeared to correspond to large elite houses. Instead, they evidently belonged to houses of commoners. The presence of houses of commoners appears to contradict the idea that this area was a market plaza. However, in one of his stratigraphic test pits, Fowler found a tomb that provided information that may help to resolve this apparent contradiction. Although he did not expose the layout of the house that contained the tomb (Urcid 1983:134), the excavation exposed remains of superimposed patio floors in front of the tomb and a possible room floor or raised walkway above it.

THE HOUSE OF TOMB 10

This house was located near the center of the presumed north market plaza. The analysis of the barely known architectural context revealed the presence of three superimposed patio floors corresponding to three successive houses (Urcid 1983:134–139). Tomb 10 was associated with the two oldest stratified house remains, House 3 and House 2, whereas a partially slab-lined grave built above the tomb—Burial 73-15B—was associated with the last or most recent house in the sequence, House 1 (Fig. 3.7).

The tomb contained the skeletal remains of at least four adults: a male (forty to fifty years old), a female (twenty to thirty years old), and two



3.7. ***Plan and profile of Lambityeco Tomb 10***

other adults of indeterminate age and sex. The slab-lined grave directly above the tomb contained the skeletal remains of one adult—Burial 73-15B—whose skull and long bones had been removed, making it difficult to determine the individual's age or sex.

The sequence of burials indicates that the successive house remains were occupied over three generations, or about seventy-five years. The married couple who headed the household and occupied House 3 was interred in Tomb 10. Their descendants, the second-generation married couple that headed the household and who occupied House 2, were also buried in the tomb, which accounts for the four adult individuals buried there. The third-generation married couple who headed the household occupied House 1. One of these two individuals was buried in the slab-lined grave and then had their bones removed when House 1 was abandoned.

Peterson's (1974a:15) observation that the house remains Fowler uncovered were all houses of commoners is borne out relative to the House of Tomb 10. This house was certainly a commoner's abode. The tomb was not a masonry construction but simply a hollow dug into the tepetate. The mouth of the hollow, facing west and serving as the tomb's entrance, was framed by two stones functioning as "door jambs" and a third resting on top of them as a "lintel" decorated on the exterior with red painted designs

consisting of a square flanked by vertical lines. A large stone slab functioned as the tomb's door. The four individuals buried in the tomb received only fourteen objects as offerings, or an average of about three objects per person. The offering is at the lower end of the range typical for offerings in the tombs of commoners and below the average for the salt producers who occupied Mound 91 and who were buried in Tomb 9.

ESTABLISHMENT OF THE NORTH MARKET PLAZA

Determining when the last structure in the House of Tomb 10 was abandoned and to what seventy-five-year time span within the Xoo phase the successive house remains correspond is critical for an understanding of when and if a north market plaza was established in this area. However, no radiocarbon dates were obtained from the sequence of house remains, and the three objects placed as an offering with Burial 73-15B, associated with House 1, were the types of objects that occur with equanimity throughout the Xoo phase. Nevertheless, objects placed with the tomb offering include at least one unusual vessel that can be tentatively assigned a more specific date within the Xoo phase because it has been found elsewhere at Lambityeco.

This unusual object is a double cup (Fig. 3.7). Only one other tomb at Lambityeco has been found to contain double cups. Tomb 6 in Mound 195 has two such items as part of its offering. One of these, which is most similar to the Tomb 10 double cup (Fig. 3.6b), came from an offering that dates to the earlier part of the Xoo phase. This suggests that the Tomb 10 offering to which the double cup belonged was probably deposited in ca. 750–775 CE.[3]

Tomb 10 was used over two generations, or about fifty years, and was associated with the two earliest stratified houses—House 3 and House 2. Although the double cup may have been placed as an offering for any one of the individuals buried in the tomb, it probably formed part of the offering for one of the last two individuals, those who occupied House 2. Earlier offerings tend to be broken as later burials and offerings are placed. The double cup in Tomb 10 was found intact and unbroken. Therefore, it likely accompanied the last burial. If House 2 was abandoned in ca. 750–775 CE, then the stratigraphically later House 1 was probably abandoned a generation later, or in ca. 775–800 CE.

The abandonment of House 1 probably corresponded to the establishment of the north market plaza in ca. 800 CE. The House of Tomb 10 left no mound despite the fact that it included an accumulation of three successive houses built one on top of the other. Elsewhere at Lambityeco

houses have been excavated where no mound was present because they were purposefully leveled in order to build other structures (see Chapter 8). It seems probable, therefore, that the House of Tomb 10 and the other house remains found by Fowler had been leveled to establish the north market plaza in ca. 800 CE and that is why no mounds remained in this area to mark their presence.

Some additional evidence indirectly supports the idea that the north market plaza was established around 800 CE. Peterson (1976:90) observed that large structures bound it in the north, south, and west. The last phase of construction of one of these large structures (Mound 195) is known to have occurred between ca. 800 and 850 CE. At that time, Mound 195 was converted into a large civic residential complex or PPA (Structure 195-1) located along the northeast side of the market plaza. Furthermore, a probable temple complex (TPA) represented by Lambityeco's largest mound, 12 m high Mound 155, was located along the south side of the market plaza. One of Fowler's stratigraphic test pits was excavated in the plaza of Mound 155 and showed it to be a single-phase construction like the plaza associated with Mound 195 (Structure 195-1). It is very likely, therefore, that between ca. 800 and 850 CE, Mound 155 was transformed into a temple complex (TPA) at the same time Mound 195 was converted to a civic residential complex (PPA). The north market plaza, situated between these two monumental complexes, was probably established coincidental with their construction.

Because the area where the north market plaza was laid out evidently supplanted previous houses of commoners, the location of any possible earlier market plaza remains to be discovered at Lambityeco. The probable location of this possible early Xoo phase market was most likely the hypothetical south market plaza, which is located near the salt deposits. Several large mounds occur on the north, south, and east sides of this possible early Xoo phase market plaza (Fig. 3.2).

Peterson (1974b:26) suggested that the ancient community of Lambityeco grew northward from the salt deposits during the Xoo phase. A fairly dense concentration of large mounds occurs in the south-central portion of the site and a more dispersed pattern farther north. Following this argument, the possible shift in the market plaza from south to north could have occurred with growth of the community. There is, however, no sound evidence that the community grew northward. The possible movement of the marketplace from a southern to a northern location during the latter part of the Xoo phase almost certainly involved more than a mere change in the demographic center of the community. Rather, such a shift in the location of the community's market plaza late in the Xoo phase appears to

correspond to other coeval economic changes, including the reorganization of salt production in a workshop area and possibly a similar reorientation of workshop production of ceramics. If so, the construction of the north market plaza would have been part of a more wide-sweeping plan for economic reorganization at Lambityeco.

XOO PHASE ECONOMIC ORGANIZATION AT LAMBITYECO

Lambityeco was the major market center for the communities in its district during the Xoo phase. It was the only community in its district that showed evidence for a wide range of economic and craft specializations. Lambityeco was the valley's major salt-producing center and as much as one-fourth of its population may have been engaged in salt production. It was also the center of pottery making that provided ceramic artifacts for the communities of its district and, probably, the neighboring Yagul district as well. A significant proportion, perhaps 10 to 15 percent, of Lambityeco's population may have been engaged in ceramic production. It was probably also a center for textiles that produced both maguey-fiber cloaks and other garments as well as a much lesser amount of cotton cloaks and other garments for the populace of its district. Shell ornaments were also produced.

Lambityeco also imported a number of products for distribution to the populace of its district. Obsidian artifacts, manos, and metates were seemingly imported as finished products from the neighboring district center of Macuilxóchitl. Greenstone beads and extra large manos may have been imported as finished products from the workshops at Monte Albán. Lime and cotton may have been imported as raw materials from the Mitla district.

Lambityeco's major import, however, was probably the 600 metric tons of corn needed each year to sustain its population. The Yagul district, a secure source of corn imports, probably channeled some of its corn surpluses to Lambityeco in return for salt, ceramics, and possibly textiles. During the course of the Xoo phase, Lambityeco may have become increasingly dependent on the riskier corn surpluses produced by the communities in the piedmont zone in the northern part of its district with the large community of Santa Ana del Valle being a principal supplier.

Peterson's (1974a:16) investigations have suggested the existence of a marketplace at Lambityeco—the north market plaza. Lambityeco's marketplace probably served as the locus through which most of the imported and locally produced goods were distributed to the populace of its district. The marketplace may have supplied the needs of Lambityeco's inhabitants on a daily basis. Periodically, however, the district market center swelled as

the populace from the communities in the Lambityeco district and neighboring districts converged to exchange goods.

Given the economic interdependence of the different districts in the Tlacolula arm and in the Valley of Oaxaca, it seems likely that a regional exchange network linked by a series of market centers, like Lambityeco, existed during the Xoo phase, much as it does today (Diskin and Cook 1975), to ensure the distribution of goods to meet the needs of households throughout the valley. Indeed, a Xoo phase market plaza similar to the one at Lambityeco has been identified by Finsten (1983) at the neighboring district center of Macuilxóchitl. Market day at the district center must have involved many producer-vendors, who bartered their goods for the products they required for their own consumption, and merchants, who bartered for goods they would carry to another district market center to exchange (Cook 1975:188). Market days were probably staggered at district centers so that Lambityeco's market day was different from Macuilxóchitl's market day. In this way, merchants could acquire goods in the Macuilxóchitl market to carry to the Lambityeco market for exchange and vice versa.

The role of local government at Lambityeco in organizing the production of goods and in controlling their exchange in the marketplace seems to have been limited during the earlier part of the Xoo phase (ca. 650–800 CE). Salt production was an individual-household enterprise during this time. Ceramic and textile production also may have been coeval household enterprises. The possible south market plaza, near the salt deposits, may have been Lambityeco's early Xoo phase marketplace but this remains to be determined.

Around 800 CE, a significant change in the government's role in organizing the production and exchange of goods took place at Lambityeco. Salt production was organized in a workshop area and ceased to be an individual-household enterprise. Salt production was made more efficient by locating the workshops next to the salt deposits and by introducing mixing tubs and ovens and, perhaps, standardized salt boilers to speed up the process of evaporation and conserve fuel. Ceramic production also may have been confined to a workshop area near the clay deposits and made more efficient by the introduction of kilns and the reduction of noneconomical production steps, such as pattern burnishing.

The marketplace was probably relocated from the south market plaza to the north market plaza around the same time. Relocating the marketplace involved leveling houses of commoners in the area selected to serve as the north market plaza. A civic residential complex or PPA (Structure 195-1) that served as the residence and government offices of Lambityeco's ruler was built along the northeast side of the market plaza, and a probable

temple complex or TPA (Mound 155) that may have served as Lambityeco's religious center was constructed along the south side of the market plaza. These two monumental complexes, then, dominated the north market plaza and may have been situated to facilitate the collection of taxes and tithes from market-goers by Lambityeco's political and religious authorities.

NOTES

1. Winter (1974:986) was the first to propose that only married couples who headed households were buried in the household tomb. In a previous report on Lambityeco (Lind and Urcid 1983), Winter's observations were further substantiated. By counting the minimum number of individuals of both sexes buried in a given tomb, it is possible to ascertain the number of couples represented and to calculate the number of generations a tomb associated with a particular house was utilized.

2. Urcid was told by Alejandro Aguilar, a Tlacolula Zapotec, that in the recent past stone (basalt?) from Cerro Yegüih at the eastern edge of Lambityeco (see Fig. 3.2) was used to produce manos and metates. It is possible that Xoo phase groundstone tool workshops occur at Lambityeco, although surveys around Cerro Yegüih and elsewhere did not reveal their presence.

3. The Tomb 6 double cup was found inside the spinning kit for one of the females buried in the tomb (Fig. 3.6b). The last interment in it was a female who was buried on top of a layer of rubble from the collapsed roof of the tomb in ca. 800 CE. The spinning kit was beneath the rubble layer and therefore placed as an offering for one of the two females buried in the tomb before her in ca. 750 or 775 CE.

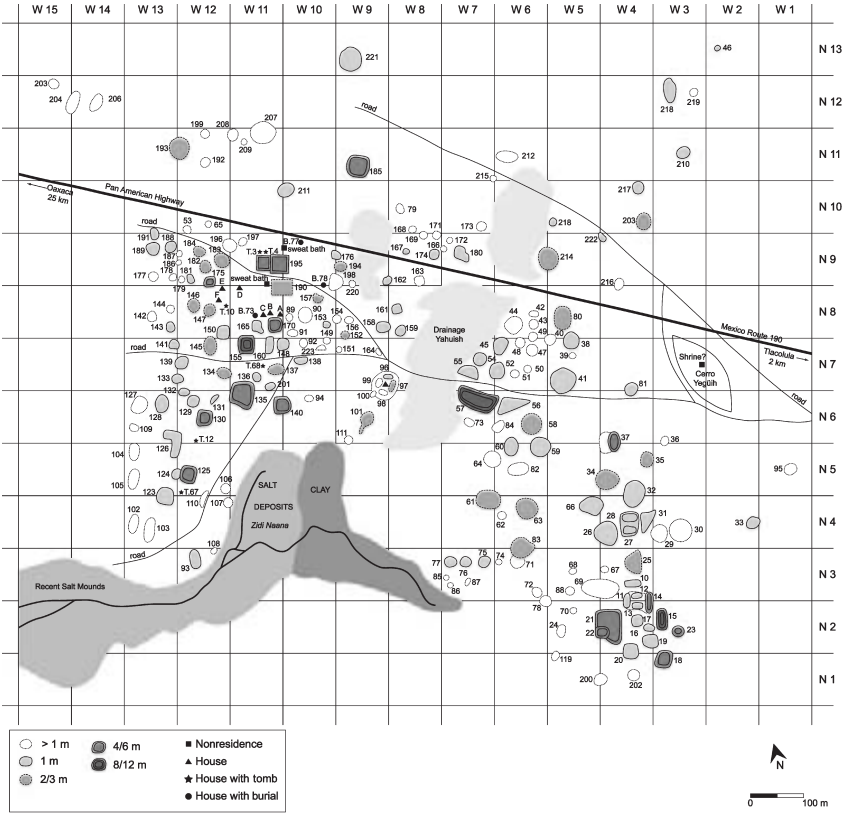
chapter four

Site Structure and Community Organization

Blanton's (1978) intensive survey of Monte Albán revealed patterns in the distribution of Xoo phase mounds that suggested that the ancient urban center may have been organized into fifteen barrios, each with its own local marketplace, temple, and civic center. Determining whether smaller and less populous district centers, such as Lambityeco, were similarly configured or manifested different patterns of community organization requires an investigation of the structure of the site (Bawden 1982).

Lambityeco is located 2 km west of the present-day market town of Tlacolula (see Fig. 2.3). The Pan-American Highway, built in the 1940s, passes through the northern part of the ancient settlement, and several dirt roads, used principally by oxcarts, also cross the site. A drainage, dry except during heavy rains, traverses Lambityeco in a north-to-south direction and terminates in the south in a salt marsh. Today Tlacolula Zapotecs call the drainage *yahuish* and the salt marsh *zidi naana*. Near the eastern edge of the site along the south side of the Pan-American Highway is a small mountainous spur called Cerro Yegüih (Fig. 4.1)

Lambityeco was first officially recorded as an archaeological site in 1953 by Ignacio Bernal, who was making a survey of valley sites. He recorded the site name as Yegüih, although informants gave John Paddock, who accompanied Bernal on his visit to the site, the name Lambityeco. Yegüih, according to Tlacolula Zapotecs, means *cerrito* (small hill or mountain) and

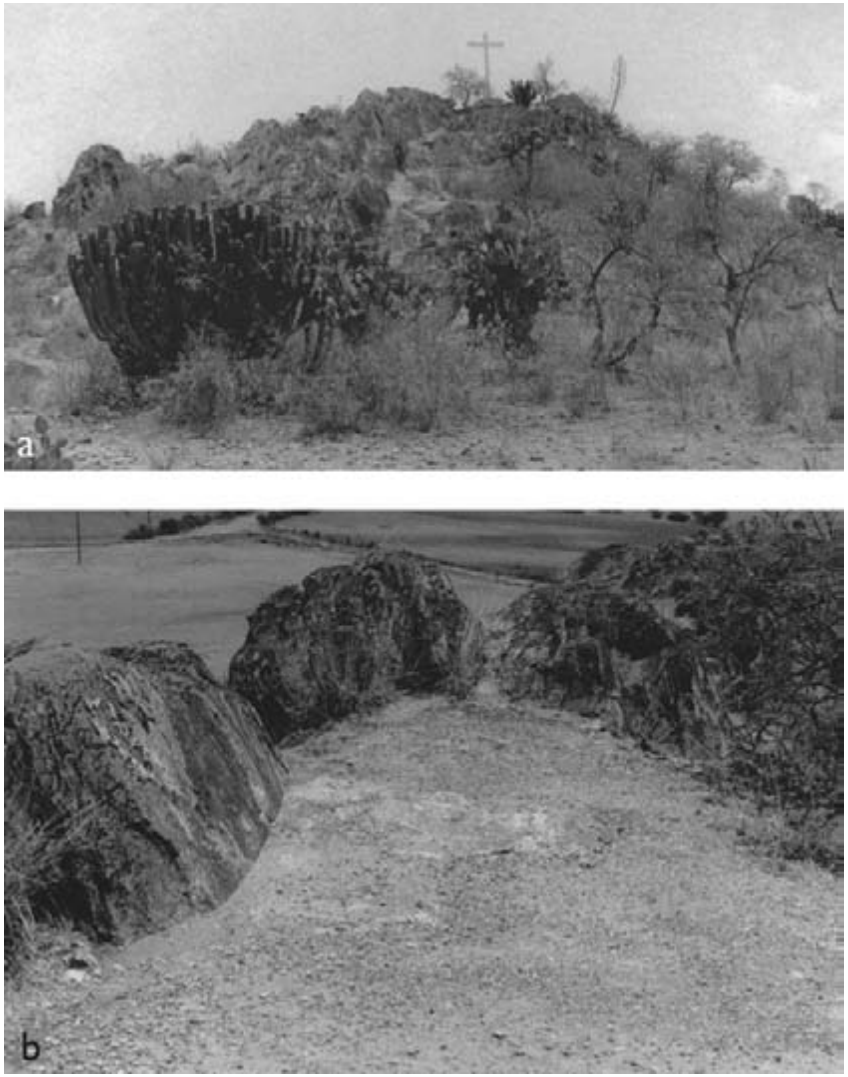


4.1. ***The archaeological site of Lambityeco***

is the name given to the mountainous spur at the eastern edge of the site (Fig. 4.2a). Its summit has remnants of a plaster floor with smoothed boulders that may represent an ancient shrine (Fig. 4.2b).[1]

The etymology of Lambityeco, which Tlacolula Zapotecs insist is the name of the entire archaeological site and which was the name given to David Peterson (personal communication, 1979) by the salt workers who lived there in the 1940s, is not easy to decipher. *Pityec* means "mound" in Zapotec. Tlacolula Zapotecs translate Lambityeco as *lugar de muchos mogotes*, or "the place of many mounds." *Lam-* or *Lambi-*, however, has no meaning for them in Zapotec. It does not mean "place" or "many."

Paddock first pointed out in 1967 that the *Lam-* or *Lambi-* in Lambityeco is almost certainly a Zapotec corruption of the Spanish word *alambique*, which itself is derived from Arabic and means "distillery." Zapotecs fre-



4.2. ***Cerro Yegüih***

quently shorten Spanish words and names: Eligio becomes *Lig*, Antonio *Ton*, and María *Li* (Parsons 1936:81). By shortening alambique, which in Zapotec is pronounced *lambik*, and adding it to *pityec* (mound) the result is *Lambikpityec*. Since *bik* and *pit* next to one another are phonologically redundant, this could explain how the name Lambityeco came into being.

Paddock believed that the meaning of Lambityeco was "distillery mounds." He pointed out that his excavations on top of Mound 195 in

1961 had revealed a lot of ash as if a distillery or "still" had been located on top of it. At the time he was thinking of the distillation of alcoholic beverages, because Tlacolula is famous for its mezcal distilleries. The work of Peterson, however, later made it clear that the distilleries referred to are salt distillation areas and that the "mounds" are mounds of filtered earth, by-products of salt production. The name Lambityeco, then, is a combination of Spanish and Zapotec words and might best be translated as "salt distillery mounds." The ancient name of the site is lost in antiquity.

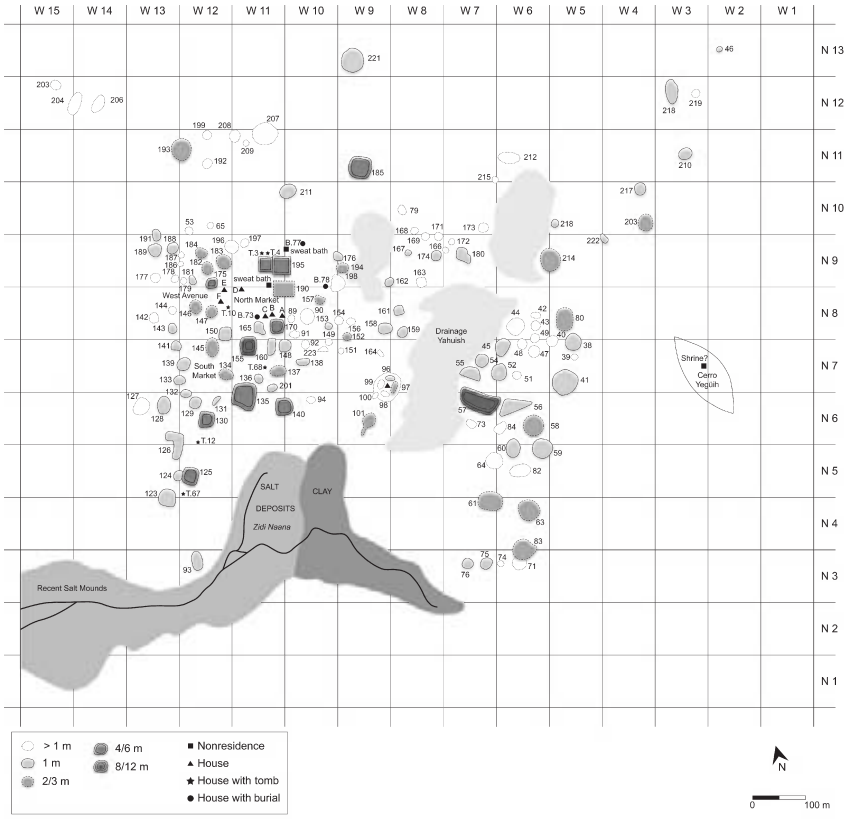
THE SURFACE SURVEY

Beginning in 1970, personnel of the Institute of Oaxaca Studies conducted a surface survey that eventually resulted in the location and mapping of 206 mounds within the 1.17 km^2 area covered by Lambityeco. When excavations at the site began in 1961, a designation for the mound that was the target of the exploration was needed. Paddock chose the number 195 in the momentarily mistaken belief that the Pan-American Highway, which passes just north of the mound, was Route 195; it is Route 190. The numbering sequence at Lambityeco begins with Mound 10 and runs through Mound 223, with some numbers in between not used (Fig. 4.1; see Appendix 2 for data on mounds illustrated in Fig. 4.1).

The mounds were located with the aid of air photos and by clearing brush from some fallow fields to enhance visibility. Mound heights were measured to the nearest meter and mound bases were paced off to determine their approximate north-south and east-west dimensions in meters. Diagnostic artifacts were collected from the surface of each mound. In addition, all artifacts were collected from a 1 m by 1 m control square on each mound. Peterson (1976:82) also surveyed areas between mounds in a series of randomly located transects placed across the site. From these data, it was possible to determine that 147 of the 206 mounds at Lambityeco show evidence of Xoo phase ceramics on their surfaces and that Xoo phase Lambityeco covered an area of nearly sixty-four hectares (Fig. 4.3).[2]

XOO PHASE LAMBITYECO

Determining the nature of Xoo phase Lambityeco is no easy task for several reasons. First, there is no guarantee that all the mounds with Xoo phase sherds on their surfaces were actually constructions dating to that phase. At least two large mounds (14 and 21) in the extreme southeastern sector of the site were almost certainly Pe phase constructions atop which some later Xoo phase trash was dumped. On the other hand, some mounds



4.3. ***Xoo phase Lambityeco***

not showing Xoo phase occupation on their surfaces may have been Xoo phase constructions. This became clear when a stratigraphic test pit was dug into Mound 57—a 10 m high mound whose surface manifested only Chila phase materials. It turned out that Mound 57 was a huge Xoo phase construction in its entirety from top to bottom. The Chila phase materials came from salt-boiling activities carried out on top of this abandoned Xoo phase structure and resulted in covering the surface of the mound with a veneer of later materials. Therefore, mounds thought to be Xoo phase may represent structures built in earlier times and some apparently non–Xoo phase mounds may be Xoo phase constructions. However, we assume that very few mounds have been misidentified as to phase.

A second and more serious problem concerns the growth and development of Xoo phase Lambityeco through time. Even if all the mounds have

been identified correctly as Xoo phase constructions, there is no way available at this time to determine from surface remains that all these structures were in use at the same time during the 200 years of the Xoo phase. Some may have been built and used in the earlier years of the Xoo phase and they remained as abandoned and ruined buildings later in the same phase. Others may have been built only during the later years of the Xoo phase and never existed during the earlier years of that phase. It is even possible that whole sections of the town were occupied early in the Xoo phase and abandoned later with a shift in population to other sectors. Such a population shift, of course, is offered only as a hypothetical example of what may have happened and our inability to detect it from surface surveys, which rely on a sequential segregation approach. Analysis of excavated features employing a sequential integration approach, on the other hand, could detect this type of spatial shift in population.

Assuming that no population shift occurred, assuming that all the mounds have been correctly identified as Xoo phase constructions, and assuming that all these constructions were in use at the same time during that phase, then, presumably the layout of Lambityeco as it existed on the eve of its abandonment is depicted on the map in Fig. 4.3. An examination of the distribution of the Xoo phase mounds throughout the site reveals that Lambityeco was a nucleated community in ca. 850 CE. The mounds are concentrated within the sixty-four hectares of the site and few, if any, isolated mounds indicative of homesteads occur dispersed in the surrounding countryside. This suggests that the Xoo phase inhabitants clustered together in Lambityeco, living in contiguous house plots within the community, and traveled on foot to any farmlands they may have worked in the surrounding countryside instead of living in isolated homesteads on their farmlands.

Most present-day Zapotec communities in the Valley of Oaxaca are also nucleated. People live on contiguous house plots within the community and travel from their houses in town to their farmlands in the surrounding countryside. Homesteads on farmlands are rare. An understanding of the nature of an ancient nucleated community like Lambityeco may best be achieved by beginning with an analysis of a present-day nucleated Zapotec community in the Tlacolula arm of the Valley of Oaxaca, Mitla.

MODEL OF A NUCLEATED ZAPOTEC COMMUNITY

To establish a reliable body of quantifiable data on a nucleated Zapotec community to serve as a model against which the archaeological data from

4.4. ***Map of Mitla, ca. 1930 (after Parsons 1936:map II)***

Lambityeco can be compared, information was compiled and analyzed from Elsie Clews Parsons's ethnography of Mitla. Around 1930, Parsons (1936:10) had Eligio Santiago, a native Mitla Zapotec, draw a map of the town (Fig. 4.4). Although it may be argued that Spanish colonial policies affected community layout in Mitla, there are several reasons to suggest that Mitla was not severely impacted by post-contact regulations.

First, unlike Tlacolula, which was established early in the Colonial period when the Spaniards moved the people of Yagul to the new Spanish settlement of Tlacolula, Mitla remains in its Prehispanic location. The town is built over the Postclassic community (Robles 1986:18). Large mounds occur within the town and the Postclassic Mitla palaces as well (Robles 1986:18–21). Even the major church, San Pablo, built in 1590 CE, is in Patio C of one of the Mitla palaces (Grupo del Establecimiento Católico) and the other two patios of this palace (A and B) include the remains of long rooms with Prehispanic murals decorating the lintels above their doors (Robles 1986:18–21; Pohl 1999).

Second, Mitla did not even have a resident Spanish *corregidor* (mayor or magistrate) in 1580 CE. The corregidor, Alonso de Canseco, lived in Tlacolula. Although a Spanish priest, Cristóbal Ruíz Maldonado, is mentioned in the *Relación de Tlacolula y Mitla* (Canseco 1580:153) as having Mitla as part of his *curado* (parish), it does not state that he lived there; he apparently lived in Tlacolula and visited Mitla from time to time. It appears, then, that no Spanish administrative or religious authorities lived in Mitla as late as 1580 CE (Robles 1986:17).

Third, an examination of the map of Mitla does not show the town conforming to a Spanish grid pattern. It does appear that the Spaniards may have attempted to impose a grid pattern on the town by first establishing a plaza in 1575 CE with a church, which no longer exists, in the center of the town (Robles 1986:21). An east-west street passes along the south side of the plaza and continues in a straight line across the town in the east, but its western extent quickly breaks down and curves north to dead end. A north-south street passes the plaza along its west side but snakes across the town from north to south. It appears that this is the extent to which the Spaniards tried to establish a grid. Outside this "grid," most other streets are short and narrow and do not follow a straight line but curve around and frequently dead-end, which appears to reflect a Prehispanic pattern. The Spanish impact on community layout in Mitla, then, appears minimal.

Santiago's map can be seen by comparison with air photos taken in the 1960s to be remarkably accurate, although not to scale. The map correctly portrays the course of the Río Mitla (also known as the Río Grande) and its feeder streams and the locations of the Mitla ruins and Church of San Pablo; the Calvario chapel and nearby soccer field; the plaza with its municipal building, jail, school, and market; and stores, streets, and barrio boundaries. Most importantly, however, the map locates each "square block" of Mitla (or, more properly, "block" bounded by streets since few blocks in Mitla are square) and identifies each plot within each block and the structure or structures built on it.

From air photos to scale (taken in the 1960s), it is easy to identify the blocks drawn on Santiago's map and determine the surface area of each block in square meters or hectares. Using this method, it was possible to determine that Mitla covered about fifty-five hectares in 1930. Parsons (1936:10) places Mitla's population in that year at 2,500 persons, which would be about forty-five persons per hectare. Lambityeco covered about sixty-four hectares in ca. 850 CE and, if it was as densely populated as Mitla, would have had a population of 2,880 persons, which is remarkably close to Kowalewski's independently derived estimate of 2,702 persons for Xoo phase Lambityeco (Kowalewski et al. 1989:287, table 9.6).

TOWN PLOTS

From an analysis of Santiago's map, it was determined that 599 plots existed in Mitla in 1930. Plot boundaries were easily defined within each block because most plots either had walls built around them or, more commonly, were bounded by a fence of organ cactus into which an opening was left and fit with a cane gate. Of the 599 plots, nearly four-fifths (475, or 79 percent) had structures built on them, whereas slightly more than a fifth (124, or 21 percent) were vacant plots. It should be noted that vacant plots occurred in nearly every block and served as convenient areas for the disposal of trash.

To date, no evidence exists that house plots within Xoo phase Lambityeco were bounded by adobe walls or fences of organ cactus. However, in an intensive survey and sampling of 68 of the 147 Xoo phase mounds at Lambityeco, Peterson (1974a, 1974b, 1976, 1979) found physical evidence (floors, walls, wattle and daub) that fifty-five, or 81 percent, were structures and thirteen, or 19 percent, were refuse heaps (middens) containing no structures. If refuse heaps were deposited on vacant plots, then these mounds mark vacant plots, and Lambityeco, like Mitla, had about 20 percent of its plots vacant and for trash disposal and about 80 percent with structures built on them.

Peterson's (1974a, 1974b, 1976, 1979) intensive survey and sampling of mounds involved an examination of the mound surface for evidence of a structure (floor, wall, or wattle-and-daub fragments), an analysis of artifacts from the surface of the mound and, in the absence of an exposed structural feature, subsurface sampling of the mound through full or partial excavation or by probing with a posthole digger to see if any structure occurred within. We conducted a comparison to determine if the mounds Peterson identified as structures could be distinguished from mounds containing refuse.

Refuse mounds could not be distinguished from structure-bearing mounds with regard to shape. They manifested neither more elongated, more circular, nor more irregular-shaped bases than structure-bearing mounds. Nor did refuse mounds have gentler or steeper slopes than structure-bearing mounds. Furthermore, no clear distinction obtained between refuse mounds and structure-bearing mounds with regard to the surface area covered by the mound base. Only by the fact that all mounds 3 m and higher represented structures, and not refuse, does any distinction occur (Table 4.1). Therefore, the identification of Xoo phase refuse mounds is necessarily limited to those identified by Peterson and does not represent all the extant refuse mounds or, by extension, all the probable vacant plots in Lambityeco at the time of its abandonment.

TABLE 4.1. A comparison of types of Xoo phase mounds by heights

Height (m)	*Refuse*	*Structure*	*Unknown*
<1	7	22	31
1	4	18	32
2	2	3	9
3	—	4	4
4	—	1	—
5	—	6	—
6	—	2	—
10	—	1	—
12	—	1	—
Totals	13	58	76

Mitla had 599 plots within its fifty-five-hectare area, or about 11 plots per hectare. Only 475 plots, or about 9 plots per hectare, had structures built on them. Lambityeco, if it were similarly divided into plots, would be expected to have had around 700 plots with 20 percent (or 140 plots) vacant and 80 percent (or 560 plots) with structures built on them. Yet only 147 Xoo phase mounds, or about 2.3 per hectare, exist at Lambityeco. Furthermore, only 117 of these mounds, or 1.8 per hectare, may represent structures. This means that the Xoo phase community of Lambityeco either had one-fifth as many plots with structures per hectare as Mitla or that only one out of every five structures at Lambityeco left a mound or escaped obliteration over the past 1,200 years.

It is conceivable that 79 percent, or 443, of the possible 560 structure-bearing plots had all superficial traces of structures built upon them obliterated. In the nearly 1,200 years since its abandonment, only one mound need have been eradicated about every three years to account for the loss. Certainly, the construction of the Pan-American Highway through the northern part of the site resulted in the annihilation of all mounds in its way. Likewise, the dirt roads crossing the site contributed to the destruction of mounds, as can be seen by some partially dissected mounds along their paths (Fig. 4.1). Finally, plow cultivation of fields within the archaeological site for an undetermined number of years since the Conquest inevitably resulted in the elimination of many mounds, especially smaller ones of 1 m or less in height.

Clear evidence that many Xoo phase structures at Lambityeco are not represented by mounds comes from excavations. At least eighteen Xoo phase structures have been discovered by pure chance in areas where no mounds occurred. These moundless structures were encountered acciden-

tally during excavations in areas specifically chosen for their apparent lack of structures (e.g., Fowler's stratigraphic test pit project) and by farmers who chanced upon them in featureless fields. Each of these moundless structures is located on the map of Xoo phase Lambityeco. Their presence makes it apparent that many additional structures may be encountered in areas of the site that appear to be devoid of structures (Fig. 4.3; see Appendix 3 for data on moundless structures).

It is not possible to demonstrate that Lambityeco was as densely populated and as highly nucleated as Mitla on the basis of the extant Xoo phase mounds. Nevertheless, the weight of 1,200 years of abandonment combined with the known history of mound-destruction processes provides for the possibility that as many as 443 Xoo phase mounds may have been destroyed at the rate of one about every three years. Furthermore, the purely accidental discovery of eighteen moundless Xoo phase structures conclusively demonstrates that many Xoo phase structures are no longer visible on the surface of the site. Finally, Peterson's sample of 46 percent (68 of 147) of the extant Xoo phase mounds demonstrates that Lambityeco, like twentieth-century Mitla, had about 20 percent of its plots vacant and 80 percent with structures built on them. This strengthens the possibility that Lambityeco was at least as densely populated and as highly nucleated as Mitla.

RESIDENTIAL PLOTS

Of the 475 plots with structures in Mitla in 1930, about 94 percent, or 448, had houses built on them, while only 6 percent, or 27, had nonresidential structures. Nearly two-thirds of the 448 residential plots contained a single house usually occupied by a nuclear family (Parsons 1936:66), whereas slightly more than one-third contained two—or rarely more—houses occupied by related nuclear families forming a joint family household (Table 4.2). For example, Parsons (1936:66) notes that four houses in one residential plot were occupied by a married couple and their three married sons, each of whom lived in one of the houses with his wife and children.

Mitla residential plots range in size from 340 to 2,800 m^2 with a mean of 915 m^2 and a mode of 800 m^2. The plots are typically rectangular, about twice as long as wide, usually measuring around 20 m wide by 40 m long. As noted above, nearly all plots are enclosed by blind fences, generally a fence of organ cactus with an opening fitted with a cane gate. Because of the fences, the interiors of the residential compounds remain hidden from the outside, providing a great deal of privacy.

The components of Mitla residential plots provide a model against which the archaeological remains from Lambityeco can be compared. The

TABLE 4.2. Number of houses per residential plot in Mitla

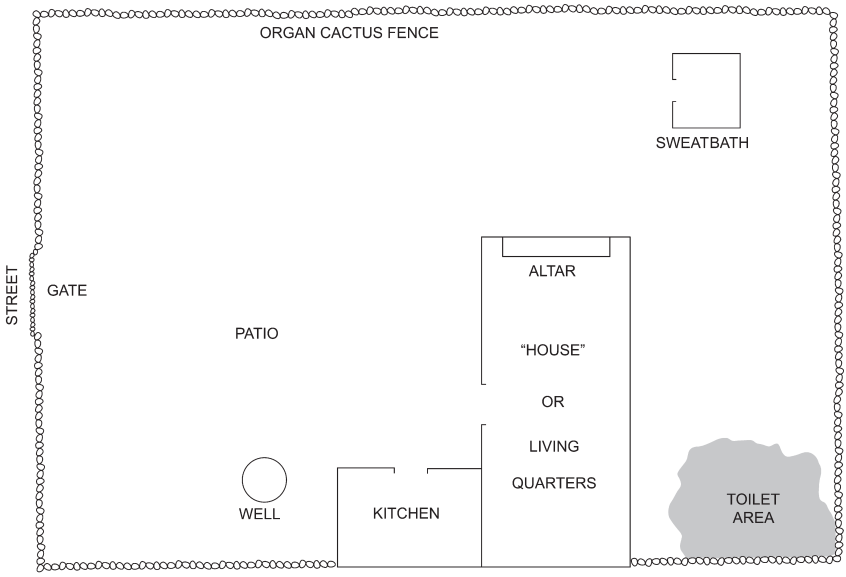
Houses per plot	*Number*	*Percent*
1	285	63.62
2	146	32.59
3	14	3.13
4	2	0.44
5	1	0.22
Totals	448	100.00

main components of the fenced plot include the house or living quarters, kitchen, courtyard, well, and toilet area (latrines or outhouses are not generally used; instead, a designated area of the plot is used as an open toilet). Additionally, some residential plots have a sweatbath structure. Unlike certain other areas of Mexico, however, residential plots do not include granaries or special structures to store corn. Instead, corn and beans are stored on the floor in a corner of the house or living quarters (Fig. 4.5).

The house or living quarters represents the largest structure built on the plot, although it occupies only a small section of the plot, which is dominated by a large open-space courtyard. The house consists of a single rectangular, generally windowless room about 4 m wide and 10 m long with a single doorway at the center of its long side. The walls are usually built of adobe blocks set in mud mortar atop a stone foundation and elevated to a height of about 3 m. The roof is generally made of thatching over a cane surface supported by pine roof poles. The living quarters have earthen, cement, or flagstone floors and invariably have an altar at one end with images or pictures of saints upon it (Parsons 1936:27–28). At the beginning of November on All Souls' Day (Día de los Muertos), the altar is filled with flowers, fruits, and fancy loaves of bread (*pan de muerto*) and becomes a focal point of the single-room house.[3]

The arrangement of more than one house in a residential plot varies. However, about 77 percent of the 144 plots with two houses on them have the houses built at right angles to one another, whereas 14 percent face one another across the common courtyard, and only 9 percent are built next to one another along the same side of the courtyard. Although three houses occur infrequently on a single plot, when they do occur they are most frequently arranged around three sides of the common courtyard.

Each of the houses (or living quarters) built in a residential plot has associated with it a kitchen, which is built as a separate structure sometimes, but not always, at a right angle to the living quarters. As Kearney (1972:13) points out with regard to Ixtepeji, a Zapotec town in the Sierra Juárez (see Fig. 10.1 for location), kitchens are usually attached to a wall of the living quarters. No doorway connects the kitchen directly to the house. The kitchen has its own doorway and must be entered from the courtyard. The kitchen is a small structure, usually 2 m wide and 3 m long. It may be made



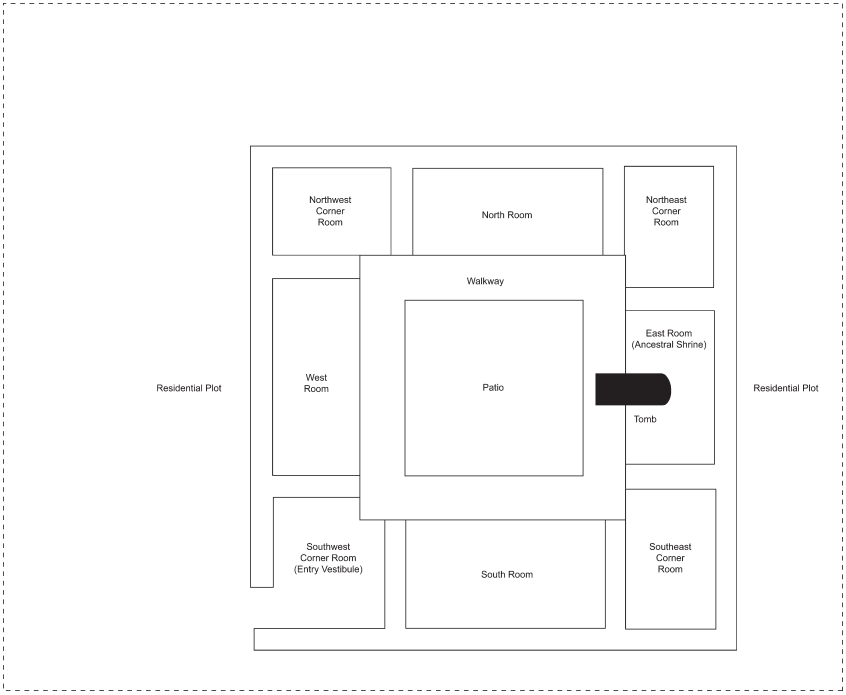
4.5. ***Model of a residential plot in Mitla***

of adobe or wattle and daub (cane plastered with mud) and has a thatched roof and an earthen, cement, or flagstone floor.

When adobe houses—living quarters and kitchen—like those in Mitla are abandoned, they easily deteriorate into mounds like many of the mounds at Lambityeco. First, the roof collapses over the floor as the roof poles rot. With the roof gone, the adobe walls are exposed to rain and begin disintegrating into dirt—eventually collapsing over the floor and stone foundation of the house. The result is a low mound of earth covering the floor and foundation. When archaeologists excavate the mounds, generally only the floor and foundation stones of the house remain. Excavations in mounds at Lambityeco have revealed Xoo phase residences that may be compared to the model of Zapotec residences in Mitla.

XOO PHASE RESIDENCES

At least nine separate mounds containing at least twenty-six houses corresponding to the Xoo phase have been either fully or partially excavated at Lambityeco. Elite residences (thirteen in four mounds) and the ordinary houses of commoners (thirteen in five mounds) were excavated.[4] Several excavated elite residences were enough preserved to provide complete floor plans (as will be seen in later chapters), but the floor plans of



4.6. ***Model of Xoo phase residence***

commoner houses were difficult to determine because few had any of the rooms around their patios preserved or fully excavated enough to provide a complete floor plan. Because the basic components of Xoo phase residences appear to be the same for elite and commoner houses—differing only in size and degree of elaboration—a model of a Xoo phase residence serves to illustrate these basic components (Fig. 4.6).

The main components of a Xoo phase house included four rooms arranged around the sides of a central patio with four smaller rooms in the corners and a household tomb. The rooms were all built with the entrances opening onto the patio. The latter was generally a small area, about 4 m on a side, and was usually paved with a smooth layer of white plaster over a cobblestone base. The patio was usually encircled by a walkway about 1 m wide and raised about 20 cm above it. Although nearly all houses excavated had a patio paved with plaster, the patio of one house was paved with crushed ignimbrite gravel, a white chalk-like substance that occurs naturally at Lambityeco, and another had only a compact earthen surface. Often a drain in the form of a stone-lined conduit (or in elite houses, a tu-

bular ceramic drainpipe) was located at one corner of the patio to facilitate the runoff of rainwater.

The rooms built along the sides of the patio were between 2 m and 3 m wide and about 4 m long, with walls on three sides. The walls were built of adobe blocks set in mud mortar atop a stone foundation. The open side of the rooms, facing the patio, may have had curtains or other perishable coverings that functioned to close them off during cool weather or for privacy, but as yet no evidence for such coverings, such as curtain holders, has been discovered in excavations. The floors of the side rooms were elevated a step (20 cm–30 cm) above the level of the walkway around the patio floor and were paved with a smooth layer of white plaster over a cobblestone base. Often, in elite houses a thick-walled ceramic pan was set flush in the center of most of the rooms.

Corner rooms are small, usually about 2 m by 3 m, with walls on four sides and a single doorway about 1 m wide. Two of their walls were shared with the side rooms adjacent to them. The other two walls were generally made of adobe blocks set in mud mortar atop a stone foundation, although in some cases these walls may have been made of cane with or without mud plaster covering them. Most floors of corner rooms were elevated a step above the walkway around the patio and paved with smooth white plaster over a cobblestone base. Some floors, however, were flush with the walkway and some were compact earthen surfaces. In elite houses, at least, a ceramic pan was set in the floors of most of the corner rooms. Evidence from excavations indicates that the roof of at least one corner room was thatched and supported by pine roof poles. One of the four corner rooms was an entryway to the house and had an additional doorway opening to the outside. This corner room served as an entry vestibule to the house and did not have a ceramic pan set in its floor.

We are unaware of any material evidence for the types of activities conducted in these rooms. Generally, plaster room floors were swept clean of any trash, which was then deposited in middens. No samples of plaster have ever been taken from the floors of Xoo phase Zapotec houses to subject them to chemical analysis. The practice of sweeping patios and rooms clean and the lack of chemical analysis of floors make it difficult to interpret specific uses of these domestic spaces.

We assume that the open patios, aside from allowing for constant traffic between the surrounding rooms, served multiple purposes, especially when weather conditions permitted people to carry out different chores and tasks. We also posit, based on the larger size of side rooms and on the assumption that the ceramic pans embedded in the floors of some of them (in the case of elite houses) most likely functioned primarily as hearths to

take the chill off the rooms in cold weather, that most of these enclosures were living quarters where families rested, visited, slept, and stored their possessions. The fourth side room had no hearth and was the ancestral shrine with the household tomb beneath it.

Setting aside the corner room that served as entry vestibule into the house, each of the other three corner rooms seem to be associated with one or another of the three side rooms adjacent to it. Yet, we disagree on their function. Lind postulates that the hearths in these rooms were actually used for cooking. Since the ceramic pan hearths (in both corner rooms and living quarters) contained a fine powdery gray ash, he suggests that they had held glowing chunks of charcoal, which produce little smoke or soot that might have blackened the room floors or walls. Given their diameter (about 30 cm) and depth (10 cm), they could easily accommodate *patojos* (shoe-shaped cooking vessels) (see Fig. 7.20a). The only such vessel thus far documented at Lambityeco measures 11 cm in height and is 21 cm long. Then, based on ethnographic analogy from the Mixteca of Oaxaca, where a nuclear family in a joint family household maintains its own living quarters and kitchen within the residential plot (Romney and Romney 1966:12), he interprets the corner rooms as kitchens associated with each of the living quarters. Since one of the corner rooms in the houses was seemingly used as a vestibule, the presence of three additional corner rooms would imply that the family groups could consist of up to 3 nuclear families, and that food preparation and consumption was not a shared social practice.

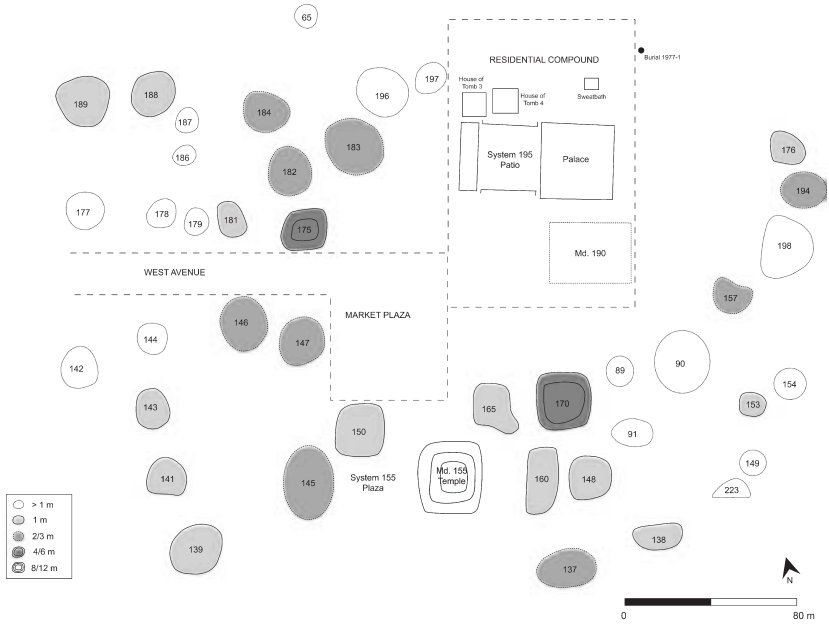
Urcid disagrees and assumes that cooking was done in nonmasonry structures built outside the houses but within the residential plot and that although the ceramic pans could have been used at times to heat meals prepared in the outside kitchens, their primary function was to warm the rooms. His assumption that cooking was done outside the houses rests on the seeming lack of blackened areas or traces of soot on the floors, especially around the hearths, or on the lower portions of the walls. If corner rooms had thatched roofs, such a feature may have solved the problem of ventilation to avoid the accumulation of smoke generated by cooking. But only one room so far discovered at Lambityeco, whose roof had burned, has yielded material evidence that it was roofed with thatch, and this corner room has other unique features that sets it apart (Urcid's interpretation of this room is presented in Chapter 6). As to patojos, their shape suggests to him that at least some cooking activities required some type of semi-enclosed hearths, so that the elongation of the pot could be inserted in a small area where the heat was concentrated, implying that such cooking vessels could not have been used in the ceramic pan hearths embedded in the floors. Thus, the use of the side and corner rooms would have been

more flexible, depending on a household's particular cycle of growth and specific needs (e.g., that of joint families or, in the case of the elite, polygynous arrangements). Activities within these rooms might have included sharing meals; manufacturing certain items such as textiles; processing foodstuffs before long-term storage or prior to cooking; carrying out other daily activities if weather conditions like extreme heat, extreme cold, or rain and wind prevented doing them in open spaces like the patios or areas in the residential plots; hosting close kin visitors; and at times accommodating for gender-specific and/or age-specific seclusions in rites of passage or sickness.

We both concur, however, that because of the contingencies of life, the household groups may have included at times widows or widowers, aged relatives, and, in the case of elite houses, polygynous arrangements. This is supported by evidence of adult burials of both sexes interred beneath house floors or beyond the confines of the house and not in the household tomb where the married couple who headed the household were eventually buried.

Because the household tomb is always located beneath one of the side rooms, most often the one on the east side of the patio, we believe such an enclosure to have been used as an ancestral shrine. Like the altars in present-day Zapotec houses, the shrine room of Xoo phase residences was probably the locus of household religious activities and may have housed images or representations of Zapotec deities. Also, just as the altar in present-day Zapotec houses becomes a focal point of the household on the Day of the Dead in honor of deceased family members, the shrine room was certainly the focal point for ancient Zapotec rituals aimed at evoking and invoking the ancestors buried in the household tomb centrally placed beneath its floor.

Tombs, like the ancestral shrine rooms above them, vary from elaborate structures in elite houses to simple structures in the houses of commoners. All tombs, however, had entrances sealed with stones and most contained multiple burials. From analyses of the skeletal remains in Xoo phase tombs from both Lambityeco and Monte Albán, it is known that virtually all individuals buried in those tombs were adults of both sexes. Furthermore, the disturbed nature of most of the skeletal remains indicates that burials were placed in tombs at different times and that earlier burials were disturbed either to remove certain bones or to make room for later burials. As commented in Chapter 3, it seems clear that the tombs beneath shrine rooms in Xoo phase houses were the burial places for married couples who headed the household and controlled the household estate during their lives and who were especially venerated following their deaths



4.7. ***The center of Xoo phase Lambityeco***

as ancestors and also the ones who bequeathed the household estate to their legitimate heirs. Other members of the household—infants, children, adolescents, and adults who did not head the household—were buried under the floors of rooms and patios or directly beyond the confines of the house structure in the residential plot.

The presence of some burials, salt-boiling activities, and sweatbaths near but beyond the confines of houses indicates that residences were surrounded by residential plots. As Winter (1972, 1976) has pointed out, residential plots can be identified archaeologically by household clusters in which various features reflecting household activities occur in areas outside and adjacent to the confines of the house. Cira Martínez (personal communication, 2008) reports that recent salvage excavations at Lambityeco in conjunction with a widening of the Pan-American Highway have shed light on the probable limits of the large residential plot within which the elite houses of Mound 195 and Mound 190, the sweatbath north of Mound 195, and the houses of commoners (the houses of Tombs 3 and 4) were built (Fig. 4.7). What remains unknown, however, is the range of variation in Xoo phase residential plots and whether these, like Mitla residential plots, were enclosed behind blind fences that hid the house from outside view.

Like Mitla in 1930, Xoo phase Lambityeco had one or more living quarters around each patio that probably housed nuclear or joint families. There is no reason, therefore, to assume that each Xoo phase "house mound" represents a single house occupied by a nuclear family. For the time being, it is not possible to determine if Xoo phase Lambityeco, like Mitla in 1930, had about two-thirds of its residential plots occupied by nuclear families residing in single houses and one-third occupied by joint family households residing in two or more houses built in a single residential plot. However, from the excavated examples at hand, it seems that joint family households were much more common at Xoo phase Lambityeco than in Mitla in the 1930s.

HOUSEHOLD COMPOSITION

Although Parsons (1936) presents indirect data on nuclear and joint family households in Mitla via the number of houses in a residential plot, neither hers nor other ethnographic studies of Valley of Oaxaca communities have provided detailed statistics on household composition. In the absence of published evidence from the Valley of Oaxaca, then, complementary data from Carrasco's (1964:185) analysis of a very detailed sixteenth-century (1530–1540 CE) census of households in the Tlacatecpan barrio of Tepoztlán, Morelos, and the Romneys' ethnographic study of the Santo Domingo barrio of Juxtlahuaca in the Mixteca Baja of Oaxaca must suffice.

Carrasco (1964:190–191) defined four types of households in the Tlacatecpan barrio of Tepoztlán: (1) nonfamily households, composed of unrelated persons; (2) consanguineal households, composed of persons connected by purely consanguineal ties; (3) nuclear family households, composed of a married couple and usually including their children and/or other unmarried relatives; and (4) joint family households, composed of two or more married couples, usually two or more married brothers or a father and his married son or sons.

Nuclear and joint family households constituted 97 percent (531) of the 549 households in the Tlacatecpan barrio (Carrasco 1964:191). This suggests that Xoo phase Lambityeco may have had at least 97 percent of its households occupied by either nuclear or joint families instead of the rather unstable nonfamily or consanguineal arrangements. Of the 201 households subject to the cacique of Tepoztlán, nearly 72 percent lived in joint family households whereas only 26 percent lived in nuclear family households. Comparative ethnographic data from the Santo Domingo barrio of Juxtlahuaca are quite compatible with Carrasco's data and indicate that joint family households account for about 77 percent of the total and

nuclear family households 23 percent (Romney and Romney 1966:xxi, chart IV; 43). These figures are probably fairly compatible with Xoo phase Lambityeco based on samples of excavated houses.

Within these two dominant household types—joint and nuclear family households—household size was about 4.4 persons (296 households with 1,298 persons) per nuclear family household and about 7.3 persons (235 households with 1,727 persons) per joint family household in Tepoztlán. However, other analyses led Carrasco (1964:209) to point out that household size in the Tlacatecpan barrio was well below average for Central Mexico. In the Santo Domingo barrio of Juxtlahuaca, average nuclear family size was 6.5 persons, whereas joint family household size averaged 12.6 persons (Romney and Romney 1966:xx–xxi, charts III–IV). These data at least provide a possible range of the number of persons per household for the households of commoners at Xoo phase Lambityeco.

The cacique's household was the largest in Tepoztlán and included twenty-three people (Carrasco 1964:189–190). Among these were the cacique and his wife, his thirteen children, and six female slaves who were probably concubines given the fact that his eldest child was only six years old (Carrasco 1964:205). Again, these data suggest that Zapotec elite households of nobles (xoana) and rulers (coqui) probably contained many more persons than households of commoners at Xoo phase Lambityeco.

From his analysis, Carrasco defined a cycle whereby nuclear family households became joint family households with the passage of time. A nuclear family household composed of a married couple and their children became a joint family household of the "head-with-sons" type when the sons married and remained in their father's compound. With the death of the father, the eldest son became the household head and together with his younger married brothers formed a joint family household of the "head-with-brothers" type. "We see then the main cycle in family development from nuclear toward joint families of the head-with-sons and later head-with-brothers types, only occasionally growing to larger types" (Carrasco 1964:208).

A similar situation obtains in the Santo Domingo barrio of Juxtlahuaca and Mitla. A young married couple will build their house within the husband's father's compound (Parsons 1936:66; Romney and Romney 1966:42–43). In Juxtlahuaca, "the major decision as to whether or not a newly married couple will reside with the husband's family is the availability of space in the prospective compound" (Romney and Romney 1966:43). If space is not available to build a house, the couple will seek a place as near as possible to the family compound. Unlike Tepoztlán, the present-day Juxtlahuaca household groups have no institutionalized household head.

"Rather, the adult men who are still in the prime of life all maintain more or less equal status" (Romney and Romney 1966:50). Even when they live in joint family households in Juxtlahuaca, each nuclear family forming the joint family household within the residential compound maintains its own kitchen for cooking and its own living quarters for sleeping, storage, and visiting (Romney and Romney 1966:12).

Carrasco's cycle of household development is bolstered by ethnographic data from Juxtlahuaca and Mitla. However, with one possible exception, none of the house remains from Lambityeco can be shown to conform to Carrasco's cycle of household development. A sequential integration approach to the sequence of houses of commoners within Mound 92 at Lambityeco appears to show an initial nuclear family household, indicated by two side rooms (one a living quarters and the other the ancestral shrine with a household tomb beneath it) with a corner room (which Lind considers a kitchen) between them flanking two sides of the patio. This is followed by a joint family household composed of two nuclear families, indicated by three side rooms (the ancestral shrine room and two living quarters facing one another across the patio) and two corner rooms (which Lind considers kitchens) between them flanking three sides of the patio. The sequence of houses ends with a joint family household with three nuclear families, indicated by four side rooms (the ancestral shrine room and three living quarters) and four corner rooms (one entry vestibule and three that Lind considers kitchens) surrounding the patio (Lind 2009). Nevertheless, the excavation data on which this analysis was based are too limited to fully substantiate it.

HOUSES OF NOBLES AND COMMONERS

Determining what proportion of the ancient Xoo phase population of Lambityeco was composed of nobles and what proportion was represented by commoners requires examining the mounds. Defining which mounds may have represented the houses of nobles is extremely difficult. Setting aside the two very large mounds, Mound 155 at 12 m tall and Mound 57 at 10 m tall—which were most likely temples—leaves 145 mounds, most of which were probably houses of commoners. Apart from the civic residential complex (PPA) in Mound 195, two other mounds representing houses of nobles have been excavated. Mound 185, a 4 m high mound representing several superimposed elite houses, was partially excavated by Winter and colleagues (1979), and Mound 190, a 3 m high mound also representing several superimposed elite houses, was completely excavated under the direction of John Paddock.

Based on the above known examples, it might be assumed that mounds in the 3–4 m height range were houses of nobles. Because there are nine mounds in the 3–4 m height range at ancient Xoo phase Lambityeco, 9 of the 145 mounds may be the houses of nobles. This works out to be about 6 percent of the mounds, and it could be assumed that this percentage of the population of ancient Lambityeco was composed of nobles, or about 173 adults and children based on a population of 2,880 persons. Also, in this case, mounds 5 m tall or taller would be temples, making for nine temples at Lambityeco, and most mounds less than 3 m high would include houses of commoners and some (19 percent) refuse mounds. However, other factors complicate this reasoning.

One 5 m high mound (Mound 125) may be an elite house. In 1967, Lind examined a looter's pit on top of it. The pit had exposed part of a patio floor with a raised walkway along its east side like those known from elite houses. This suggests, but does not prove, that Mound 125 might have had the house of a noble atop it. If houses of nobles included mounds in the 3–5 m height range, then 14 of the 145 mounds at Lambityeco were houses of nobles and accounted for about 9.7 percent of the population, or about 276 adults and children based on a population of 2,880. In this case, only three mounds 6 m tall or taller would have been temples, but the number of houses of commoners and refuse mounds would remain unchanged.

Another complicating factor was a 1 m high mound (Mound 148) that was partially excavated and possibly could be an elite house. Not enough of the mound was excavated to prove that it represented the house of a noble. No house floors or patios were exposed. However, a 30 cm high stone *talud* (sloping wall) was partly exposed and may have formed the wall of a low platform on which the house was built (Urcid 1983:117). Because an elite house in Mound 195 was built atop a similar low platform with a talud, it appears possible that Mound 148 was the house of a noble. Mound 148 had a basal area of 675 m^2. An examination of the basal areas of mounds known to be houses of commoners revealed that they ranged between 80 m^2 and 300 m^2, whereas known elite houses ranged between 650 m^2 and 1850 m^2.

With this in mind, 1 m and 2 m high mounds were examined to determine how many of them had basal areas 650 m^2 or greater and, therefore, might have been houses of nobles. A total of nineteen mounds 1 m high and five mounds 2 m high had basal areas 650 m^2 or greater, making a total of twenty-four mounds that may have been elite houses. Added to the fourteen mounds 3–5 m tall, this totals thirty-eight houses of nobles representing 26 percent of the 145 mounds and making nobles account for about 748 adults and children based on a population of 2,880 persons for

ancient Xoo phase Lambityeco. In this case, the number of possible temples remains at three, but the number of houses of commoners decreases.

From the data at hand, it appears that anywhere from 6 to 26 percent of the population of ancient Xoo phase Lambityeco was composed of nobles. This is certainly an unacceptable range, although it should be kept in mind that it is based on the extant Xoo phase mounds and that many mounds were probably destroyed over the past 1,200 years. If Lambityeco were as densely populated as Mitla in the 1930s, it would be expected to have as many as 560 Xoo phase mounds with structures. This means that as many as 443 mounds may have been destroyed and most, if not all, of these mounds were probably 1 m tall or less and represented houses of commoners. It is a certainty that mounds corresponding to the houses of nobles are disproportionately represented relative to mounds corresponding to the houses of commoners because the latter are small and more easily subject to destruction whereas the former are much larger and less easily eradicated.

COMMUNITY ORGANIZATION AT LAMBITYECO

Insofar as it is possible to determine community organization from site structure, it is evident that Lambityeco was a nucleated community with a population of nearly 3,000 persons on the eve of its abandonment at the end of the Xoo phase. Like the plaza in Mitla in the 1930s and the Main Plaza at Xoo phase Monte Albán, the community of Lambityeco had a center, the North Marketplace—a plaza measuring 50 m east-west by 65 m north-south. A major thoroughfare, the West Avenue about 25 m wide and nearly 135 m long, entered the community from the west and led directly to this plaza (Fig. 4.7).

The community of Lambityeco was organized around this plaza. Its principal government building, which housed the residence of the ruler of the Lambityeco district, was a PPA (Mound 195) located in a large residential compound on the northeast side of the plaza. Its principal temple, Mound 155, the tallest structure within Lambityeco, formed a TPA located along the south side of the plaza, and a probable 5 m high temple (or possibly elite house, Mound 175) occurred at its extreme northwestern corner.

Most of the mounds at Lambityeco in the areas surrounding and beyond the plaza are probably the remains of houses. These houses are not bounded by streets, as in 1930 Mitla. Prehispanic societies had neither wheeled vehicles nor beasts of burden and therefore did not require streets. Instead, footpaths probably wended their way throughout the community. This, however, does not mean that houses were haphazardly scattered about Lambityeco. All excavated structures at Lambityeco were oriented about 16° 30' east of north, or what came to be called "construction north."

4.8. ***Sunrise over Mound 195 during the winter solstice, December 22, 1987 (photo courtesy of David Peterson)***

From his research at Lambityeco, Peterson (1991) concluded that this alignment was determined based on the point of sunrise during the winter solstice and the point of sunset during the summer solstice (Fig. 4.8). Because all known structures at Lambityeco follow this alignment, even the houses of commoners, it is clear that community planning went into the building of structures at Lambityeco.

Unlike Monte Albán, there is no evidence at Lambityeco for "barrios," each with its marketplace, civic center, and temple. Lambityeco was too small to have separate marketplaces for any barrios it might have had. Furthermore, mounds that might represent small temples are not distributed as would be expected if they were barrio temples. Likewise, mounds that might represent the elite houses of nobles do not show any pattern of distribution that would indicate that they were associated with particular barrios. This, however, does not mean that barrios did not exist at Lambityeco. Mitla had six barrios in 1930, but archaeologists would be hard put to identify them from any material remains (Fig. 4.4).

Most of Lambityeco's Xoo phase population of nearly 3,000 persons were commoners. Probably over half of them were involved in nonagricultural pursuits. As much as one quarter of the population carried out salt-production activities. Another 15 percent may have been potters and an additional 15 percent may have produced textiles, but there is no solid archaeological evidence for these latter two percentages. A number of

commoners may have cultivated the fields around Lambityeco, perhaps some planting corn and some planting maguey and beans, which require less rainfall than corn.

Nobles may have constituted at least 6 percent of Lambityeco's population. There is no evidence they lived together in a single barrio at Lambityeco, but in some cases, their houses appear near one another, suggesting that closely related nobles may have lived next to one another (Lind and Urcid 1983). The ethnohistoric model, presented in Chapter 1, suggests some of the roles these nobles might have occupied at Lambityeco.

The ruler of Lambityeco (the coqui) probably occupied the elite house atop Mound 195. Also, the elite house seemingly occupied by a priest of Cociyo (the Zapotec deity of lightning, thunder, and rain) was located in Mound 190, directly south of Mound 195 (Lind and Urcid 1983) within the same residential compound. Other nobles (xoana) residing in Lambityeco probably included additional priests, political advisers, captains who led military units, and administrators, some of whom oversaw each of the eight villages within the Lambityeco district. Whether the latter resided in Lambityeco or in the village they administered is uncertain.

NOTES

1. Bernal customarily named previously unnamed sites after a prominent nearby topographical feature, which is why he named Lambityeco Yegüih. Sr. Juan López, a Tlacolula Zapotec, provided Lind with the translation of Yegüih. He also related that Yegüih is enchanted (*encantado*). At times a very tiny rooster emerges from the solid rock and, crowing, encircles the base of the hill. The trip around the hill takes the little rooster five minutes to complete. At other times, a giant of a man dressed as a *charro*, emerges from the solid rock, encircles the hill, and disappears like the rooster. Anyone who has spent time in villages in Oaxaca knows that every nearby *cerro* is enchanted. The rooster is probably the *zanate de oro* (bird of gold) and the charro is undoubtedly the *charro diabólico* (diabolical horseman), both of which are common in Zapotec folklore (Cruz 1946).

2. In two earlier publications (Lind and Urcid 1983, 1990) the total number of mounds was given as 197 and Xoo phase mounds as 141. In a more recent publication, Lind (2001) cited 213 total mounds and 169 Xoo phase mounds. This inflated number resulted from including moundless structures excavated at Lambityeco as mounds (Appendix 3). After a careful and complete revision, the above numbers of 206 total mounds and 147 Xoo phase mounds stands as the most accurate count (Appendix 2).

3. Lucha Sosa, a Mitla Zapotec, informed Lind in 1982 that deceased members of the household come back on the Day of the Dead to partake of the food and drink, and therefore their favorite foods and drink are placed on the altar for them and sometimes their favorite clothing as well.

4. In a recent salvage excavation along the Pan-American Highway, at least five other houses of commoners, two of them moundless, were excavated at Lambityeco to the east of Mound 195 (Cira Martínez, personal communication, 2008).

chapter five

Excavations in Mound 195 Sub: Structures 195-6, 195-5, and 195-4

The objectives of the Lambityeco excavations combined a problem orientation with salvage work and a commitment to public awareness. The problem orientation concerned the chronological position of the ruins that John Paddock had determined from surface remains to be Monte Albán IIIB–IV (Xoo phase). Paddock pointed out that, prior to 1961, excavations in the Tlacolula arm of the valley had uncovered remains of Monte Albán II (Nisa phase) at Caballito Blanco, Transición II–IIIA (Tani phase) at Loma Larga, and Monte Albán V (Liobaa and Chila phases) at Yagul and Mitla. The Lambityeco excavations, therefore, would provide important information on a previously unexcavated site that belonged within an as yet unexplored time period, the Xoo phase (Monte Albán IIIB–IV), in the Tlacolula arm of the valley.

Although any one of many mounds might have been selected at Lambityeco, Paddock chose Mound 195 for salvage purposes. It is about 30 m south of the Pan-American Highway (Fig. 5.1a). In the 1940s, when the highway was built, treasure-seeking S.O.P. (Secretaría de Obras Públicas) road builders purposely gouged into the northeast corner of the mound on the pretext of obtaining road fill (Fig. 5.1b). "They found no treasure, we may be confident; but they destroyed the northeast corner of the pyramid inside the mound, leaving some adobe walls exposed" (Paddock, Mogor, and Lind 1968:3). The proximity of Mound 195 to the Pan-American

5.1. ***Mound 195 at Lambityeco***

Highway invited future looting and the exposed adobe structures were being damaged by rains. Therefore, Paddock decided to excavate and consolidate Mound 195 to halt looting and transform it from a potentially pockmarked eyesore into an attractive public resource providing educational insights into Mexico's past (Fig. 5.1c).

Before excavations in 1961, photos were taken of Mound 195 both before (Fig. 5.2a) and after (Fig. 5.2b) the mound was cleared of brush. It

5.2. ***Mound 195 before excavations***

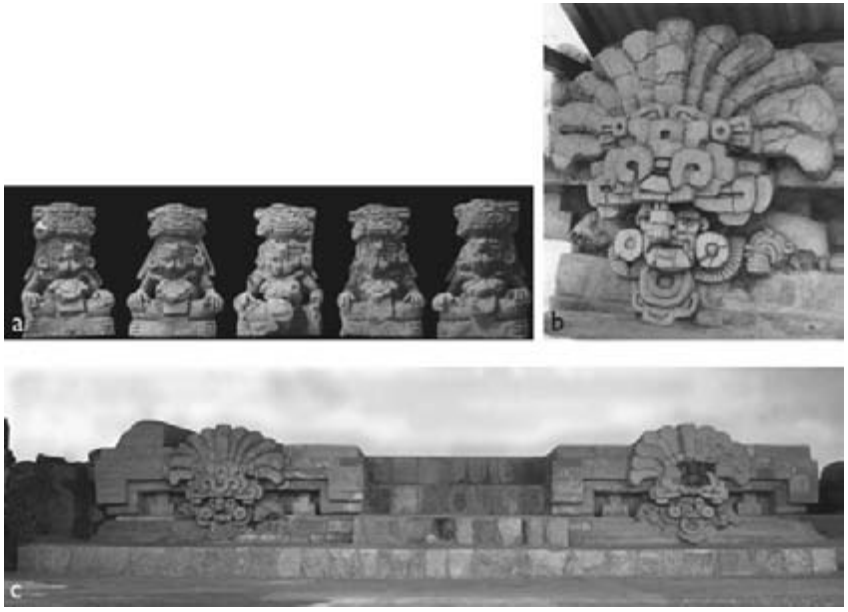
was evident from the beginning that Mound 195 was a 6 m high mound with a plaza surrounded by three low platforms attached to its west side. The plaza and associated platforms were designated System 195. Also, during the 1961 excavations Dr. Eduardo Noguera visited the site for several days and, with some of the students, excavated a stratigraphic test pit into Mound 190, a 3 m high mound located 10 m directly south of Mound 195 (Fig. 5.1a).

The 1961 explorations had succeeded in uncovering the uppermost or last structure, an elite house, built atop Mound 195 with its associated tomb, Tomb 1. Later, the plaza surrounded by low platforms (System 195) attached to the west side of Mound 195 was fully exposed. These structures were designated Structure 195-1. A stratigraphically older structure under Structure 195-1 was also uncovered atop Mound 195 and named Structure 195-2. Continued excavation within Mound 195, at a depth of about 4 m, revealed an older platform that contained an elite house built atop it. The older platform was called Mound 195 Sub and the elite house built on it, Structure 195-3. This structure was associated with Tomb 6, which had two portrait busts attached to its façade. The tomb had an altar with friezes above it. Two elite houses predating Structure 195-3, Structure 195-4 and the stratigraphically older Structure 195-5, were also associated with Tomb 6, but not with the portrait busts or altar with friezes. Finally, the oldest elite house in Mound 195 Sub, Structure 195-6, which was associated with Tomb 5, was found stratigraphically beneath Structure 195-5.

Excavations in Mound 190 revealed a series of five superimposed elite structures. The four oldest structures were associated with Tomb 2 (Paddock, Mogor, and Lind 1968) and may have been occupied by several successive generations of priests dedicated to Cociyo. Five nearly identical Cociyo urns were found in Tomb 2 (Fig. 5.3a) and two large plaster busts of Cociyo (Figs. 5.3b and c) were attached to the walls on either side of a stairway that ascended to a room in one of the houses. Although Mound 190 will be referred to on occasion, the current study focuses on the stratified elite houses in Mound 195.

THE SEQUENCE OF STRUCTURES IN MOUND 195

Mound 195 embodies six successive elite structures. Structure 195-6, the oldest, probably dates to ca. 700–725 CE and includes Tomb 5. The east room floor was resurfaced once before Structure 195-6 was covered by Structure 195-5 construction. Structure 195-5 probably dates to ca. 725–750 CE and includes Tomb 6, which, with modifications, formed part

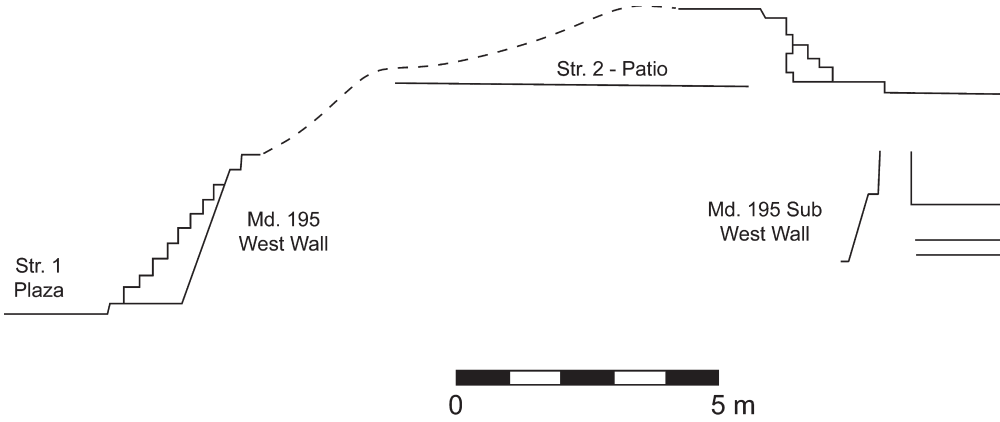


5.3. ***Cociyo urns from Tomb 2 and Cociyo busts from Mound 190 (photo a after Paddock, Mogor, and Lind 1968:fig. 2)***

and was continuously used by the residents of two subsequent structures. Structure 195-5, in turn, was covered by Structure 195-4, which incorporated Tomb 6 and included the construction of an "Annex" (Structure 195-4NE). Structure 195-4 dates to ca. 750–775.

Structure 195-3 represents the final house built on top of Mound 195 Sub. It dates to ca. 775–800 CE and incorporated Tomb 6 with the portrait busts attached to its façade and the altar complex with friezes above it. Around 800 CE, Structure 195-3SE was left unoccupied, but Structure 195-3NE remained occupied while the western half of Mound 195 and the plaza and platforms of System 195 were being constructed. Structure 195-3NE was abandoned when the western half of Mound 195 was completed and Structure 195-2, a temporary residence, was built on top of it.

Structure 195-1 was the final structure. It included an elite residence and Tomb 1 and was built on top of Mound 195, covering the earlier Structure 195-2 house. It also included the plaza of System 195 together with its surrounding platforms. Structure 195-1 was occupied beginning in ca. 830 CE and was probably deserted in ca. 850 CE at the same time Lambityeco was largely abandoned and ceased to be a functioning community (Fig. 5.4; Table 5.1).



5.4. ***The sequence of elite structures in Mound 195***

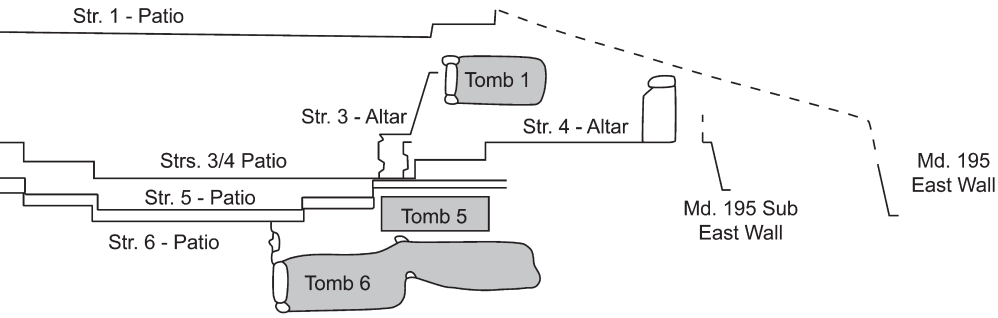
TABLE 5.1. Absolute dates associated with the sequence of structures in Mound 195

Mound 195	*Lab sample no.*	*Uncalibrated date*	*Calibrated date*[1]
Structure 195-1	GX-1481	1055± CE[2]	—
	GX-1573	755±90 CE	830 CE
	I-3257	730±100 CE	825 CE
		725 CE[3]	—
Structure 195-2	I-2679	720±95 CE	830 CE
	I-3258	700±105 CE	805 CE
Structure 195-3	GX-1482	690±100 CE	800 CE
Structure 195-4	—	—	—
Structure 195-5	—	—	—
Structure 195-6	—	—	—

Notes:
1. Midpoint of calibrated range (see Appendix 1 by Markens, Winter, and Martínez).
2. An anomalous date (Rabin 1970:14–15).
3. Archaeomagnetic date (Wolfman 1973:199, 232).

MOUND 195 SUB—STRUCTURES 195-6, 195-5, AND 195-4

The first three elite houses within Mound 195 Sub—Structure 195-6, Structure 195-5, and Structure 195-4—were only partially explored in excavations because of later constructions that covered them. Consequently, they will be treated together in this chapter. Although no absolute dates exist for these earlier structures, we assume that each elite house was occupied for one generation, or about twenty-five years. Because Structure 195-3, built over Structure 195-4, can be dated from ca. 775 to 800 CE,



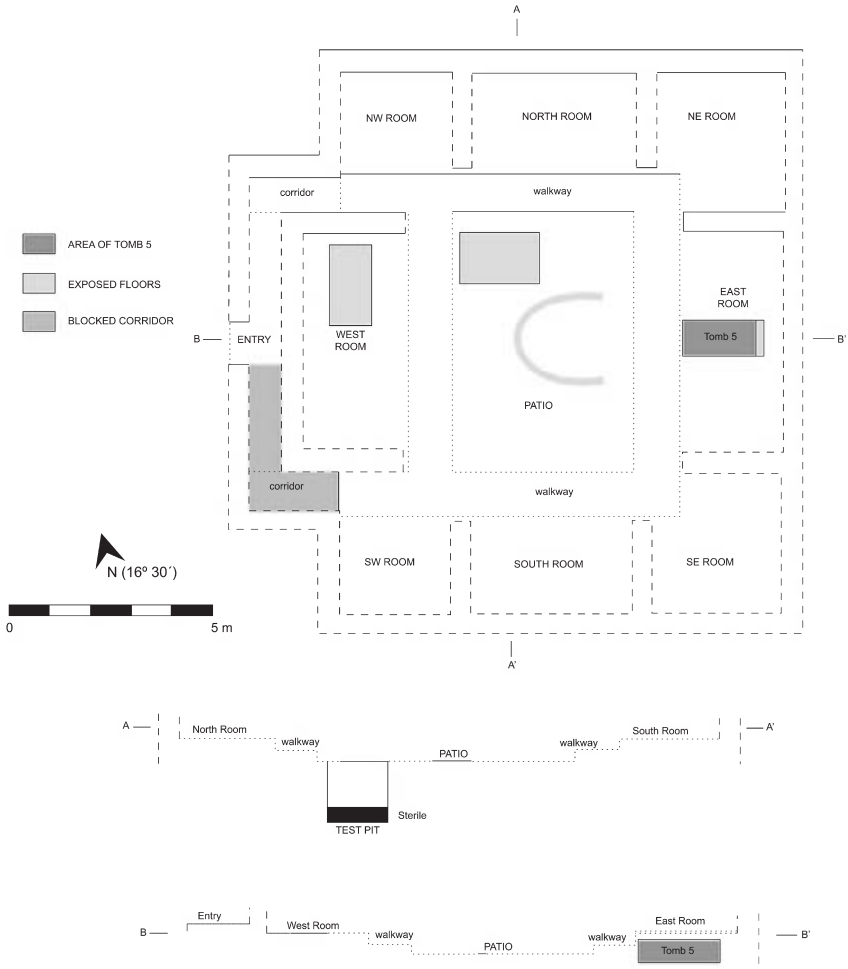
we estimate that the three elite houses that predate Structure 195-3 were occupied between ca. 700 and 775 CE.[1]

Structure 195-6

Structure 195-6 is the original, or oldest, house within Mound 195 Sub for no other construction lies between it and sterile gravel (Fig. 5.5). It measured about 14.4 m north-south and 14.2 m east-west and covered approximately 205 m^2. In the area where Structure 195-6 was built, the natural terrain slopes downward from north to south. Consequently, it was necessary for the ancient architects to build up the lower-lying southern sector to provide a level area on which to construct the house. A test pit excavated down to sterile soil under the northwest corner of the patio revealed that 1.18 m of Xoo phase deposits underlie Structure 195-6. Whether or not this construction fill was contained within a low platform faced with stone, as occurred in Structure 195-5 and later structures of Mound 195 Sub, is not known but certainly possible.

The few data available from the deepest excavations into Mound 195 Sub indicate that the floor plan of Structure 195-6 follows the pattern that Caso (1938:69, 83–84) referred to as typical of Monte Albán style houses; that is, four rooms arranged around the sides of a central patio with three smaller rooms and an entryway in the corners. Fig. 5.5 illustrates the sections of Structure 195-6 exposed in excavations and the reconstruction of the floor plan and profiles across the house.

Sections of the patio floor and the floors of the rooms east and west of it were uncovered in excavations. The rooms were 50 cm above the level of



5.5. ***Plan and profiles of Structure 195-6***

the patio floor, suggesting that raised walkways about 25 cm high encircled the patio in front of the rooms. The east room manifested two superimposed floors, indicating that it had been resurfaced once before Structure 195-6 was covered by the next house. This remodeling was minor because the later floor was placed directly on top of the earlier floor. The patio may have been rectangular, judging from the locations of the east and west rooms, and probably measured 6.6 m north-south and 4.6 m east-west.

No pits were dug through the north and south rooms or through any of the corner rooms of Structure 195-3SE to search for the earlier rooms relating to Structure 195-6. Likewise, no excavation was done beneath the

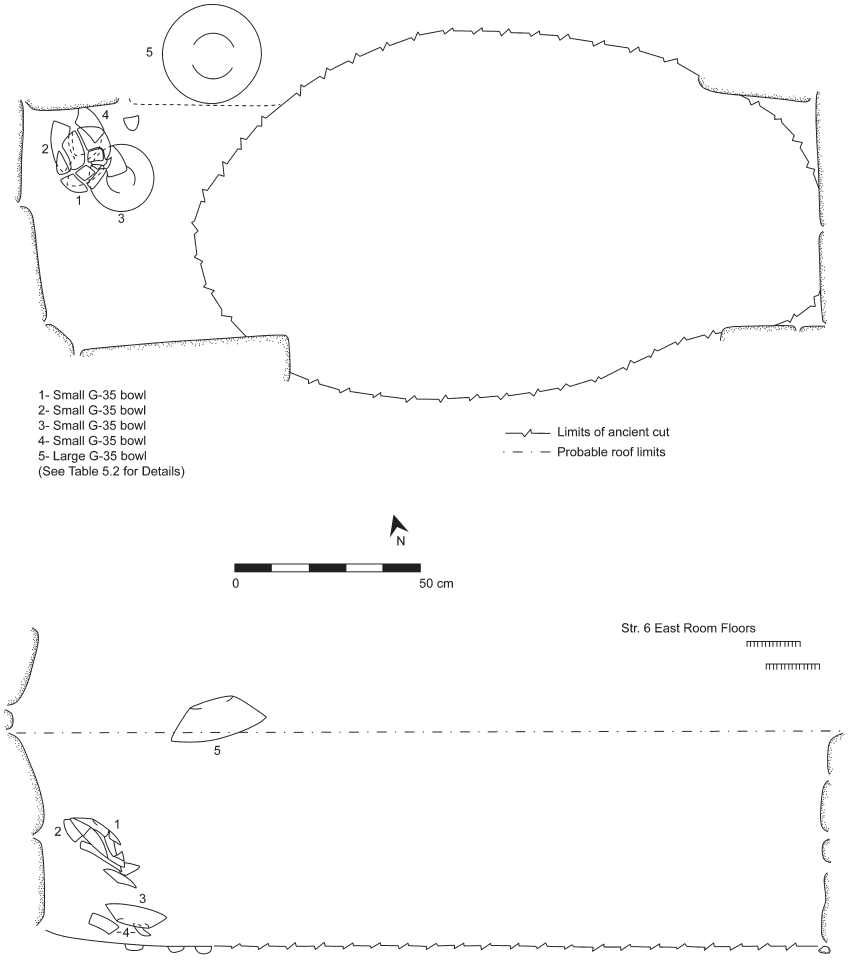
L-shaped entryway of Structure 195-4SE to locate any earlier entryway for Structure 195-6. Therefore, these features have been hypothetically reconstructed in Fig. 5.5. The L-shaped entryway has been reconstructed based on the known L-shaped entryways of Structures 195-3 and 195-4.

Tomb 5 in Structure 195-6

The resurfacing of the east room of Structure 195-6 relates to the placement of a burial in Tomb 5. The tomb was located beneath the front center of the east room at 20 cm under the level of the original room floor and 25 cm under the level of the later room floor. Unfortunately, Tomb 5 was mostly destroyed by two subsequent cuts made through it—the first to build the main chamber of Tomb 6 in association with Structure 195-4 and the second to place a burial in association with Structure 195-3. However, the ancient cuts failed to obliterate the western (front) and eastern (rear) walls of the tomb. The east wall was sealed beneath the original floor of the east room, indicating that Tomb 5 had been built into Structure 195-6 from its inception (Fig. 5.6).

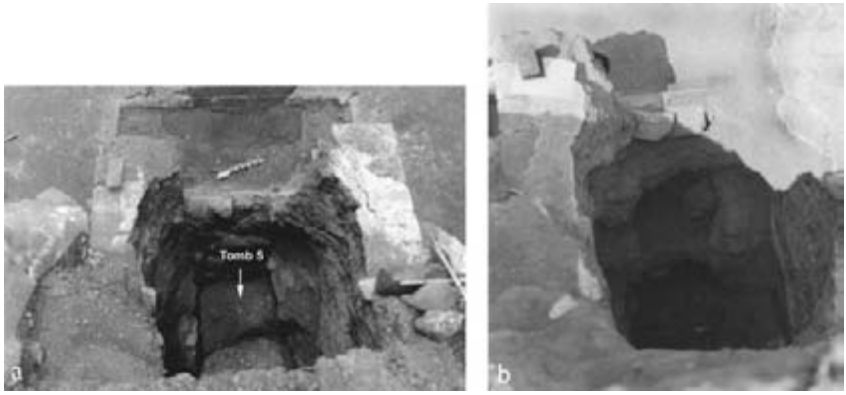
The tomb consisted of a single chamber with its long axis oriented east-west.[2] It measured 2.10 m long, east-west, and 65 cm wide, north-south. There is no evidence for a door to the tomb; therefore, it might be assumed that it was entered through the roof, although it is probable that the door was replaced by a wall during subsequent construction activities. Remnants of its stone walls and plaster floor were preserved in the eastern and western extremes, but the roof was totally dismantled. The plaster floor of the tomb was placed on top of a cobblestone base. The extant walls were preserved to a height of 55 cm, which may have been the original height of the tomb (Fig. 5.7).

No skeletal remains were found in the small sections of Tomb 5 that remained intact. Any skeletal remains that might have occurred were probably removed when subsequent cuts destroyed the tomb floor. Yet, several objects were found in its northwest corner (Fig. 5.6; Table 5.2), including four small gray ceramic bowls of the ubiquitous G-35 type described by Caso, Bernal, and Acosta (1967:385) as characteristic of the Xoo phase (Monte Albán IIIB-IV). A fifth large G-35 bowl was also found in the fill of the ancient cut outside and above the probable limits of the tomb roof. Isolated sherds from three other G-35 bowls were found within the fill in the northwest corner of the tomb, but there is no reason to believe that these isolated sherds formed part of the offering because such sherds are common in virtually all excavation contexts in Mound 195 and elsewhere at Lambityeco.



5.6. ***Plan and profile of Tomb 5***

It seems highly unlikely that these G-35 bowls formed part of the original Tomb 5 offering. Their locations suggest that they were removed from Tomb 6 when one of the ancient intrusions was made and then tossed into and above Tomb 5 when the cut was filled. The presence of hardened plaster in two of the bowls suggests that they might have been reused from older offerings as containers for wet plaster. Any original offering that might have been in Tomb 5 was probably removed, like the skeletal remains, when the ancient holes were dug through it. The married couple who headed the Structure 195-6 noble household between ca. 700 and 725 CE were almost certainly buried in Tomb 5.



5.7. ***Tomb 5 beneath altar***

TABLE 5.2. Objects from Tomb 5[1]

No. in Fig. 5.6	*Field no.*	*Description*[2]
1	#7358	Small G-35 bowl. Light gray. Dia. 19 cm, ht. 4.4 cm. Base design: B. Broken but complete. No contents.
2	#7359	Small G-35 bowl. Dark gray. Dia. 19.5 cm, ht. 5.5 cm. Base design: E. Broken and incomplete. Interior contains hardened plaster.
3	#7361	Small G-35 bowl. Dark gray. Dia. 17.5 cm, ht. 5.1 cm. Base design: A. Broken and incomplete. No contents.
4	#7362	Small G-35 bowl. Light gray. Dia. 17 cm, ht. 6 cm. Base design: None. Broken and incomplete. Interior contains hardened plaster.
5	#7265	Large G-35 bowl. Light gray. Dia. 30.5 cm, ht. 8.5 cm. Base design: None. Broken but complete. No contents.

Notes:
1. These objects probably did not form part of the original Tomb 5 offering but may have come from Tomb 6.
2. For base designs see Figure 7.14.

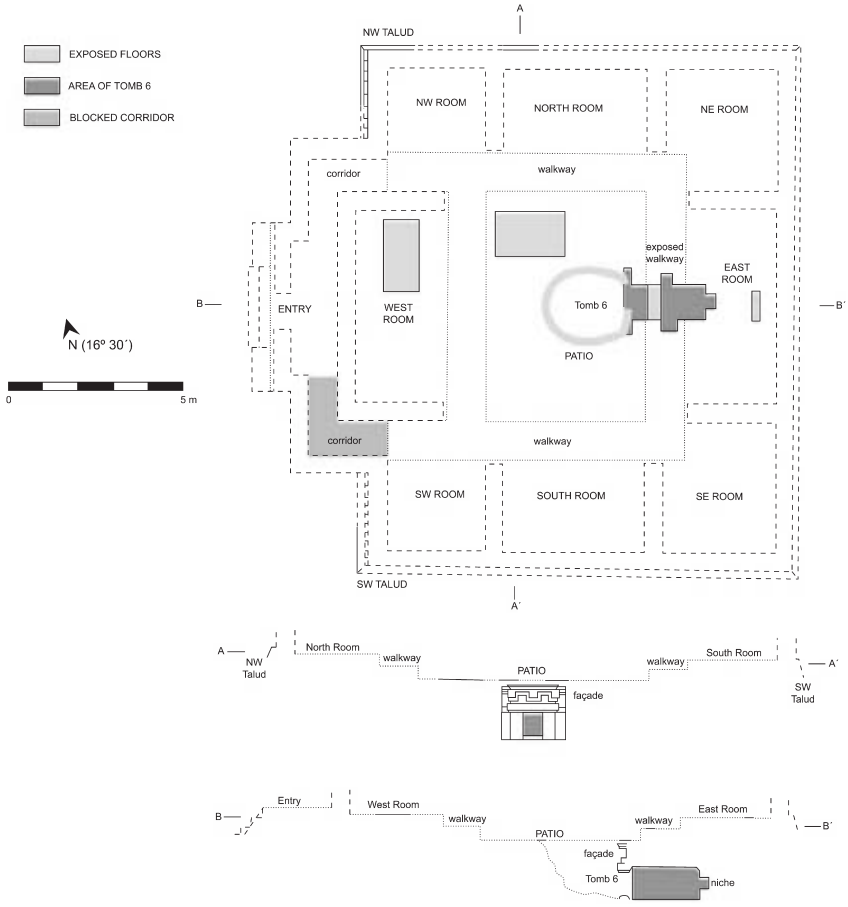
Structure 195-5

Structure 195-5 was constructed atop a low platform. The northwest corner of the platform was detected in a stratigraphic context (beneath Structure 195-4 construction) that clearly relates to Structure 195-5. The west wall of the platform, which corresponds to the front of the house, and the north wall were in the form of a talud with an outset vertical molding at its base. The wall was preserved to a height of 40 cm and retained its original plaster covering (Fig. 5.8). The construction overburden made it impossible to expose the wall all around the platform or obtain a complete

5.8. ***West talud of the Structure 195-5 platform***

floor plan of the Structure 195-5 house on top of the platform. Figure 5.9 illustrates the sections of Structure 195-5 uncovered in excavations and the reconstruction of the floor plan and profiles across the house.

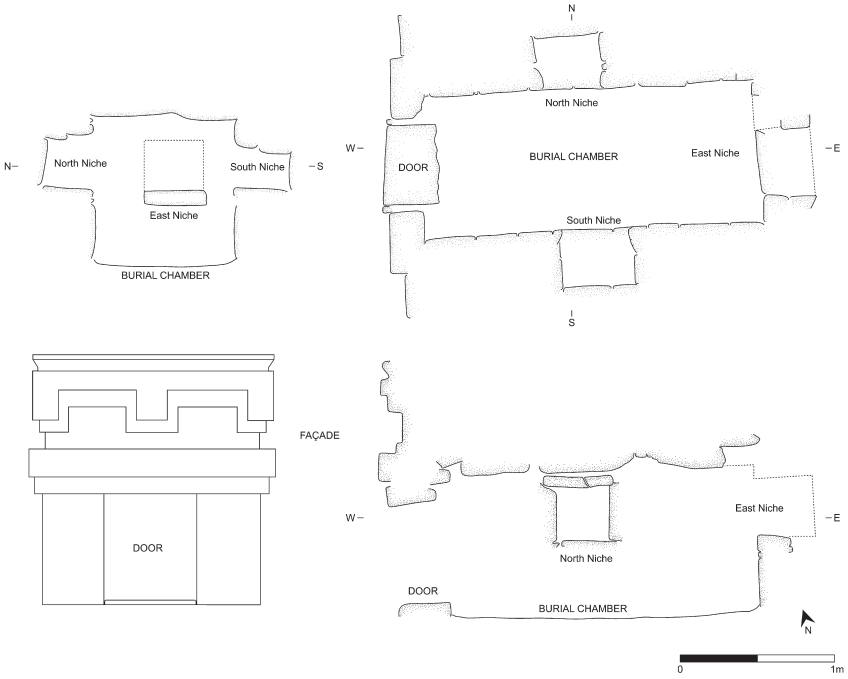
The Structure 195-5 house atop the platform, which measured about 15.1 m north-south and 15.7 m east-west and covered approximately 237 m^2, was built directly over Structure 195-6. A 25 cm layer of construction fill was placed over the patio and room floors of Structure 195-6, and the patio and rooms of Structure 195-5 were built directly above their Structure 195-6 counterparts. Sections of the Structure 195-5 patio floor, a raised walkway east of it, and rooms to the east and west of the patio were uncovered in excavations. The east walkway, situated between the patio and the east room, was 25 cm above the level of the patio floor. The walk-



5.9. ***Plan and profiles of Structure 195-5***

way probably encircled the patio, fronting the remaining rooms as well. The east and west rooms were 50 cm above the level of the patio floor. The patio was rectangular and probably measured 6.6 m north-south and 4.6 m east-west.

No pits were dug through the north and south rooms or through any of the corner rooms of Structure 195-3SE to search for the earlier rooms relating to Structure 195-5. Likewise, no excavation was done beneath the L-shaped entryway of Structure 195-4SE to locate any earlier entryway for Structure 195-5. Therefore, these features have been hypothetically reconstructed in Figure 5.9.



5.10. ***Plan and profiles of Tomb 6 in Structure 195-5***

Tomb 6 in Structure 195-5

Tomb 6 was located at the center of the eastern edge and 20 cm below the Structure 195-5 patio floor and extended eastward beneath the east walkway and part of the east room (Fig. 5.9). The presence of the patio floor and east walkway above the top of Tomb 6 is solid evidence that it was built into Structure 195-5 from its inception. Although Tomb 6, as seen today, has two chambers and elaborate plaster heads decorating the façade, when originally built as part of Structure 195-5 it was simpler. It had only a single chamber with niches in three of its walls and lacked the stucco heads on the façade (Fig. 5.10).

The long axis of Tomb 6 is oriented east-west with the door and the façade facing west. The single chamber (later to become the antechamber) was 2.02 m long, east-west, and 90 cm wide, north-south, with walls built of stone covered with white plaster. The flat roof, 95 cm above the plaster floor of the tomb, was formed by three large stones. Niches occurred in the north, south, and east (rear) walls of the tomb. The tomb doorway, 60 cm wide and 70 cm high, was sealed by a large stone. The façade, built of

well-cut stones covered with white plaster, was decorated with twin panels painted red and framed by double cornices.

The married couple who headed the Structure 195-5 household between ca. 725 and 750 CE were buried in Tomb 6. Their probable skeletal remains occur in the single chamber that was later to become the antechamber of Tomb 6. However, Tomb 6, with modifications, served as the burial place for later married couples who headed the Structure 195-4 and 195-3 households. An analysis of the skeletal remains and offerings contained within Tomb 6 will be postponed until Chapter 7.

Structure 195-4[3]

This house was built over Structure 195-5, as Structure 195-4SE, and as an "Annex" (Structure 195-4NE) along the north side of Structure 195-5. The entire house covered about 460 m^2. Its construction involved changes in the platform on top of which Structure 195-5 had been built. A test pit, excavated through the Structure 195-4SE patio floor, exposed an adobe retaining wall that had been built over the Structure 195-5 patio floor to raise the level of the platform on top of which the SE sector of Structure 195-4 was built. The platform was raised 65 cm higher by placing construction fill within numerous contiguous cells or bins formed by the adobe retaining walls built over the floors of the Structure 195-5 house.

Apart from being raised above its Structure 195-5 counterpart, the platform was extended eastward to conform to the expanded floor plan of the SE sector of Structure 195-4. The sloping stone walls that must have occurred along the east, south, and west sides of the Structure 195-4SE platform may have been covered by the later construction of the Structure 195-3SE platform. Therefore, it is uncertain whether or not the taludes at the southwest corner and along the east side of the Structure 195-3SE platform, which were fully exposed in excavations, were also present in the Structure 195-4SE platform. It is possible that older sloping stone walls formed the east, south, and west sides of a more ancient Structure 195-4SE platform.

Construction of the Structure 195-4NE "Annex" along the north side of Structure 195-4SE resulted in leveling the area with about 90 cm of construction fill. The north wall and northwest corner of the Structure 195-5 platform were buried beneath this construction fill. There is no evidence that a platform was built to contain the fill. Although it seems likely that a platform with sloping stone walls would have been necessary at least on the north and east sides of Structure 195-4NE, none was found.

It is possible that the stones forming the platform walls were removed and reused when the later Structure 195-1 was built.

Because it was not feasible to expose Structure 195-4 completely, the areas of the house uncovered in explorations and the reconstruction of it are presented in Figure 5.11. Structure 195-4 includes two separate patios—southeast (SE) and northeast (NE)—each with rooms arranged around it. Each of these separate sectors of the house will be discussed in turn, beginning with the SE sector.

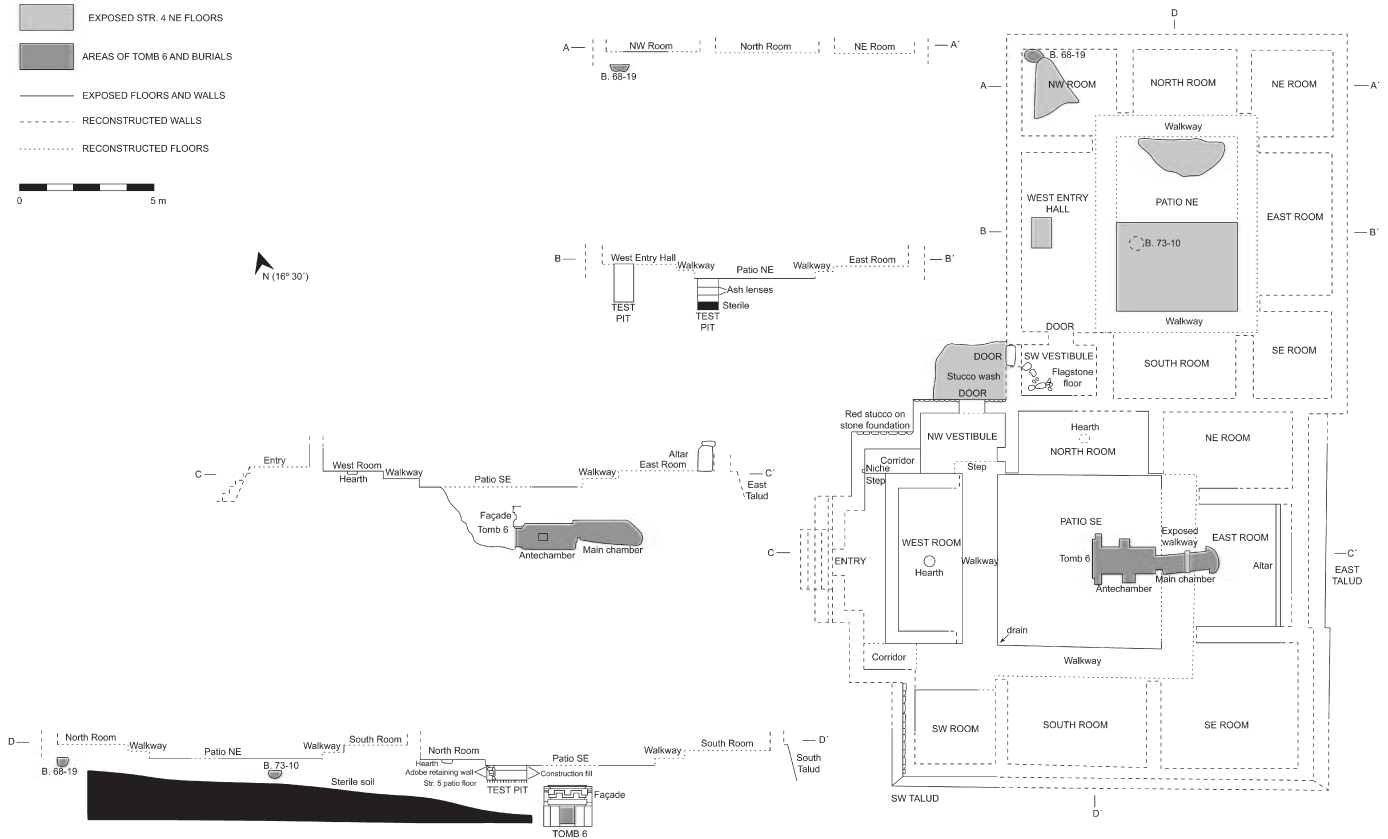
Structure 195-4SE

Structure 195-4SE measured approximately 14.7 m north-south and 18.9 m east-west and covered about 277 m^2. The patio floor was fully exposed in excavations. It was raised 65 cm higher than the Structure 195-5 patio, making it possible to expand the Structure 195-4SE patio floor eastward above the east walkway and part of the east room of Structure 195-5. The Structure 195-4SE patio measured 6.6 m on a side and had a tubular ceramic drainpipe in its southwest corner.

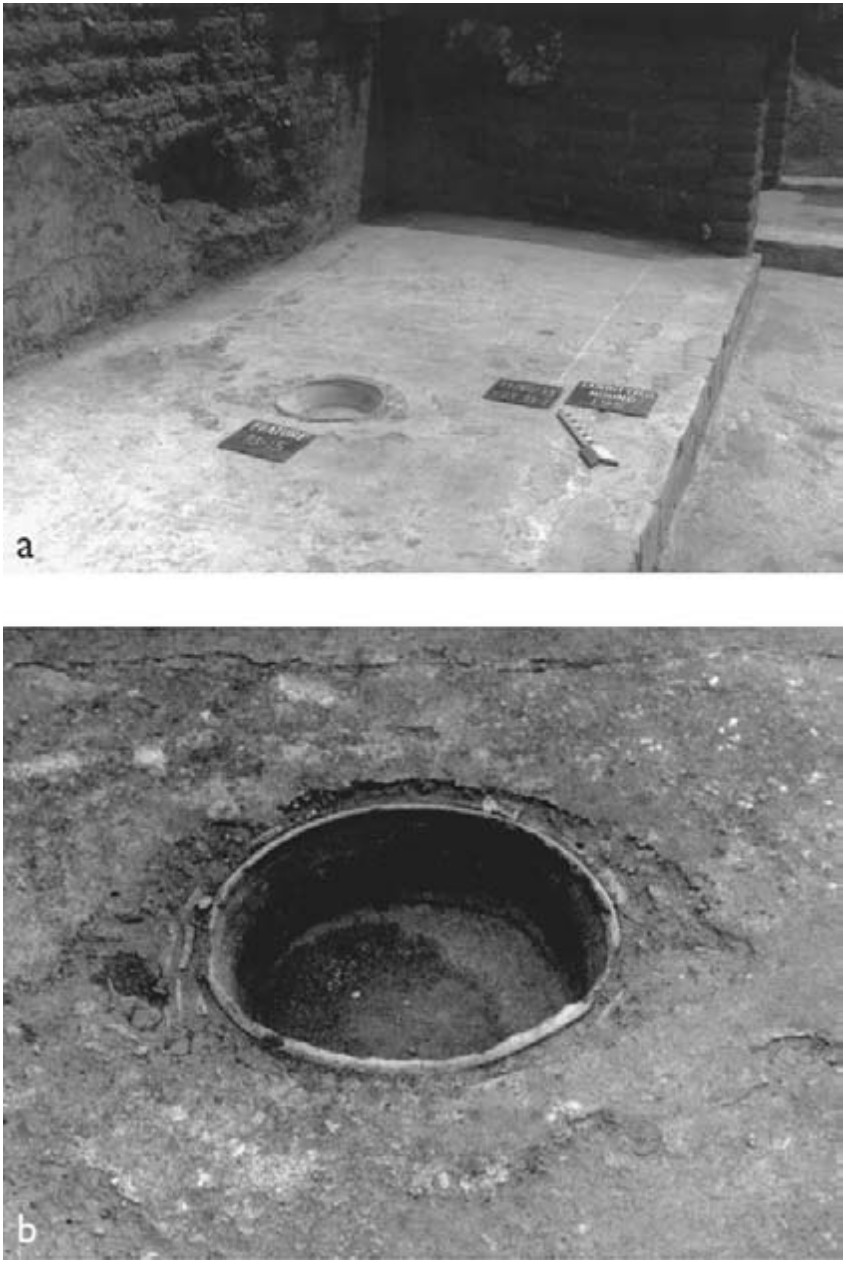
The room on the west side of the patio was completely uncovered in excavations (Fig. 5.12a). A test pit, excavated through the room floor, revealed that it had been raised 60 cm with construction fill and built directly above its Structure 195-5 counterpart. The room's interior measured 5.4 m long, north-south, and 2.35 m wide, east-west, and was enclosed on three sides by adobe walls 50 cm thick with its remaining side open, facing on the patio. It had a ceramic pan 35 cm in diameter and 10 cm deep, which served as a hearth, placed in the center of the room flush with the floor (Fig. 5.12b). A walkway, about 95 cm wide, ran along the west side of the patio in front of the room. The walkway was a step (30 cm) above the patio and a step (25 cm) below the room floor.

The north room was fully explored in excavations. It was a step (23 cm) above and fronted directly on the patio. Its interior dimensions were 4.9 m east-west and 2.3 m north-south, and it was enclosed on three sides by adobe walls 50 cm thick, leaving its remaining side open facing on the patio. A circular hole in the floor indicates that a ceramic pan, used as a hearth, had been set in the center of the room flush with the room floor.

The northwest vestibule, located between the north and west rooms at the northwest corner of the patio, was completely exposed in excavations. Its interior dimensions were 3.2 m east-west and 2.3 m north-south and its floor was a step (20 cm) above the walkway that ran along the west side of the patio. The vestibule shared its east wall with the north room and its south wall with the west room, both of which were made of adobe and 50



5.11. ***Plan and profiles of Structure 195-4***



5.12. ***West room of Structure 195-4SE***

cm thick. Its north adobe wall was 50 cm thick and had a stone foundation covered with red plaster on its exterior (north side), which formed an outside (north) wall of the house. The west adobe wall of the vestibule was only 30 cm thick. This vestibule will be discussed further in a later section.

A fragment of the walkway along the east side of the Structure 195-4SE patio was exposed in the ancient cut made through the altar and Tomb 5. It was about 25 cm above the patio floor. The east room floor was probably 25 cm above the walkway but it was not explored in excavations. The adobe core of a possible altar was found along the probable back (east) wall of the room.

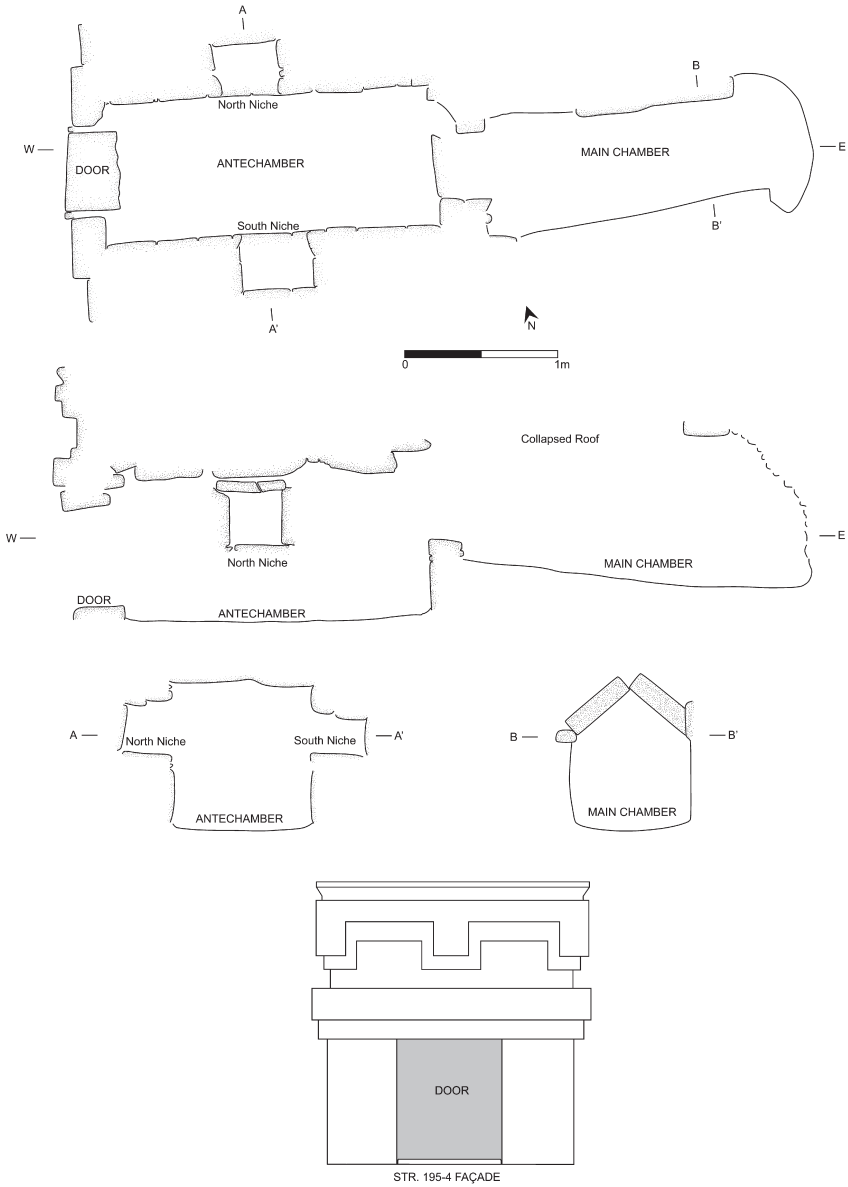
The northeast corner room was covered by the south room of Structure 195-3NE and no pits were dug through it or through any of the rooms along the south side of Structure 195-3SE to search for the earlier rooms relating to Structure 195-4SE. Therefore, these features have been hypothetically reconstructed in Figure 5.11.

Tomb 6 in Structure 195-4SE

The construction of the main chamber of Tomb 6, converting it from the single-chambered tomb with three niches of Structure 195-5 to a double-chambered tomb, occurred coincident with the construction of Structure 195-4SE. A hole was dug through the center of the east room of Structure 195-5 behind the original tomb. This hole resulted in the near-total destruction of Tomb 5. The hole was dug to clip the rear (east) niche of the original tomb and convert it into a narrow passage between the antechamber (original tomb) and the newly constructed main chamber (Fig. 5.13).

Little precision was taken in adding the main chamber to Tomb 6. It was not aligned with the antechamber but slanted off toward the north. The south wall of the main chamber angles northward so that in its eastern extreme it is 15 cm north of where it should have been had it been aligned with the antechamber. The north wall is likewise misaligned. Unlike the antechamber floor, which was almost perfectly horizontal, the hard-packed earthen floor of the main chamber sloped downward from west to east so that the east end was 20 cm lower than the west end. The east end was somewhat irregularly rounded, instead of being squared off, in both its floor plan and its concave profile.

The walls of the main chamber were formed in part by stone and in part by the naturally compact sterile soil on the sides of the ancient cut made to build it. Unlike the antechamber, it lacked niches. The roof was built of adobes arranged to form a vault (Fig. 5.14). Vaulted roofs, but



5.13. ***Plan and profiles of Tomb 6 in Structure 195-4SE***

built of stone, are characteristic of Monte Albán tombs (Acosta 1965:819). Because of the sloping floor, the height of the roof above the floor varies from 75 cm in the west to 97 cm in the east. The main chamber was 2.5

5.14. ***Vaulted roof of the main chamber of Tomb 6***

m long and 65 cm wide, except in its eastern extreme where it expanded to a width of 90 cm. The married couple who headed the Structure 195-4 household between ca. 750 and 775 CE, were buried in the main chamber of Tomb 6. Their probable skeletal remains occur among those of the four persons buried there.

Structure 195-4NE

The Structure 195-4NE "Annex" was built against the north side of Structure 195-4SE. It measured about 14.2 m north-south and 12.9 m east-west and covered approximately 183 m^2. A test pit, excavated to sterile soil beneath the patio floor, revealed that Structure 195-4NE was built over 90 cm of Xoo phase deposits. These deposits represent construction fill that was used to level the area before building Structure 195-4NE. The construction fill served to place the Structure 195-4NE patio floor 15 cm higher than the Structure 195-4SE patio floor (Fig. 5.11).

Because the northern half of the Structure 195-4NE patio was re-used as the southern half of the Structure 195-3NE patio, it was fully exposed in excavations. Remnants of the northern half of the patio floor of Structure 195-4NE were also detected at the base of the hole dug by S.O.P. crews under the floor of the north room of Structure 195-3NE (Fig. 5.15a).

5.15. ***Some features of Structure 195-4NE***

Although this indicates that the Structure 195-4NE patio was farther north and west than the later Structure 195-3NE patio, it was not possible to determine its limits with certainty. However, it appears to have measured about 6.6 m north-south and 4.6 m east-west.

Also uncovered in the hole dug by S.O.P. road builders was a section of the floor of the northwest corner room of Structure 195-4NE (Fig. 5.15b). Because this room floor was 50 cm above the level of the patio floor, it seems likely that a 25 cm high walkway encircled the patio. Finally, another exposed portion is a section of the floor of the west room of Structure 195-4NE. This floor was also 50 cm above the level of the patio floor, once again indicating that a 25 cm high walkway must have encircled the patio.

The north room and northeast corner room of Structure 195-4NE were completely obliterated by the hole gouged by S.O.P. crews. Furthermore,

no pits were dug beneath the east room of Structure 195-3NE to search for the east room floor of Structure 195-4NE. Finally, the construction of Structure 195-3NE involved the obliteration of all the rooms along the south side of Structure 195-4NE except for a small section of a flagstone floor corresponding to the southwest vestibule, which will be discussed shortly. Therefore, all of these rooms are hypothetically reconstructed in Figure 5.11.

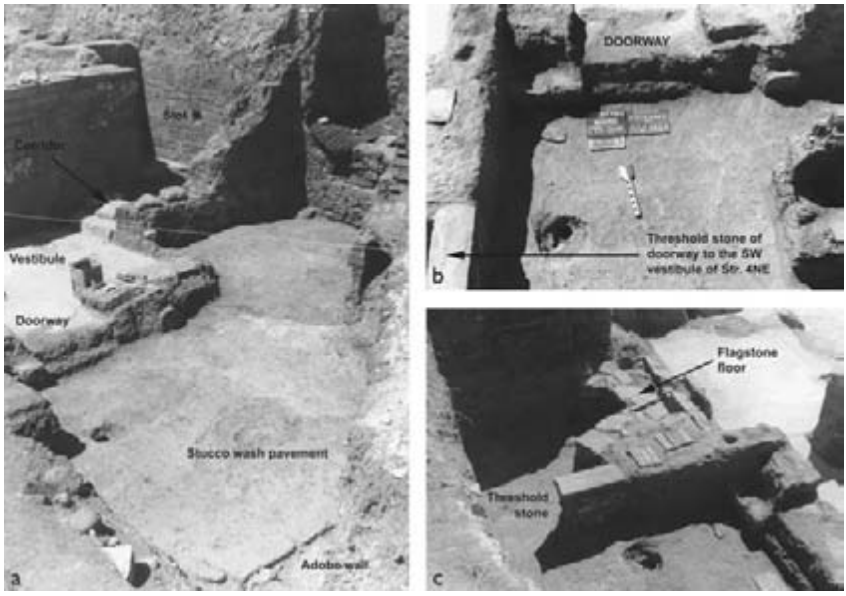
BURIALS

Burial 73-10 was a six- to nine-month-old infant of undetermined sex who had been placed in a simple grave excavated into Xoo phase deposits underlying the Structure 195-4NE patio floor. Because the patio floor above the burial was intact, the baby was probably buried either before or while it was being constructed. The top of the skeleton was 49 cm beneath the level of the patio floor at a distance of 1.8 m north of the south side of the patio and 32 cm east of the west side of the patio (Fig. 5.11). The baby was buried in a flexed position, lying on its left side, with the head to the south and feet to the north. The remains were covered by a small inverted G-35 bowl that measured 18 cm in diameter and had a height of 5 cm and pattern burnished design I (see Fig. 7.14 for design).

Burial 68-19 was a six- to eight-year-old child of undetermined sex who had been placed in a simple grave dug into Xoo phase deposits underlying the floor of the northwest corner room of Structure 195-4NE. However, because of the destruction of part of this floor both by S.O.P. crews and by ancient construction activity, it is not possible to determine whether the burial was placed under an intact floor (Fig. 5.11). The top of the skeleton was at a depth of 70 cm beneath the level of the floor. The child was buried lying on its back with the head to the east and feet to the west. The legs were drawn up and flexed, and the right arm was placed behind the back and the left arm was parallel to the trunk. The skeleton was in primary deposition, but the cranium was missing and had been destroyed when a walkway was built at a later date along the west side of Structure 195-3NE. No offering was present with the burial (Fig. 5.15c).

STRUCTURE 195-4 ENTRYWAYS

The explorations of the west entry, corridor, and northwest vestibule of Structure 195-4SE have yielded important information concerning the main entry to the SE sector of Structure 195-4 and the connection between it and the Structure 195-4NE "Annex." Although it was not possible



5.16. ***Entryways between Structures 195-4SE and 195-4NE***

to explore the main entry on the west side of Structure 195-4SE because of later structures that covered it, the L-shaped corridor that led from the main entry to a vestibule at the northwest corner of the Structure 195-4SE patio was fully excavated (Fig. 5.11).

The southwest corridor of Structure 195-4SE was blocked; however, the northwest corridor was open and wrapped around the exterior of the west room, providing the main entryway to the house. The west leg of the corridor (behind the west room) was 88 cm wide and extended northward for about 1.4 m before ending at a step that descended 17 cm to the north leg of the corridor. A rectangular slot was located in the adobe wall on the west side of the corridor at a point 65 cm above the top of the step (Fig. 5.16a). Potter (1974:61–62) suggested that this slot, and others like it in the structures of Mound 190, functioned to attach some type of door or gate that could be used to close the corridor. The north leg of the corridor was at a right angle to the west leg and extended along the north wall of the west room. The north leg was 1.05 m wide and extended eastward for about 2 m before terminating at a step that descended 15 cm into the northwest vestibule of Structure 195-4SE (Fig. 5.16a).

The northwest vestibule, as mentioned above, was 2.3 m wide, north-south, and 3.2 m long, east-west. An open doorway, about 90 cm wide, uncovered on the north side of the vestibule provided a small side entry to

the SE sector of Structure 195-4. The doorway, whose threshold was 8 cm above the level of the vestibule floor, had its jambs on either side (east and west) preserved to a height of only a few centimeters above the threshold. It was not possible, therefore, to determine if any slots occurred on either side of the doorway (Fig. 5.16b).

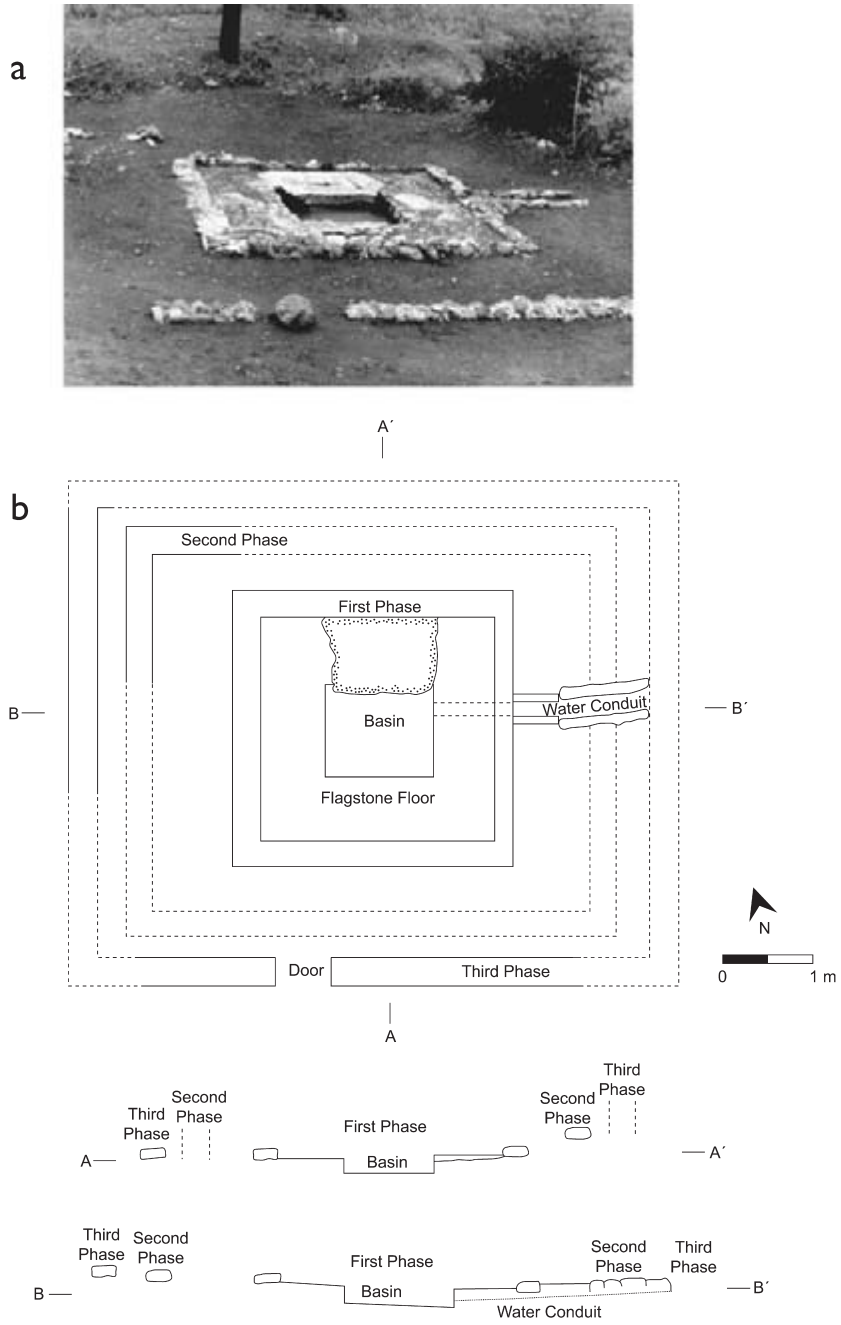
The doorway opened onto a paved area outside the SE sector of Structure 195-4. This paved area, located a step below (20 cm) the threshold of the doorway, was simply surfaced with a thin plaster wash placed over hard-packed earth. The pavement measured 2.7 m east-west by 2.2 m north-south and extended to a second open doorway located on the west side of Structure 195-4NE. The existence of the second doorway is indicated by the presence of a large flat stone marking the threshold of the doorway, which was a step (30 cm) above the pavement. The doorway opened into the southwest corner room of Structure 195-4NE. The corner room, which functioned as a vestibule, had a flagstone floor (Fig. 5.16c).

The plaster pavement served as an access area between Structures 195-4NE and 195-4SE via the two doors—one leading to the southwest vestibule of Structure 195-4NE and the other leading to the northwest vestibule of Structure 195-4SE. It is possible that the paved area was enclosed by adobe walls on its north and west sides, although only the adobes along the north side of the paved area were uncovered in excavations (Fig. 5.16a). If the paved area was enclosed by adobe walls, then the only entrance to the Structure 195-4 house would have been through the main entryway on the west side of Structure 195-4SE.

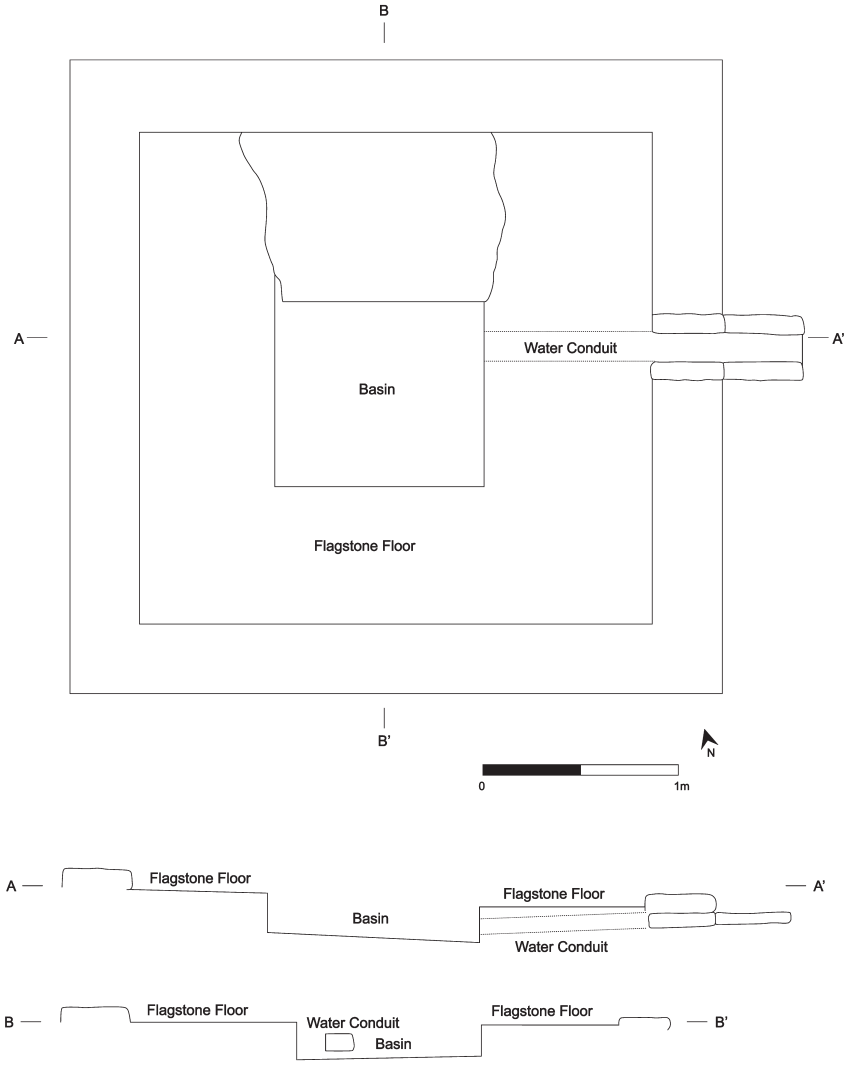
SWEATBATH

During the 1961 excavations, a sweatbath (*yaa* in modern Mitla Zapotec) was uncovered in association with Xoo phase ceramics about 10 m north of the north wall of Structure 195-4NE (Fig. 5.17a). The sweatbath manifested three phases of construction (Fig. 5.17b). It appears likely that the innermost, or oldest, construction of the sweatbath was associated with Structure 195-4. Yet without a stratigraphic link connecting the sweatbath to the houses, we cannot dismiss the possibility that its first version had been continuously used without any modification since the earliest construction of Structure 195-6. Nevertheless, its proximity to Structure 195-4 (only 10 m away) and distance from Structures 195-5 and 195-6 (about 25 m away) favors its association with Structure 195-4.[4]

The sweatbath had the foundations of its walls and its flagstone floor preserved intact. It was nearly square, measuring 3.2 m north-south and 3.55 m east-west. In the center of the floor was a rectangular plaster-covered

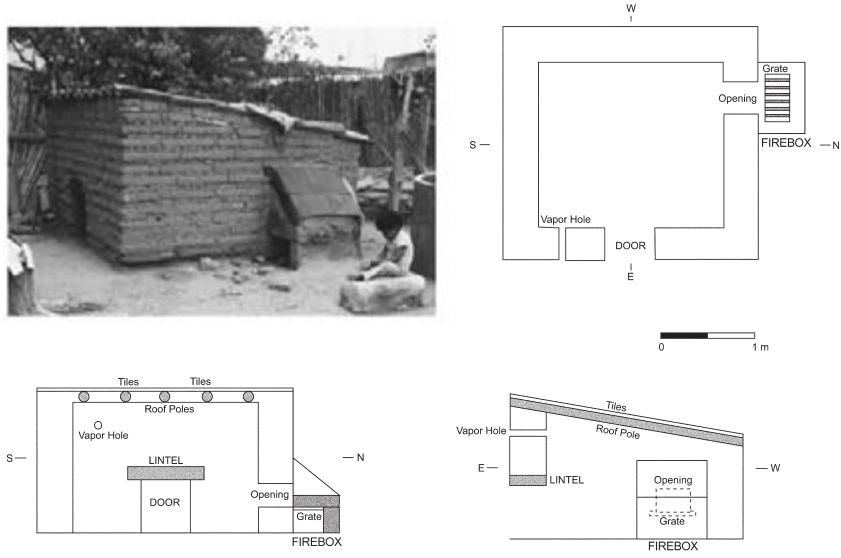


5.17. ***Sweatbath north of Mound 195 with three phases of construction***



5.18. ***Plan and profiles of the innermost or original sweatbath***

basin 93 cm wide, north-south, 1.08 m long, east-west, and 20 cm deep. A stone-lined water conduit began 40 cm outside (east of) the east wall of the sweatbath, passed beneath the flagstone floor, and opened into the northeast corner of the basin about 4 cm above the basin floor. Steam was probably produced by placing hot stones in the basin and pouring water into the conduit outside the sweatbath (Fig. 5.18).



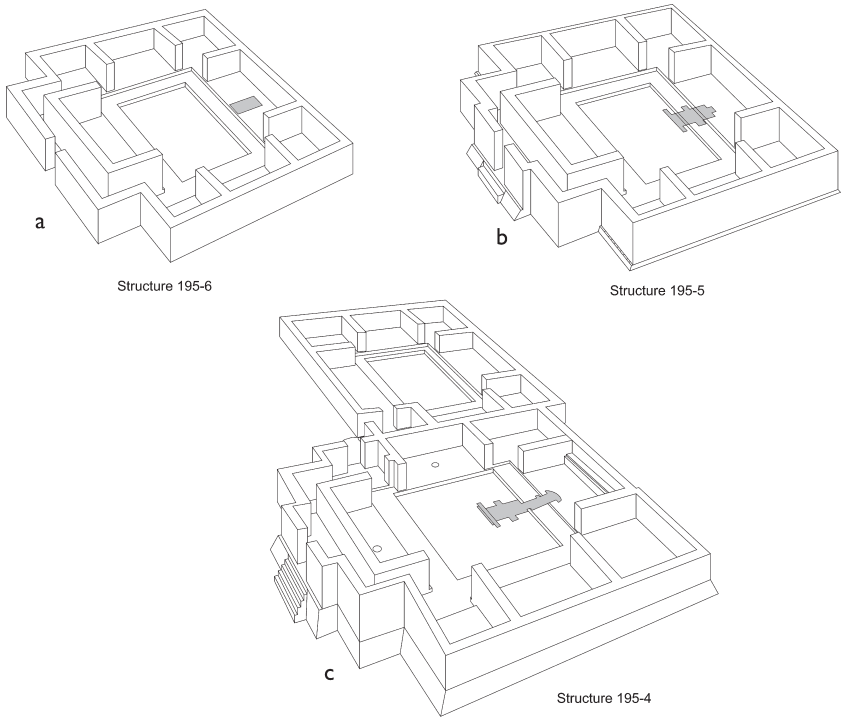
5.19. ***Sweatbath in Mitla in 1980***

This sweatbath is similar in form to a somewhat smaller one examined in Mitla in 1980 that measured 2.72 m north-south and 2.48 m east-west. However, the locus of steam production differs between the archaeological and modern examples. The modern example has a firebox (*horno*) along its north wall. The firebox is made of adobe and has an iron grate that held stones. A fire was lit beneath the grate to heat the stones. A small opening (*ventanilla*) in the north wall allowed steam from water poured on the heated stones to fill the sweatbath (Fig. 5.19).

Mitla Zapotecs report that they most frequently prescribe a sweatbath for women who have just given birth; however, male and female patients are also given sweatbaths to cure various ailments. A curer (*curandera*) enters the sweatbath with the patient and uses a leafy plant to swish water from a jar over the patient's body. The water in the jar is prepared with orange peels, laurel leaves, and marigolds. The archaeological examples also may have been used for women who had just given birth and to cure ailments, although orange peels (an Old World fruit) certainly would not have been used to prepare the water.

THE STRUCTURE 195-6, 195-5, AND 195-4 HOUSEHOLDS

Assuming the reconstructions of Structures 195-6, 195-5, and 195-4 in Figure 5.20 are correct, the possible composition of the elite households



5.20. ***Isometric reconstructions of Structure 195-6, 195-5, and 195-4***

that occupied them remains to be determined. Structures 195-6 and 195-5 manifest the same layout: four rooms and four corner rooms arranged around a single patio (Figs. 5.20a and b). We assume the entryways to the houses were in the west and L-shaped, like the known entryways of Structures 195-3 and 195-4. The probable entryways in Structures 195-6 and 195-5 led to a corner room of the house that served as an entry vestibule.

The east rooms of Structures 195-6 and 195-5 were built over the household tomb, Tomb 5 and Tomb 6, respectively, and served as shrine rooms dedicated to the household ancestors buried in the tombs beneath them. Rituals honoring the deceased ancestors were probably performed in the rooms. The remaining three rooms around the patios of Structures 195-6 and 195-5 are probably living quarters, each associated with an adjacent corner room that may have functioned as a kitchen, storeroom, or sleeping quarters or was used for other activities. Several possibilities exist for the utilization of this complex of rooms. First, a joint family household consisting of a married couple and their married sons may have occupied

the three living quarters and associated corner rooms. Second, the rooms might have been occupied by a polygynous family household composed of the married couple who headed the household and his secondary wives or concubines, as suggested by some of the ethnohistoric documents. Finally, one or more of the rooms may have been set aside for visitors. Combinations of the above, and even other possibilities, exist. However, it seems likely that upon marriage, the eldest son and presumed heir of the married couple who headed the household, occupied one of the living quarters and associated corner room.

The Structure 195-4 house has a more complex layout than that of Structures 195-6 and 195-5 (Fig. 5.20c). It contains eight rooms and eight corner rooms arranged around two patios—SE and NE. Excavations determined that the entryway to the SE patio was from the west along an L-shaped corridor. The end of the west leg of the corridor may have had a gate blocking it, preventing unauthorized entry to the house. The north leg of the corridor led to the northwest corner room of Structure 195-4SE. This corner room served as an entry vestibule off the patio.

The northwest corner room of Structure 195-4SE had a doorway in its north wall that led to a paved area outside the house. The paved area may have been enclosed by an adobe wall and was directly west of the southwest corner room of Structure 195-4NE. This corner room, paved with a flagstone floor, also served as an entry vestibule and had a doorway in its west wall that provided access to Structure 195-4NE. An additional doorway in its north wall led to the west room of Structure 195-4NE. This long, narrow room served as an entrance hall within Structure 195-4NE.

The east room of Structure 195-4SE was the ancestral shrine room with Tomb 6 beneath it. This room was larger than its counterparts in Structures 195-6 and 195-5. Also, it appears to have had an altar, perhaps with friezes, along its back, or eastern, wall. However, although more elaborate than its Structure 195-6 and 195-5 counterparts, the east room of Structure 195-4SE was probably, as in those earlier structures, the locus of regularly placed offerings and rituals honoring the household ancestors buried in Tomb 6.

The remaining six rooms and six corresponding corner rooms and the patios of Structure 195-4SE and Structure 195-4NE manifest some significant differences. The patio of Structure 195-4SE is square and at 43.5 m^2 is significantly larger than the 30.3 m^2 rectangular patio of Structure 195-4NE. Likewise, the eastern corner rooms of Structure 195-4SE are much larger than the corner rooms of Structure 195-4NE. These differences, combined with the large Structure 195-4SE east ancestral shrine room containing an altar, suggest that Structure 195-4SE was a more public part

of the house, whereas Structure 195-4NE was more private. Nevertheless, Structure 195-4SE does contain three possible living quarters and their associated corner rooms, and this layout presents problems with interpreting it as a strictly public and nonresidential part of the house.

Structure 195-4SE is the more accessible part of the house via the elaborate west entryway. The large east room with its possible altar was highly visible to all from the large patio where the married couple who headed the noble household may have provided feasts for other nobles. The large south room, which may have functioned as both a residence and a room in which daily business was conducted, and the associated southeast corner room were probably occupied by the married couple who headed the noble household. The north room and adjacent northeast corner room may have been occupied by their married son and heir, and the west room and associated southwest corner room may have been occupied by an aged relative, such as the male household head's widowed mother, or used to host visiting dignitaries.

Structure 195-4NE is the least accessible part of the house. Like in Structures 195-6 and 195-5, the three rooms around the patio of Structure 195-4NE are probably living quarters, each associated with an adjacent corner room that may have functioned as a kitchen, storeroom, or sleeping quarters or was used for other activities. These rooms may have been occupied by the secondary wives or concubines of the male household head. This interpretation is based on data from documentary sources, cited in Chapters 1 and 4, that noble leaders had many secondary wives (Çarate 1581; Villagar 1580) and large households (Carrasco 1964).

Alternate interpretations of this complex of rooms in Structure 195-4 are, of course, possible. Structure 195-4SE may have been a strictly public part of the house where the married couple who headed the noble household conducted daily business, feasted other nobles, and quartered visiting dignitaries. Structure 195-4NE may have been the residential quarters occupied by the couple and their family.

NOTES

1. Our estimate is based on six minimum individuals buried in Tomb 6, which is associated with Structure 195-5, Structure 195-4, and Structure 195-3. This accounts for three married couples who would have occupied these structures over a period of seventy-five years, at twenty-five years per generation. A calibrated radiocarbon date of 800 CE is associated with the penultimate entrance into Tomb 6, indicating that Structure 195-3 was occupied from ca. 775 to 800 CE (Table 5.1). Therefore, Structure 195-4 was probably occupied from ca. 750 to 775 CE and Structure 195-5 from ca. 725 to 750 CE. We assume a married couple

was buried in Tomb 5 of Structure 195-6 and had occupied Structure 195-6 from ca. 700 to 725 CE.

2. Virtually all tombs and burials at Lambityeco were oriented construction east-west or 16° 30' east of north. Therefore, our description of the orientation of mortuary features is not in terms of magnetic east or west.

3. In a short article published on the elite houses of Mound 195 (Lind 2001), a somewhat different interpretation of Structure 195-4 was presented. The current interpretation corrects some misinterpretations made in the earlier article with regard to the rooms along the south side of Structure 195-4SE, the ancestral shrine and altar, and the entry to Structure 195-4NE.

4. A sweatbath that Lind examined in Mitla in 1980 was about 10 m away from the house with which it was associated. Lind wishes to thank Armando Hernández and Ofelia Bautista of Mitla for giving him permission to study their sweatbath and Felix Sosa of Mitla for directing him to it.

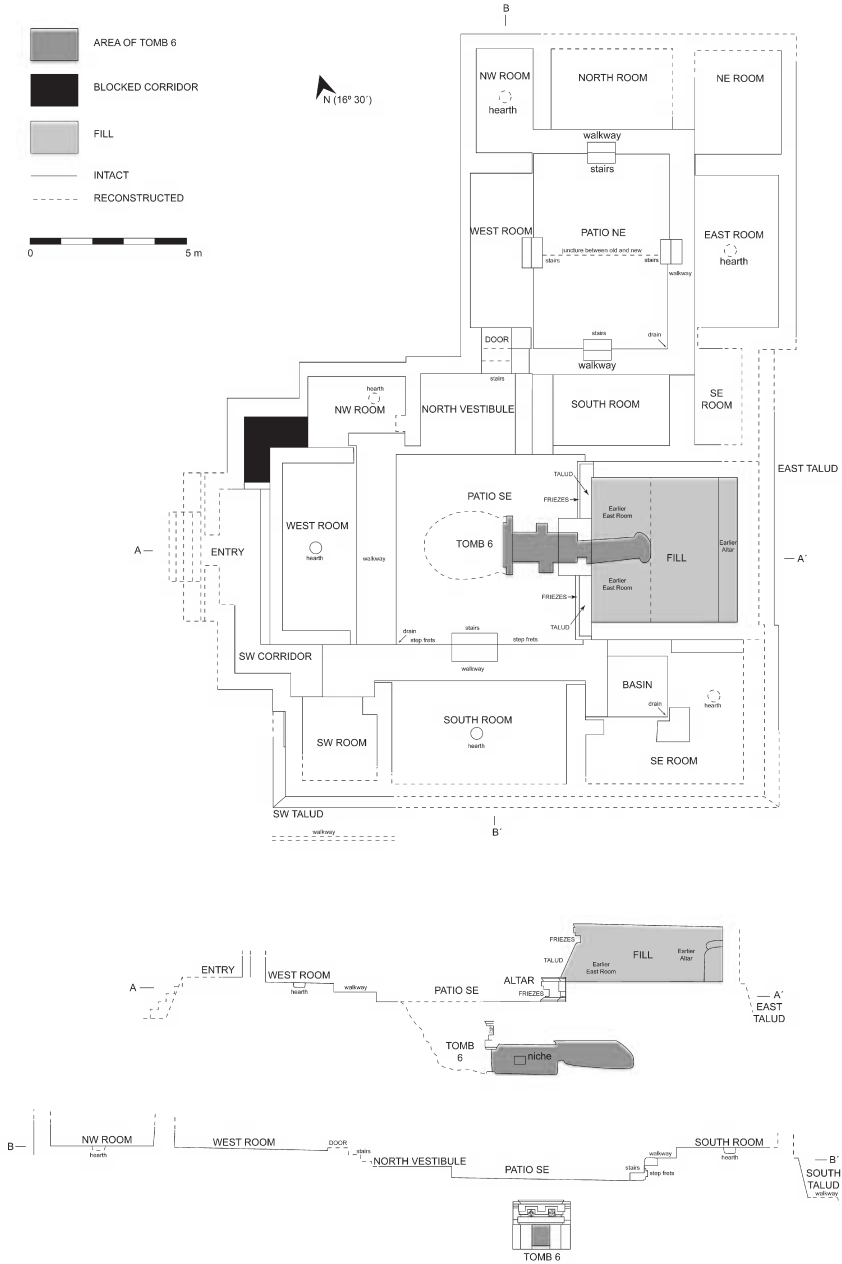
chapter six

Structure 195-3

Structure 195-3 was the final building constructed on Mound 195 Sub and the structure most completely explored in excavations. It covered an area of about 434 m^2 and represents a complete renovation of Structure 195-4. With the exception of the main west entry, which could not be explored because of later constructions that covered it, Structure 195-3 was fully exposed in excavations, making it possible to draft a complete floor plan (Fig. 6.1). Like Structure 195-4, Structure 195-3 included two patios—southeast (SE) and northeast (NE)—each with rooms arranged around it. Each of these separate sectors of the house will be discussed in turn, beginning with the NE sector.

STRUCTURE 195-3NE

This section of the building measured approximately 13.7 m north-south and 11.1 m east-west and covered an area of about 152 m^2. It was built up against and partly incorporated into Structure 195-3SE and represents a major renovation over its Structure 195-4NE form. The renovation involved moving rooms south and east of their former Structure 195-4NE locations, raising them to a higher elevation, and incorporating some of the rooms on the south side into areas formerly occupied by rooms along the north side of Structure 195-4SE (compare Figs. 5.11 and 6.1).



6.1. ***Plan and profiles of Structure 195–3***

6.2. ***Structure 195-3NE***

No sloping stone walls were found along the north and east sides of Structure 195-3NE despite the fact that they once must have existed to contain the construction fill in the platform atop which the structure was built. Any north wall of the platform, however, would have been destroyed by the hole dug by S.O.P. crews. The absence of a wall along the east side of the platform is difficult to explain. It is possible that its stones were removed and reused in the later construction of Structure 195-1.

The Structure 195-3NE patio was fully exposed in excavations. It measured 6.2 m north-south and 4.3 m east-west. The southern half (3.2 m) of the earlier Structure 195-4NE patio was reused as the northern half of the patio floor of Structure 195-3NE, and a new section, 3 m long, was tacked on to form the southern half. The juncture between the "old" and "new" sections of the Structure 195-3NE patio floor is clearly visible at the center of the patio (Fig. 6.1). The patio had a drain, formed by a tubular ceramic pipe, in its southeast corner.

Walkways, which were fully preserved and uncovered in excavations, were raised 75 cm above the level of the patio floor and occur in a continuous band around the north, east, and south sides of the patio; but none occurs along the west side (Fig. 6.2a). However, the floor of the west room, like the walkways, was raised 75 cm above the level of the patio floor. The

height of the walkways and west entrance hall above the patio floor necessitated the construction of stairways that were placed to lead directly to the rooms above on all four sides of the patio. Each stairway was composed of two steps that measured about 35 cm wide and about 25 cm high. The 75 cm high vertical walls on either side of each of the stairways manifested white plaster-covered panels framed by single cornices. The shorter north and south sides of the patio had single panels on each side of the stairways, whereas the longer east and west sides had twin panels.

The northwest corner room was completely preserved and exposed in excavations (Fig. 6.2b). It was at the level of the north walkway that led into the room from the east, providing an 80 cm wide entry. This narrow access was the only entry to the northwest corner room, which otherwise was enclosed on all four sides by adobe walls. The adobe walls on the west, east (shared with the north room), and north sides were 55 cm thick, whereas the adobe wall on the south (shared with the west room) was 65 cm thick. The room measured 3.3 m north-south and 1.9 m east-west, and a circular hole through the plaster floor near the center of the room indicated that a ceramic pan, serving as a hearth, had once been embedded in the floor.

The north room was a step (25 cm) above the 80 cm wide north walkway that fronted it (Fig. 6.2b). Its corresponding stairway, 90cm wide, rose from the patio directly in front of the center of the room. Practically two-thirds of the northern part of the room was destroyed by S.O.P. crews. However, the southern third of the room floor, sections of the east adobe wall (55 cm thick), and all of the west adobe wall (65 cm thick) were preserved. Because of the destruction of the floor, it was not possible to determine whether this room had a ceramic pan embedded in its floor; but it most likely did. The room measured 3.9 m east-west and an estimated 2.6 m north-south. It was enclosed on three sides (the north was not preserved) by adobe walls; the south side was open, facing on the patio.

Like the north room, the northeast corner room had been destroyed along its north side by S.O.P. crews so that it was not possible to determine whether a ceramic pan occurred in its floor (Fig. 6.2c). The room was entered through a narrow (70 cm) doorway at its southwest corner and was a step (20 cm) above the walkway. Apart from this narrow doorway, the room was enclosed on all sides (the north wall was not preserved) by adobe walls 65 cm thick. It measured an estimated 3.3 m north-south and 2.9 m east-west, making it the largest corner room in Structure 195-3NE.

The east room was partially destroyed along its east side but otherwise was preserved and exposed in excavations (Fig. 6.2c). It was a step (20 cm) above the 80 cm wide east walkway that fronted it. The east stairway, 80 cm wide, rose from the patio directly in front of the center of the room.

The west side was open, facing on the patio, whereas the other three sides were enclosed by adobe walls 65 cm thick. A ceramic pan was found embedded in the floor in the center of the room. The room measured 4.9 m north-south and 2.9 m east-west, making it the largest room in Structure 195-3NE.

The eastern half of the southeast corner room had completely eroded away but the remaining portion was preserved and exposed in excavations. It was entered through a 90 cm wide doorway at its northwest corner, which was a step (20 cm) above the walkway. Apart from the entry, the room was enclosed on four sides (the east wall was not preserved) by adobe walls 65 cm thick. Because the eastern half of the room was obliterated, it was not possible to determine if it had a ceramic pan in its center. The room measured 2.8 m north-south and an estimated 2 m east-west, making it the smallest corner room in Structure 195-3NE.

The south room was built in the area formerly occupied by the northeast corner room and part of the north room of Structure 195-4SE. It was completely preserved and exposed in excavations. The room was a step (15 cm) above the 85 cm wide south walkway that fronted it. The south stairway, 80 cm wide, rose from the patio directly in front of the center of the room. The north side of the room was open, facing on the patio, whereas the other three sides were enclosed by adobe walls 65 cm thick. No ceramic pan was embedded in the room floor. The room measured 2.3 m north-south and 3.7 m east-west, making it the smallest room in Structure 195-3NE.

The west room was preserved and excavated in its entirety. As mentioned before, no walkway fronted the room, but a stairway, 1 m wide, rose from the patio floor to the center of the room. The room measured 5 m north-south and 2.1 m east-west and was enclosed by adobe walls 65 cm thick on the north and south sides and 40 cm thick on its west side. Its east side was open, facing on the patio. No ceramic pan was embedded in its floor. A 95 cm wide doorway in its south wall opened onto a stairway that descended into the north vestibule of Structure 195-3SE (Fig. 6.2d).

STRUCTURE 195-3SE

The platform (Mound 195 Sub) atop which Structure 195-3SE was built measured 14.6 m north-south and about 19.3 m east-west and covered approximately 282 m^2; its full western extent could not be determined because of later constructions that covered that side. The talud at the southwest corner of the platform was exposed in excavations (Fig. 6.3a). It was preserved to its original height of 1.35 m. Its standing section extended 2.3

6.3. ***Southwest corner of the platform of Structure 195-3SE***

m along its west side, where it met at a right angle with a vertical stone wall that ran west to accommodate the southwest entrance corridor. Above the platform wall on the west side, the exterior adobe wall of the Structure 195-3SE house was faced with thin, flat stones covered with white plaster (Fig. 6.3b). The sloping wall along the south side of the platform extended for 4 m, its remaining 12.5 m either was not explored or was removed to obtain stones to build the later Structure 195-1. A 1 m wide raised walkway with a stone curb was built along the base of the south platform wall (Fig. 6.1).[1]

The talud along the east side of the platform was only preserved to a height of 90 cm. The standing section extended for 10.3 m and had a 20 cm jog outward (east) beginning at a point 5.5 m from its southern terminus. The jog was built to accommodate the southeast corner room of Structure 195-3SE. The east platform wall was either not exposed along the 2.5 m of its southern end and for 2 m along its northern end or the stones had been removed to build the later Structure 195-1. No sloping wall existed along the north side of the platform, but the exterior wall in the northwest section of Structure 195-3SE had a stone foundation that was covered with red plaster as it probably had in Structure 195-4SE.

Like its predecessor, Structure 195-3SE had its principal entry located on the west side of the platform. A stairway, probably consisting of four

steps, ascended the platform leading to the entry behind the west room. Because this area could not be excavated, it has been hypothetically reconstructed in Fig. 6.1. The corridors behind the west room leading directly from the entry, however, were fully explored. Whereas the L-shaped northwest corridor was the main entryway to Structure 195-4SE, this corridor was blocked and filled in Structure 195-3SE and the L-shaped southwest corridor became the only passageway open between the west entry and the Structure 195-3SE house.

The L-shaped corridor passed behind and turned eastward alongside the exterior of the west room to enter a small square vestibule located in front of the southwest corner room. The west leg of the corridor was 80 cm wide and 2.25 m long. It was at the same elevation as the south leg so that no step separated them. The south leg was 95 cm wide and 2 m long and ended at a step that descended 26 cm to the level of the small square vestibule, 1.7 m on a side, in front of the southwest corner room at which point it merged with the raised walkway along the south side of the patio. The eastern 1 m of the south leg of the corridor was widened to 1.7 m to conform to the width of the small vestibule.

Construction of the entry and southwest corridor of Structure 195-3SE over their Structure 195-4SE counterparts involved some complex building activities. Two narrow (25 cm) adobe walls were erected along the north and east sides of the entry behind the west room. The adobe wall in the north served to block the northwest corridor from the entry. The adobe wall in the east was built up against the back wall of the west room and probably served to reinforce the wall following the remodeling of the entry. Construction of the 1.7 m wide space at the eastern end of the south leg involved building a jog in the south wall of the corridor and overlapping it with the west wall of the southwest corner room. To accomplish this, it was necessary to add a vertical stone wall at a right angle to the west platform wall to accommodate the expansion of the corridor, as mentioned earlier (Fig. 6.3b).

The southwest corridor was the only entryway to the entire Structure 195-3 building. It provided direct access to the walkway that fronted the rooms along the south side of the Structure 195-3SE patio. The walkway, 1.1 m wide and raised 70 cm above the level of the patio floor, extends 9.25 m along the south side of the patio from the end of the southwest corridor in front of the southwest corner room to the southeast corner room.

The southwest corner room of Structure 195-3SE was small, measuring 2.7 m north-south and 2.4 m east-west. It was enclosed on three sides (east, west, and probably south—the south wall was not preserved) by adobe walls 50 cm thick. The adobe wall on the west side of the room was

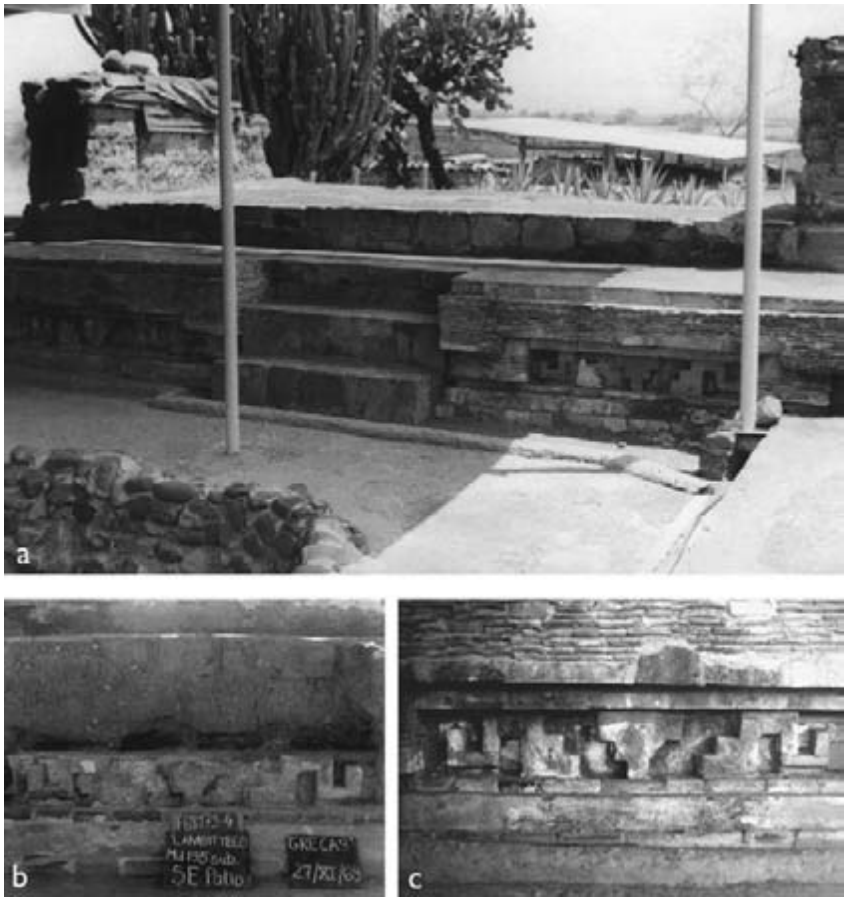
preserved to a height of about 60 cm. The exterior of this wall, which is located directly above the west platform wall, was faced with large, thin, flat stones (Fig. 6.3b). Whether or not the exteriors of the walls of Structure 195-3SE had also been faced with stone is not known. It seems likely, however, that only the exterior adobe walls at the front (west side) or façade of Structure 195-3SE, where the main entry was located, manifested stone facing.

The southwest corner room shared its wall in the east with the large south room, and an adobe pilaster projecting from this wall occurred at the extreme northeast corner of the room. The adobe pilaster probably served to support a roof pole across the front (north side) of the room. The north side of the room was open, facing on the small square vestibule a step below (30 cm). The southwest corridor entered this small vestibule directly in front of the southwest corner room.

The south room was centered on the south side of the patio and raised a step (30 cm) above the walkway that fronted it, which placed it 1 m above the level of the patio floor. The room was the largest one in Structure 195-3SE, measuring 3.25 m north-south and 5.7 m east-west. It was enclosed on three sides (east, west, and probably south—the south wall was not preserved) by adobe walls 60 cm thick and preserved to a height of 1 m. The north side of the room, facing on the patio, was totally open. A ceramic pan, 40 cm in diameter and 12 cm deep, was embedded in the center of the room.

A stairway, about 1.5 m wide, served as a direct means of communication between the patio, walkway, and the center of the south room. The stairway consisted of two steps, each about 45 cm wide and 30 cm high. The walls on either side of the stairway manifested panels decorated with step frets framed by double cornices (Fig. 6.4a).

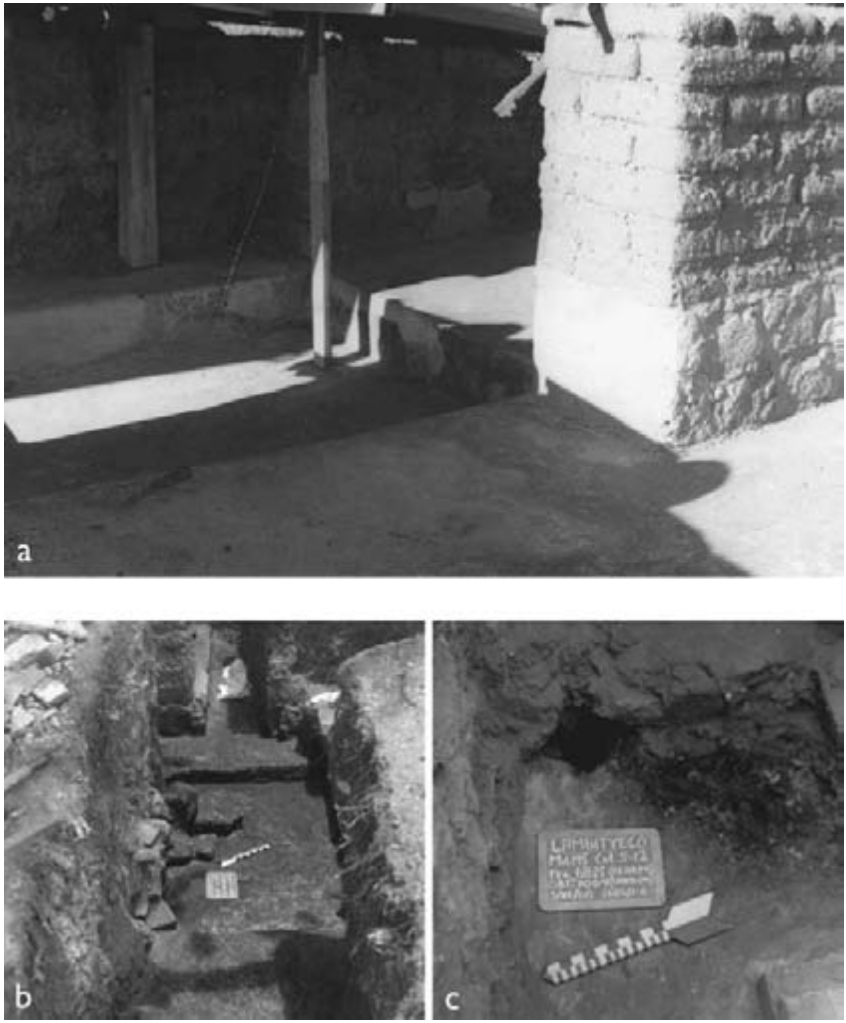
The step frets in the panel on the east side of the stairway were well-preserved (Fig. 6.4b). Those in the panel on the west side were only partially preserved. However, from the remnants uncovered in excavation it is apparent that they represented the same design as occurred in the east panel (Fig. 6.4c). The motifs in each panel included a double-stepped T-shaped element in the center and stepped rectilinear upturned hooks on either side of it that display outward bilateral symmetry. The late Howard Leigh (personal communication, 1979) suggested an interpretation of this step fret design. The double-stepped T-shaped element represents the sky, whereas the upturned rectilinear hooks represent lightning. The former motif actually has counterparts in the Zapotec hieroglyphic script where it appears accompanied by drops of water and thus seemingly carries the semantic value of "cloud." According to Leigh's interpretation, then, this



6.4. ***South room of Structure 195-3SE***

step fret design would signify by metonymic extension "lightning in the sky," which is a metaphor for Cociyo, the Zapotec deity representing lightning, thunder, and rain.

The southeast corner room, directly east of the south room, was an unusual enclosure measuring 4.6 m north-south and 5.2 m east-west, making it the largest corner room in Structure 195-3SE (Fig. 6.5a). The south walkway led into the area providing a 1.1m wide entry on the west side (Fig. 6.5b). The room was otherwise enclosed on all four sides by adobe walls, although the south and east walls were not preserved. The floor of the room included a sunken basin or small patio, 2 m on a side, with a drain in its southeast corner. Narrow walkways occurred on the north and west sides of the small patio. The walkway in the west, 18 cm above the patio,



6.5. ***Southeast corner room of Structure 195-3SE***

was 65 cm wide and 2.5 m long. The walkway in the north, 28 cm above the patio, was only 50 cm wide and 2 m long.

An L-shaped room occurred on the east and south sides of the small patio at a level 28 cm above it. The east wing of the room was 2.5 m wide east-west and 3.3 m long north-south and had a circular hole indicating that it had had an embedded ceramic pan in its center. The south wing was 2.1 m wide north-south and 3.4 m long east-west. The L-shaped room was once covered by a thatched roof that had burned following the aban-

donment of Structure 195-3SE (Fig. 6.5c). Carbonized thatching from the roof and remnants of charred roof poles 5 cm in diameter that had supported the thatching were found on the floor of the room. The roof poles had rested on top of the freestanding L-shaped adobe column at the juncture of the two wings of the room and extended across the front of the south wing to an adobe pilaster projecting from the wall on the west side and across the front of the east wing to a narrow adobe wall (35 cm thick) in the north built up against the back half of the south wall of the east room.

Although the rooms raised above the south side of the patio were directly accessible from the southwest corridor, it was necessary to descend the stairway in front of the south room and enter the patio to gain access to the rooms along the west and north sides of Structure 195-3SE. Even though the Structure 195-4SE patio was reused as the Structure 195-3SE patio, modifications of the rooms around it resulted in a reduction of its overall size. Whereas the earlier patio measured 6.6 m on a side in Structure 195-4SE, its dimensions were later reduced to 5.9 m east-west and 6.2 m north-south in Structure 195-3SE. The patio had a drain, formed by a tubular ceramic pipe, in its southwest corner.

The west room remained unchanged in Structure 195-3SE from its Structure 195-4SE form (see Fig. 5.12). During the remodeling of the entry behind the west room, a doorway, 85 cm wide, was opened temporarily in the west wall of the room—probably to allow access to the house. After completion of the remodeling, the doorway was sealed and a 25 cm thick adobe wall was built, reinforcing the room wall. Furthermore, the narrow 95 cm wide walkway, which had fronted the west room in Structure 195-4SE, was extended 35 cm eastward out onto the patio in Structure 195-3SE. This 1.3 m wide walkway led from the west room to the northwest corner room.

In Structure 195-4SE, the northwest corner room had functioned as a vestibule, entered from the west by the northwest corridor and from the north through a doorway (see Figs. 5.11 and 5.16a). In Structure 195-3SE, the corridor and doorway were blocked and the vestibule was converted into a corner room measuring 2.4 m north-south and 2.9 m east-west. The room had adobe walls on four sides and was entered through a 1.4 m wide doorway a step (20 cm) above the north end of the west walkway. A circular break in the floor indicates that the northwest corner room had an embedded ceramic pan near its center.

The earlier north room of Structure 195-4SE was converted into a vestibule in Structure 195-3SE. The north vestibule of Structure 195-3SE was both shortened in its east-west dimensions and widened in its north-

south dimensions over its Structure 195-4SE counterpart. The shortening of the room from 4.8 m in Structure 195-4SE to 3.7 m in Structure 195-3SE involved building an adobe wall on the east side of the room 1.1 m west of the earlier east wall, thereby lopping 1.1 m off the east end of the room. The Structure 195-3SE north vestibule was shortened to accommodate construction of the south room of Structure 195-3NE. Likewise, the earlier northeast corner room of Structure 195-4SE was eliminated and the area it had occupied was filled by part of the south room and southeast corner room of Structure 195-3NE (compare Figs. 5.11 and 6.1).

Apart from being shortened, the north vestibule of Structure 195-3SE was also widened over its Structure 195-4SE counterpart by the addition of a row of stones along its front (south side), which flanks the north side of the patio. Therefore, although the earlier north room was 2.3 m wide, north-south, in Structure 195-4SE, it was widened to 2.6 m, north-south, in the later Structure 195-3SE north vestibule. The north vestibule, then, measured 2.6 m north-south and 3.7 m east-west and was a step (23 cm) above the patio floor. The vestibule floor had been extended 30 cm south out onto the patio floor. It was enclosed on three sides (north, east, and west) by adobe walls, although its south side was open, facing on the patio. The vestibule had a 95 cm wide doorway in its north wall, which was reached by a stairway that communicated with the west room of Structure 195-3NE (Figs. 6.1 and 6.2d).

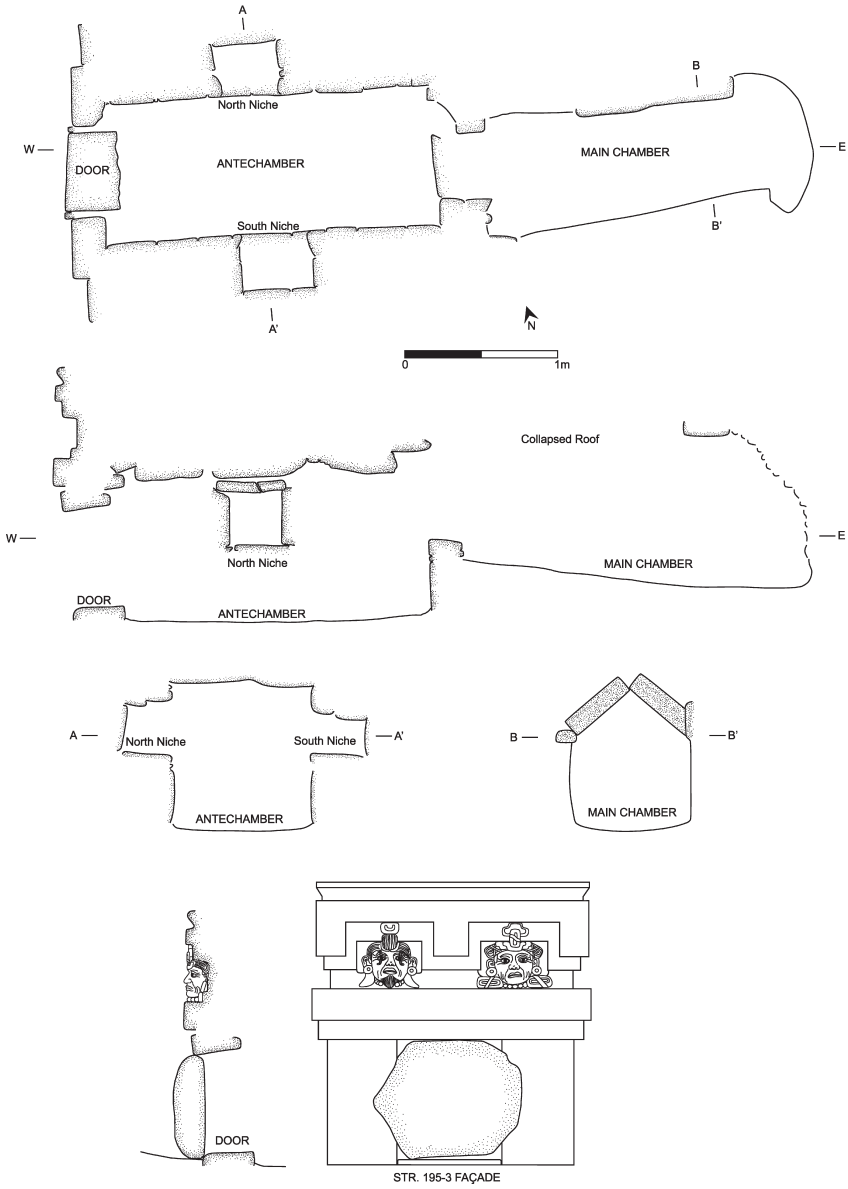
The east room of Structure 195-3SE underwent two phases of construction. The ancient hole through the altar exposed a segment of the floor of the Structure 195-3SE east room and revealed that it had been built 50 cm above the walkway in front of the Structure 195-4SE east room, making it 70 cm above the patio floor. Further excavations exposed the northern third of the Structure 195-3SE east room beneath later construction (Fig. 6.6). It is evident that a walkway, 80 cm wide and at the same level as and at a right angle to the south walkway, extended northward into the east room. The east room floor was at the same level as the walkway that led into it. Adobe walls, 60 cm thick and preserved to a height of 1.5 m, occurred on the north and south sides of the room but the east adobe wall was only 25 cm thick. The east room measured 4.65 m north-south and 2.75 m east-west.

Sometime after its construction, the east room was filled to the tops of the walls and extended 25 cm eastward out onto the patio floor to convert it into a large altar complex above Tomb 6 (Fig. 6.6a). This remodeling probably took place at the same time that two portrait heads modeled in plaster were attached to the façade of the tomb.

6.6. ***Earlier east room of Structure 195-3SE***

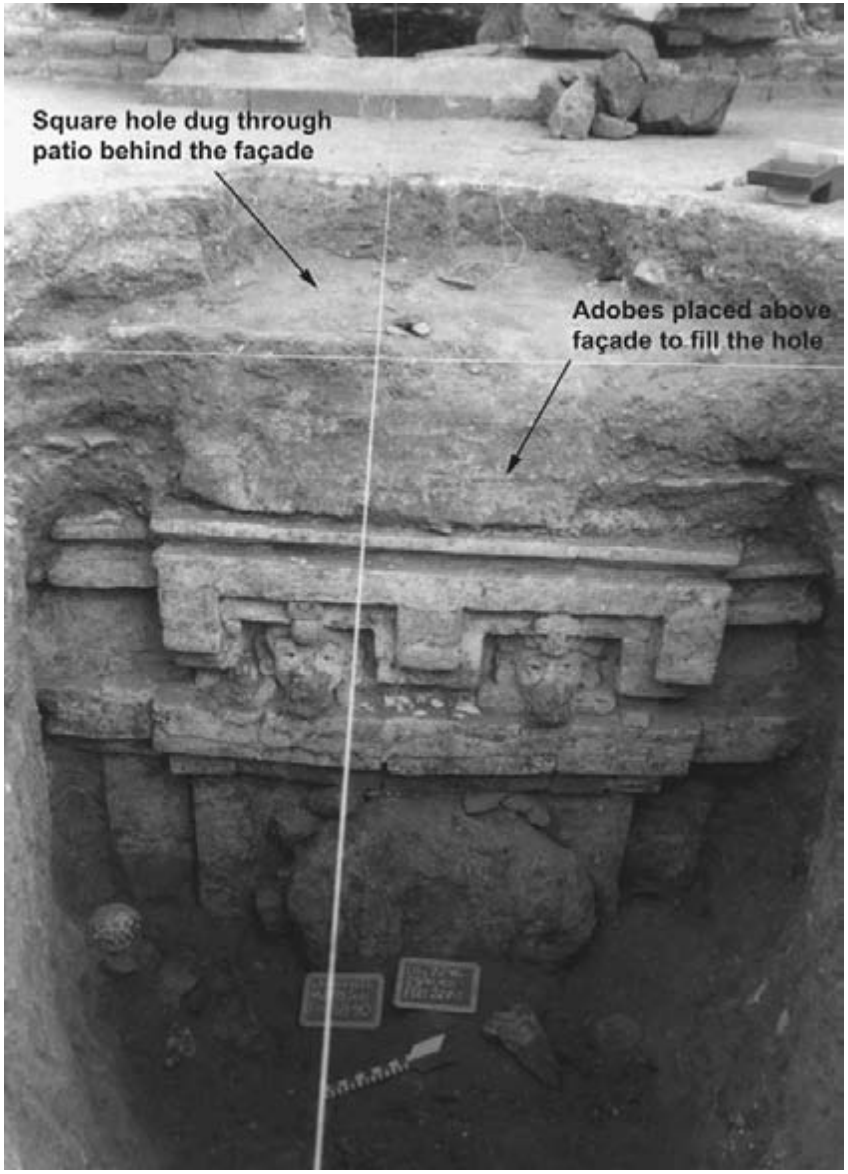
TOMB 6 IN STRUCTURE 195-3SE

Apart from the portrait heads attached to its façade, Tomb 6 was the same in Structure 195-3 as it had been in Structure 195-4 (Fig. 6.7). To affix the heads, it was necessary to dig a hole through the patio floor to expose the



6.7. Plan and profiles of Tomb 6 in Structure 195-3SE

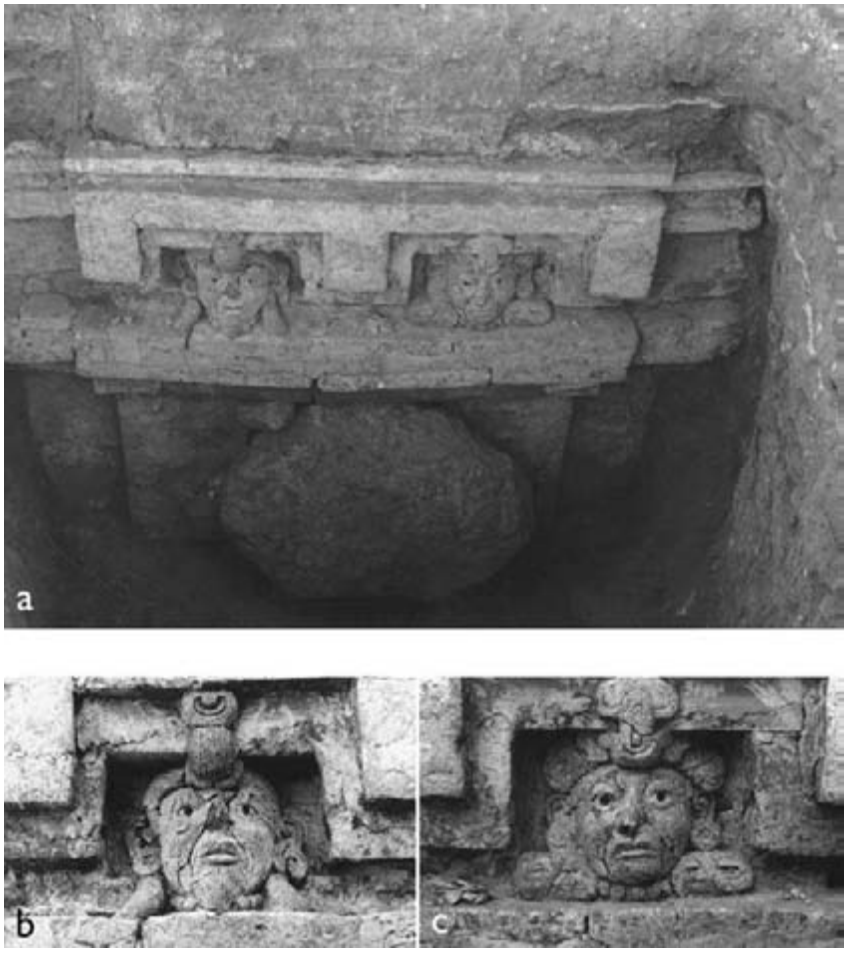
façade and lintel of the tomb. The hole, which also penetrated a 1 m wide section of the Structure 195-5 patio floor above the façade and directly behind the heads, was apparently cut to provide the working space necessary



6.8. ***Cut above the Tomb 6 façade***

to attach the heads. Following their placement, the hole above the façade was filled with adobe blocks and mortar (Fig. 6.8).

In the process of preserving the heads, it was discovered that the panels on the façade had been covered with five layers of paint. Two layers of red



6.9. Plaster portrait heads on the façade of Tomb 6

paint decorated the panels before the heads were attached. Following their attachment, a layer of white paint and two additional layers of red paint had been applied.

The slightly larger-than-life-size heads (each measures 30 cm by 30 cm), attached to the façade of Tomb 6, are virtual portraits of individuals (Fig. 6.9a). The head on the north side of the façade depicts an old man, identified as old-aged by the wrinkles on his face (Fig. 6.9b). He has a small pointed beard and wears a necklace and earspools with dangling jaguar tooth pendant earrings. Each of his eyes has a scroll above and below it. The hair is folded over the head and tied with a thin band. These last two

attributes (scroll in the eyes and long hair folded and tied with a thin band) are part of the defining traits of Glyph Ñ, a sign that has been correlated with the fourth day name in the Zapotec calendar, Lachi ("Ballcourt") (Urcid 2001:188–193, 245–247). The complementing numeral, a single dot marked with a U-shaped groove in the center, appears above the folded hair. Thus, the name of the personage is rendered as Lord 1 Lachi.[2]

The head on the south side of the façade portrays an old woman, identified as old-aged by the wrinkles on her face (Fig. 6.9c). She wears her hair intertwined with ribbons, a fashion still known among present-day Zapotec women, particularly from the community of Yalalag (see Fig. 10.1 for location). Over her forehead is the Glyph J, a sign that corresponds to the fifteenth day name in the Zapotec calendar, Naa ("Corn") (Urcid 2001:178–181). She is adorned with a necklace and earspools, and beneath the earspools are numeral bars that represent the number 10. Her calendar name, then, is rendered as Lady 10 Naa.

Following the attachment of the plaster portrait heads to the façade, they were covered by a layer of mud and a petate (woven mat) was placed on top of the mud to protect the heads when the area in front of the tomb was refilled with dirt. Upon excavation, the petate impression was clearly visible on the chunks of solidified mud directly in front of the heads. The heads were uncovered each time the tomb was reopened and then protected again, as evidenced by the presence of several layers of paint in the panels of the façade and by the petate impressions on the solidified mud associated with the last opening of the tomb.

Lord 1 Lachi and Lady 10 Naa are probably the couple who occupied Structure 195-3 between ca. 775 and 800 CE and were buried in the main chamber of Tomb 6. Their probable skeletal remains occur among those of the four persons buried in the main chamber of the tomb. He evidently died first because the last burial in the tomb is an intact primary of a female.

THE ALTAR COMPLEX IN STRUCTURE 195-3SE

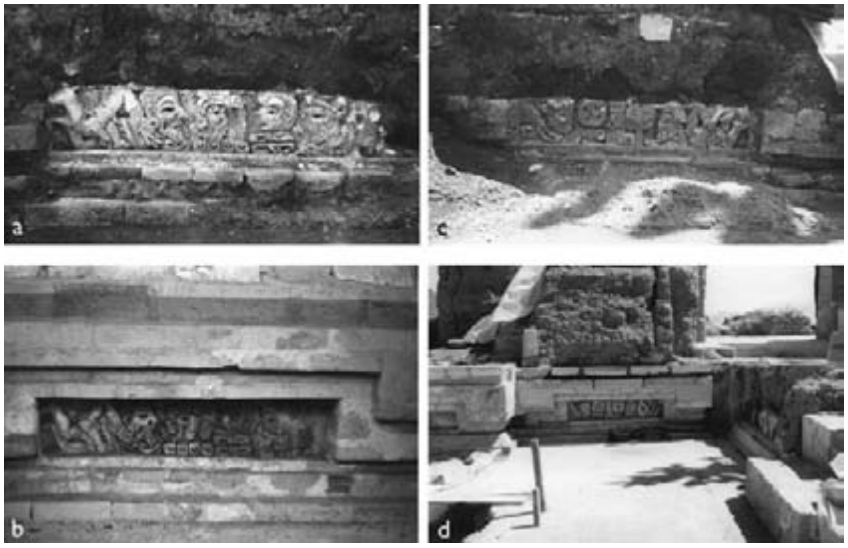
As mentioned above, the first phase of construction of the east room of Structure 195-3SE was followed by a second phase in which the room was filled to the tops of its walls with construction fill (Fig. 6.10a). A flat-topped altar was constructed at the center of the east side of the patio above Tomb 6 and up against the construction fill in the east room. The walls flanking the altar had panels decorated with elaborately executed plaster friezes framed by double cornices, and large *taludes* (sloping stone walls) nearly 2 m high, topped with panels containing additional friezes, were built above them, enclosing the altar in an open niche. The entire complex

6.10. ***The altar complex in Structure 195-3SE***

appears to have been modeled after the façade of a monumental platform, with the projecting flat-topped altar and the recessed niche substituting for a central staircase, and the lateral lower and upper friezes with sloping walls mimicking broad balustrades decorated with panels (Fig. 6.13).

The altar was built of adobes, faced with well-cut stone, and finished with white plaster (Fig. 6.10c). The front (west half) of the altar projected 55 cm out into the patio, whereas the back (east) half was set 55 cm into the east room. The altar rose 86 cm above the patio floor and its top measured 1.8 m north-south and 1.1 m east-west. This top formed the base of a niche between the two taludes on either side of the altar. The front of the altar faced west on the patio and consisted of a single panel, which may have contained a frieze, framed by double cornices.

Based on the height of a frieze fragment of Glyph V Chilla ("Alligator") found in excavations and additional information from Tomb 6 to be dis-



6.11. ***The lower friezes of the altar complex***

cussed in Chapter 7, we hypothesize that the glyphic appellative of an individual named Lord 2 Chilla was depicted in the panel at the center of the altar (Fig. 6.12). The upper cornices on either side of the panel were each decorated by a red-painted rectangle with rounded corners and a red X-shaped motif in its center. These signs seemingly allude to the four corners of the world. The center of the altar had been destroyed upon the abandonment of the SE sector of Structure 195-3 when a hole was dug through it to gain access to the main chamber of Tomb 6 to place a final burial (Fig. 6.10b).

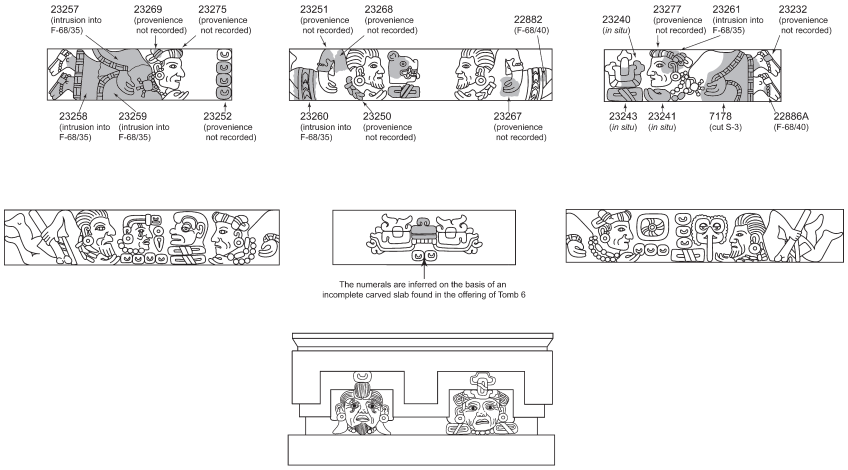
The lower lateral panels containing the extant friezes were 1.06 m long and about 22 cm high. Each one depicts a bearded man and a woman, identified as old-aged by the wrinkles on their faces (Fig. 6.11). These couples are shown in profile and in a horizontal position, as if floating. The men are rendered as complete figures, from head to toe, whereas the women are only profiled from the waist to the head. The men have small pointed beards, are barefoot, wear only loincloths, and are adorned with earspools and necklaces. Each carries a human femur clearly identified as the proximal end by the prominent femoral head. The distal ends are cut off and squared (Rabin 1970:4–5). The women wear shawls, earspools, and necklaces and have their hair intertwined with ribbons. In contrast to the portrait-like heads on the façade of Tomb 6, the personages in the friezes are conventionalized representations of couples lacking individuality.

Each of the old men and women in the lower friezes has an open hand, curved slightly upward, with fingers pointing to his or her calendar name. The couple in the north frieze includes a man called 4Ñ, Lord 4 Lachi ("Ballcourt"), and a woman named 10O, Lady 10 Loo ("Monkey") (Figs. 6.11a and b). The couple in the south frieze includes a man named 8F, Lord 8 Laala ("Owl"), and a woman called 3E, Lady 3 Xoo ("Earthquake") (Figs. 6.11c and d). The couples in these lower friezes, then, are different from the one portrayed in the heads on the façade of Tomb 6.

One in-situ segment (a hand and a numeral bar) was preserved at the lower north corner of the upper panel on the south side (Rabin 1970:6, fig. 7). From this in-situ segment it was possible to determine that the upper panels rested on top of the sloping stone walls at a level 1.95 m above the patio floor. Apart from the in-situ segment, the upper friezes were destroyed in ancient times when Structure 195-3SE was covered by a subsequent construction. However, a number of frieze fragments were found in excavations and several of them were assembled to reconstruct two partially complete females (Rabin 1970:6–7). One of the female figures fits together with the in-situ segment in the upper south frieze (Rabin 1970:7, fig. 8); therefore, it is assumed that the other female figure formed part of an upper north frieze whose panel had been totally destroyed (Rabin 1970:7, fig. 9). Likewise, because the female in the upper south frieze is known to have been facing north toward the center of the altar complex, it is assumed that the female in the upper north frieze faced south toward the center of the altar complex (Fig. 6.12).

Like the females in the lower friezes, the women in the upper north and south friezes were depicted in profile and in a horizontal position, as if floating. However, whereas the old men had been fully profiled from head to toe in the lower friezes, it was the old women who were fully profiled in the upper ones. They wore sandals and were dressed in shawls (with the same design as those of the females in the lower friezes) and ankle-length skirts. "Unfortunately, only one female head, badly damaged, was recovered. The hair style is still visible and is similar to that of the women in the lower friezes" (Rabin 1970:6). From the evidence at hand, it appears that the upper north and south panels contained only the full figures of females, and therefore the panels in which they occurred were not as long as the panels of the lower friezes.

Other available fragments yielded evidence for two male figures that were probably companions to the females in the upper friezes, like the couples in the lower friezes but who were situated in an upper central panel no longer preserved. These included fragments from a necklace and parts of two waistbands, like those worn by the male figures in the lower friezes.



6.12. ***In situ and loose fragments of the stucco figures upon which the hypothetical reconstruction of the friezes is based***

In addition, most of a bent naked arm, like those of the males depicted in the lower friezes, occurred. However, unlike the arms of the males in the lower friezes, this arm fragment had a human mandible decorating it. Also pertaining to either one of the males or the female in the upper north frieze was a portion of a curved hand (Fig. 6.12).

Unlike the couples in the lower friezes, who faced one another, the males in the upper central panel probably faced away from the females and confronted each other. However, like those in the lower friezes, the couples in the upper friezes were identified by calendar names. The female figure in the upper south frieze had a numeral bar, a partial glyph for the day sign J or Naa, and an open hand with the fingers curved slightly upward pointing to her calendar name, Lady 5 Naa ("Corn").

There were fragments of an additional day name including a main sign, a numeral bar, and three dots arranged vertically. The main sign was Glyph B Peche ("Jaguar"), and because it would not fit in front of the woman in the north frieze, then by default it would identify one of the males. For purposes of parsimony, we are hypothetically assigning the remaining numeral bar to the name of this man, who will be identified as Lord 5 Peche ("Jaguar"). Because the three vertically arranged dots manifested a slightly upturned edge along the right side, we believe the numeral was set along the south side of the upper north frieze, where the other female was depicted. However, the placement of the numeral there leaves enough room for a fourth dot. We hypothesize that this woman was named Lady 4 ? (Figs. 6.12 and 6.13).

It is apparent that the altar complex depicted the genealogy of the Structure 195-3 couple, Lord 1 Lachi and Lady 10 Naa. Their ancestors extend back five generations to an apical ancestor, Lord 2 Chilla, who founded the noble lineage. Some of them must have occupied the earlier houses of Mound 195 Sub and had their remains buried in Tombs 5 and 6.

SWEATBATH

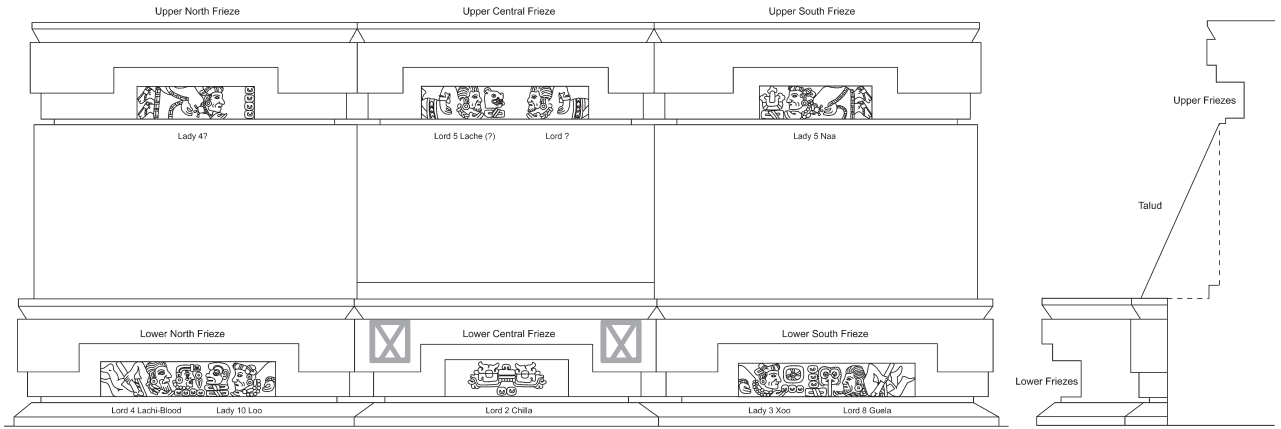
The second phase of construction of the sweatbath, which may have occurred in association with Structure 195-3, involved expanding its size (Fig. 6.14). The center of the original sweatbath was left intact. The adobe walls around the floor, however, were demolished and new walls were built to expand the size of the sweatbath. Only the foundations at the northwest corner of this second construction were preserved. From this preserved section, it was possible to estimate that the sweatbath measured 4.55 m north-south and 5.6 m east-west.

The expansion of the sweatbath necessitated an elongation of the water conduit if it were to be located outside the limits of the east wall, as it had been in the original structure. The elongation, uncovered in excavations, was achieved by somewhat shoddily attaching a 1 m long extension to the conduit to bring it, like its predecessor, to a distance of 40 cm beyond the limits of the east wall. The extension was wider than the original conduit, being 27 cm instead of 14 cm wide, but funneled into the original conduit.

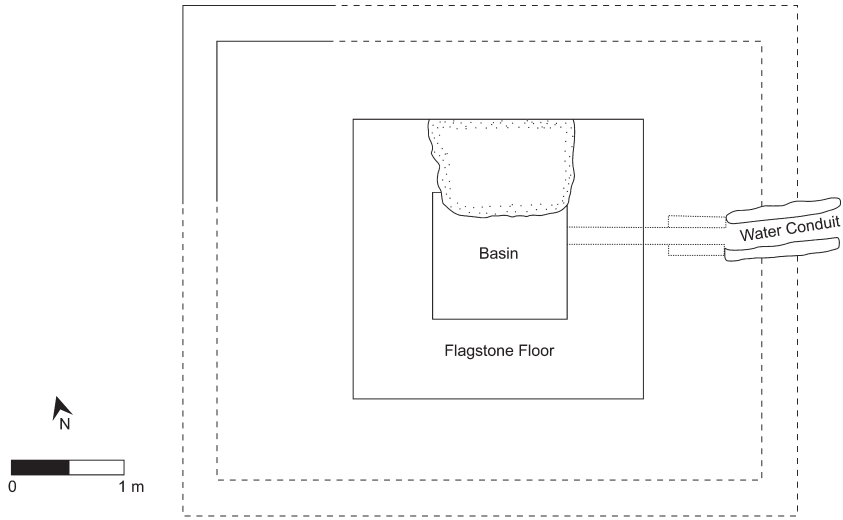
THE STRUCTURE 195-3 HOUSEHOLD

Like its predecessor, Structure 195-3 had a complex layout (Fig. 6.15). Initially, before the construction of the altar complex, it contained fourteen rooms, fewer than the sixteen rooms of Structure 195-4. The earlier east room of Structure 195-3SE was probably an ancestral shrine above Tomb 6 where offerings were placed and rituals conducted in honor of the household ancestors buried in the tomb. The later construction of the altar complex converted this east room into an ancestral shrine with friezes depicting the ancestors of Lord 1 Lachi and Lady 10 Naa. Offerings were probably placed on the altar at the center of this shrine and rituals conducted before it in honor of these ancestors. Construction of the altar complex reduced the number of rooms in Structure 195-3 to thirteen—seven rooms and six corner rooms arranged around two patios—SE and NE.

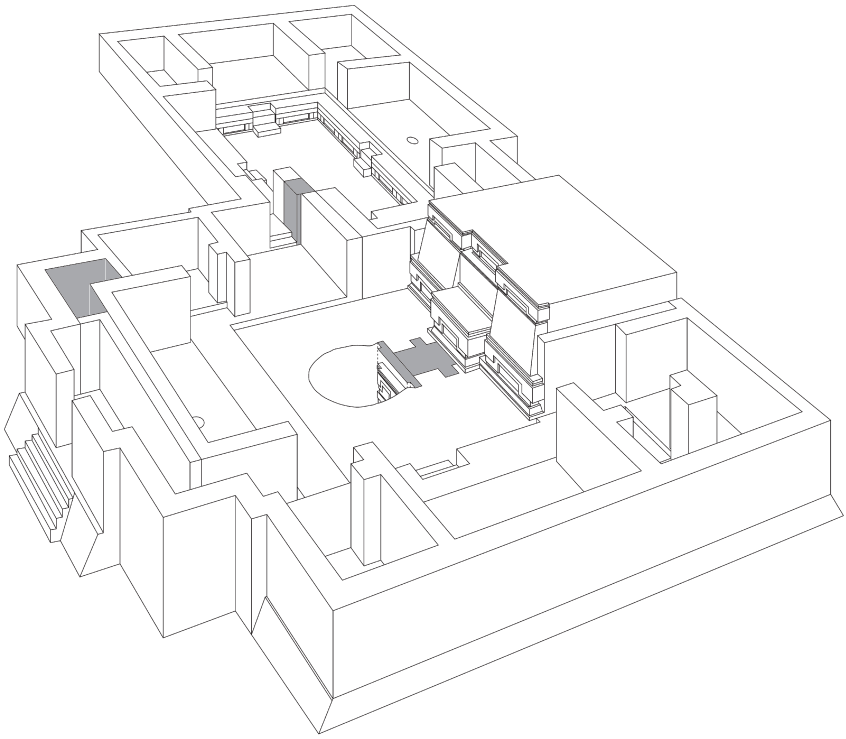
The only entrance to Structure 195-3 was on the west side of Structure 195-3SE. Whereas the northwest L-shaped corridor was the main entrance to Structure 195-4SE, in Structure 195-3SE this corridor was blocked and



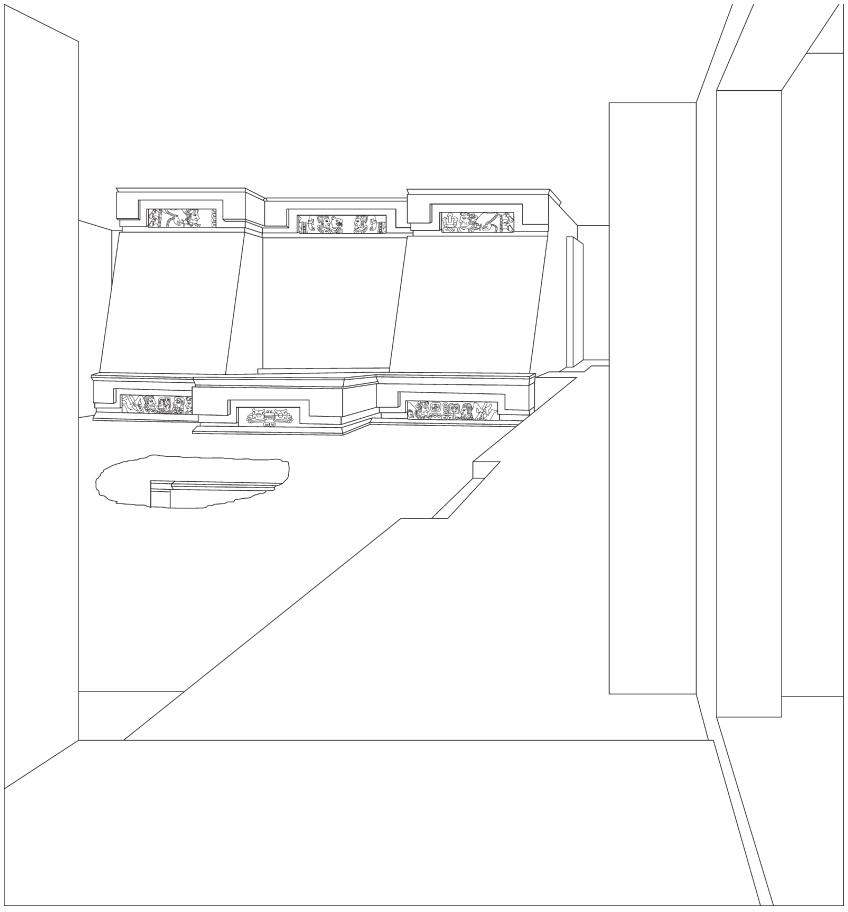
6.13. ***Reconstruction of the altar complex***



6.14. *Second phase of construction of the sweatbath*



6.15. *Isometric reconstruction of Structure 195–3*



6.16. ***View of the altar complex from the end of the southwest entrance corridor***

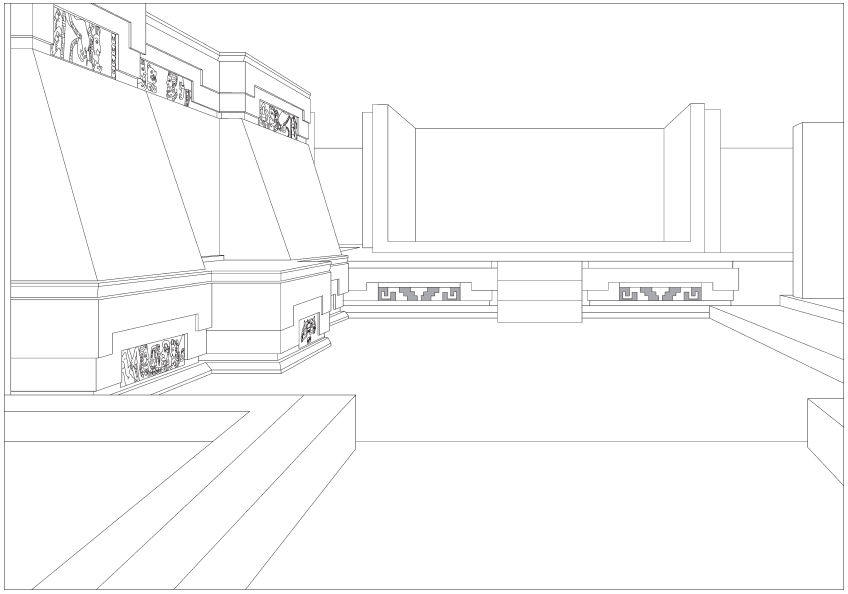
the southwest L-shaped corridor became the only entrance to Structure 195-3. The entryway was purposefully designed to impress. The altar complex was in the direct line of view of anyone entering the small vestibule at the end of the southwest corridor (Fig. 6.16). The vestibule was in front of the Structure 195-3SE southwest corner room. We have different interpretations of this room. Lind points out that it was well-situated to control access to Structure 195-3 and suggests it may have been occupied by a servant or guard, one of whose tasks may have been to announce visitors and control access to the elite building. Urcid points out that because this corner room lacks a hearth for warming the enclosure, it would have had another function, perhaps storage. In his view, control into the house would have taken place at the entrance to the residential compound.

From the small vestibule it was necessary to proceed along the walkway in front of the south room of Structure 195-3SE and descend a stairway into the patio. To gain access to Structure 195-3NE it was necessary to cross the Structure 195-3SE patio to the Structure 195-3SE north room that served as a vestibule. The vestibule had a stairway that led to a doorway in its north wall. The doorway opened onto the Structure 195-3NE west room. This room was different from the other rooms in Structure 195-3NE. It was long and narrow and lacked a walkway linking it to the other rooms. Being the locus of the only entry to Structure 195-3NE, it served as an entrance hall isolated from the other rooms. Anyone entering this entrance hall had to descend its stairway, cross the patio, and ascend one of the stairways to access the rooms above.

The remaining five rooms, five corresponding corner rooms, and the patios of Structures 195-3SE and 195-3NE manifest some significant differences. At 36.6 m^2 the patio of Structure 195-3SE is larger than the 26.7 m^2 patio of Structure 195-3NE. Likewise, the southeast corner room of Structure 195-3SE is much larger than the corner rooms of Structure 195-3NE; and the large south room of Structure 195-3SE has the walls flanking its staircase decorated by step frets in panels framed by double cornices, whereas the walls flanking the staircases of the Structure 195-3NE rooms have undecorated panels framed by single cornices. These differences, combined with the large Structure 195-3SE altar complex containing friezes, suggest that Structure 195-3SE was a more public part of the building whereas Structure 195-3NE was more private.

By way of its elaborate west entryway, which provided a dramatic view of the altar complex to those entering the house (Fig. 6.16), Structure 195-3SE was the more public and more accessible part of the building. The wide staircase ascended from the patio to the center of the south room, the largest room in Structure 195-3. The walls flanking the staircase contained panels decorated with "lightning in the sky" step frets (a metaphor for Cociyo) framed by double cornices, marking this room as a special place. We hypothesize that this room was where Lord 1 Lachi and Lady 10 Naa conducted their daily business (Fig. 6.17).

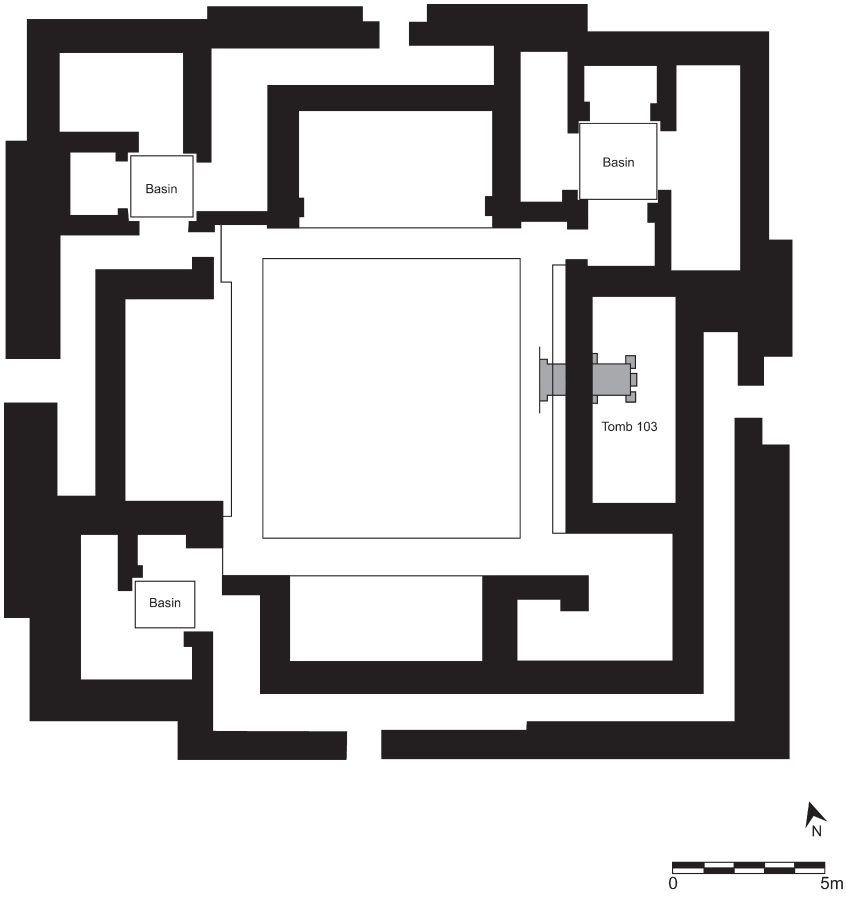
The large southeast corner room, adjacent to the south room and the largest corner room in Structure 195-3, had a small patio with a drain and an L-shaped room on the south and east sides. Each wing of the L-shaped room was the typical size of a corner room. Lind suggests they probably functioned as kitchens that provided food and refreshments to guests conducting business in the adjacent south room. They also may have served as areas where, on occasion, feasts were prepared for groups of noble guests gathered in the patio.



6.17. ***View of the south room in Structure 195–3SE from the north vestibule***

Urcid, on the other hand, has a different interpretation regarding the function of this room based on his study of the House of Tomb 103 at Monte Albán (Fig. 6.18). The layout of this house, the last one to be built atop a tall platform on Terrace 18, generally conforms to the typical distribution of domestic space. Yet it presents three peculiar features not seen in other known house layouts. One is the occurrence of four entries, one on each side of the structure, suggesting that at least in its last version, the entire building had corresponding staircases that, when climbed, led first to a corridor along the entire perimeter of the structure. The second feature is that, by means of internal corridors that generate hidden entries, the four main entrances eventually lead to only two internal points of entry at either side of the west room (the one opposite to the room under which Tomb 103 was built). The third feature is that three of the four corner rooms have plastered quadrangular basins seemingly devoid of drainages. A passage in the second chapter of the *Historia de los Mexicanos por sus Pinturas*, which deals with how the world was created and by whom, seemingly provides a clue to interpret the architectural peculiarities of the House of Tomb 103:

> Regarding the god of water, [the informants] say that he has an abode with four rooms, and in the center a large courtyard where there are four large containers with water: one has good water, the one that rains when bread [maize] and seeds are growing, and it comes down when



6.18. ***Plan of the House of Tomb 103 at Monte Albán***

> the weather is good. The other is bad when it rains, causing spider webs to grow in the bread [maize], spoiling it. The other is when it rains and [maize] freezes; the other when it rains but [maize] does not produce kernels and dries out. (Garibay 1996:26; translated by Urcid)[3]

One may assume that the sequence of types of rain given in the account quoted above begins in the east (the starting direction in Prehispanic cartographic documents). The architectural features of the House of Tomb 103 seemingly produce a fourfold kinesis starting with the four staircases of the building or at least the four attested entrances to the structure. The hypothesized peripheral corridor, or at least those reached after passing through the four entrances, most likely led to circumambulatory movements that eventually ended in the central courtyard surrounded by four corner

rooms, three of which contained basins that, when ritually filled, symbolically stood for the "good rain" (the northeast basin), the "bad rain" (the northwest basin), and the "rain that came with hail" (the southwest basin). The fourth corner room, without a basin (on the southeast), would have stood symbolically for the "unproductive rain" (i.e., little or no rain). Based on the preceding interpretation, the southeast corner room in Lambityeco Structure 195-3SE may have conflated the quadripartite symbolic associations present in the four corner rooms in the House of Tomb 103 at Monte Albán and thus could have been used by the household heads to conduct secluded rituals to petition for rain and good maize crops.

Irrespective of which of the above interpretations is accepted, Structure 195-3SE can be viewed as strictly a public area with the south room containing the administrative hall of the married couple who headed the noble household and not their residence, which instead was located in Structure 195-3NE. The west room of Structure 195-3SE and its associated northwest corner room may have been where visiting dignitaries were quartered.

Structure 195-3NE is the least accessible part of the building, suggesting it served as the private residential quarters of the Structure 195-3 household. Of the three rooms around the patio, the east room is the largest and most likely served as the living quarters of the married couple who headed the noble household, Lord 1 Lachi and Lady 10 Naa. The adjacent northeast corner room, associated with the east room, is the largest corner room and probably functioned as a kitchen, storeroom, sleeping quarters, or place for other activities. The north room was the second-largest living quarters and its adjacent northwest corner room the second-largest corner room in Structure 195-3NE. These rooms may have been utilized by the eldest son and his wife, the presumed heirs to the Structure 195-3 household.

The south room and adjacent southeast corner room were the smallest areas in Structure 195-3NE and are somewhat unique. Despite its floor being totally preserved, the south room did not have a ceramic pan embedded in its floor. Virtually all rooms that served as living quarters have these hearths embedded in their floors near the center of the room. This suggests the possibility that the south room may have functioned as a storage area. The small southeast corner room also appeared to lack a hearth, although its floor was partially destroyed, making this uncertain. This small room may also have served as a storage area.

Alternate interpretations are certainly possible for the complex of rooms in Structure 195-3. Structure 195-3SE may not have been a strictly public part of the house but may have included the residences of Lord 1 Lachi and Lady 10 Naa in the south room (living quarters) and associated

southeast corner room and their married son and heir in the west room (living quarters) and associated northwest corner room. In this scenario, Structure 195-3NE may have contained the residences of Lord 1 Lachi's secondary wives or concubines.

NOTES

1. Peterson (personal communication, 1983) reported the existence of this walkway. Unfortunately, no photos or drawings of it were found in the excavation archives to show exactly how far it extended along the south platform wall of Mound 195 Sub.

2. Rabin (1970:12) initially identified Lord 1 Lachi as Lord 1 L; Paddock (personal communication, 1979) identified the man as Lord 1 L because of the scrolls through his eyes, which represented Caso's Glyph L. Caso (1965:939, 944, table 1) equated Glyph L with the Nahua Ollin, "Movement" or "Earthquake," for which the Zapotec name is Xoo. Therefore, in earlier articles (Lind and Urcid 1983, 1990), Lord 1 Lachi was identified as Lord 1 Xoo. In an article on Tomb 6 (Lind 2002), the man was incorrectly identified as Lord 1 Piya. However, Urcid's (1992, 2001:188–193, 245–247) work on Zapotec writing made it clear that the day name of the man was not Glyph L, based exclusively on the scrolls through his eyes, but instead a more inclusive constellation of traits that constitute Glyph Ñ or "Ballcourt."

3. A similar account was recorded by Cruz (1946:33–35) among Zapotec peoples in the first half of the twentieth century.

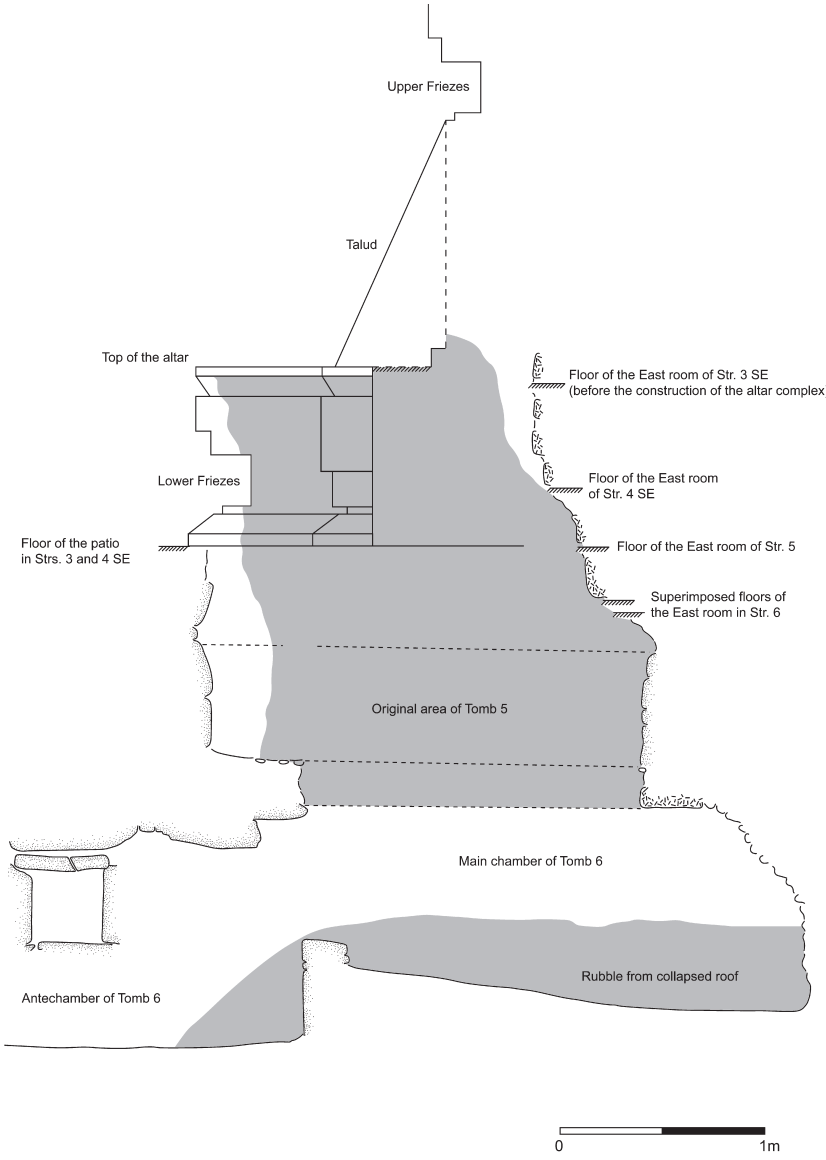
chapter seven

Tomb 6

In the preceding two chapters, we discussed the stratigraphic position of Tomb 6 and its relation to Structures 195-5, 195-4, and 195-3. To briefly summarize, Tomb 6 was built initially as a single-chambered tomb in association with Structure 195-5 (see Figs. 5.9 and 5.10). The main chamber was added in association with Structure 195-4 (see Figs. 5.11 and 5.13), and the portrait heads were probably attached to the façade in association with Structure 195-3 (see Figs. 6.7 and 6.8). The roof of the main chamber was destroyed by a hole dug through the altar to place a final burial in the tomb in association with Structure 195-3 (Fig. 7.1). Following this burial, the Structure 195-3SE sector of the house was abandoned. In this chapter, we present an analysis and interpretation of the skeletal remains and offerings associated with Tomb 6.[1]

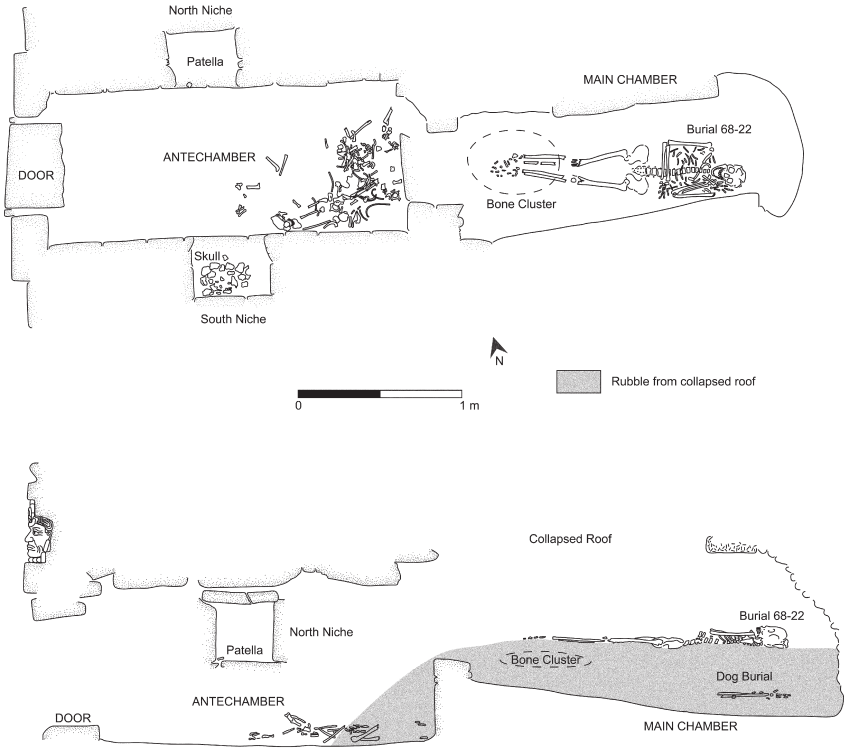
SKELETAL REMAINS

When Tomb 6 was excavated, a single undisturbed primary interment (Burial 68-22) was discovered on top of the rubble from the destroyed roof in the main chamber and a large number of disarticulated bones were found scattered throughout and below the rubble in the main chamber and across the floor of the antechamber (Fig. 7.2). The analysis of the human remains revealed that a minimum of six adult individuals were buried in



7.1. ***Profile of the hole dug through the altar, Tomb 5, and the roof of the main chamber of Tomb 6***

the tomb. Apart from the undisturbed primary burial, five minimum human individuals, three dogs, and eight birds are represented among the disarticulated skeletal remains.

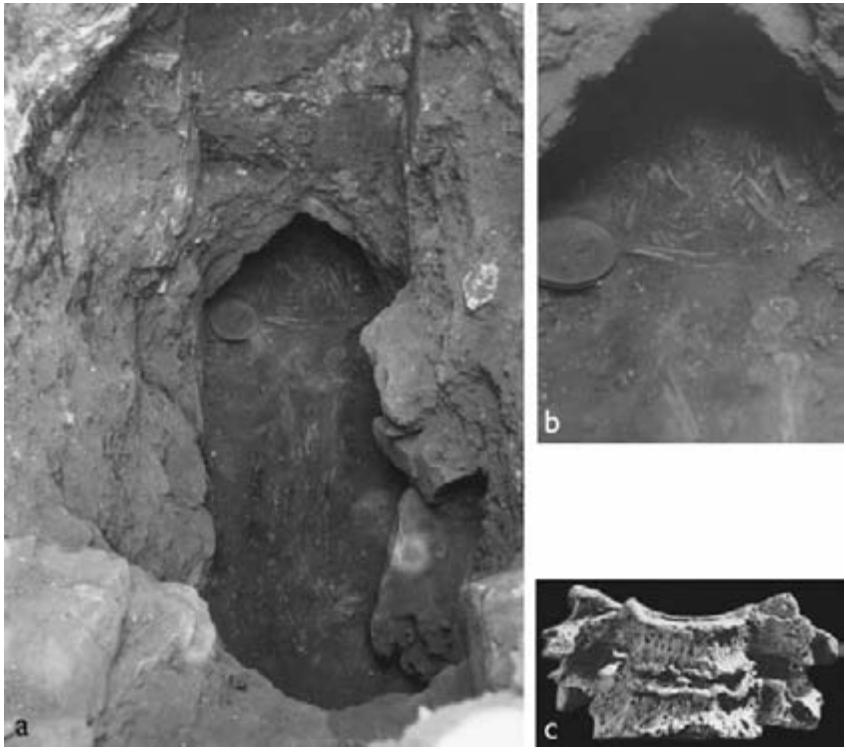


7.2. ***Plan and profile of the Tomb 6 skeletal remains (redrawn from Mogor 1968)***

Burial 68-22 represents the skeletal remains of the last individual to be buried in the tomb. These skeletal remains correspond to an adult female who was perhaps between thirty-five and forty-five years old when she died. Because the elite married couple who headed the Structure 195-3 household were probably the last two individuals to be buried in Tomb 6, it appears that Burial 68-22 represents the remains of the wife, Lady 10 Naa.

The burial was a fully extended supine primary with the head to the east and feet to the west end of the main chamber. The right arm was bent at the elbow so that the forearm rested across the stomach. The left arm was doubled with the forearm upward so that the left hand rested near the left side of the face. The feet were crossed with the right foot resting on top of the left (Fig. 7.3a).

Remnants of a shroud in the form of a mat covered the entire skeleton. This mat was not a woven petate but rather strips of reeds paralleling one another and running lengthwise, east-west, over the top of the skeleton. The strips forming the mat may have been held together by threads, of



7.3. ***Burial 68-22, a female thirty-five to forty-five years old***

which no traces remain. Two G-35 bowls, one inside the other, were located on the north side of the skeleton near the right elbow (Fig. 7.3b). The bowls were small and lacked tripod supports and burnished designs. No macroscopic traces of any contents were found within them.

Apart from Burial 68-22, human skeletal remains corresponding to at least three other individuals were found in the main chamber of Tomb 6. Foot bones from at least two of these individuals had counterparts in the antechamber. Also, a human cervical vertebra in the main chamber had a counterpart among human bones found on top of the altar outside the tomb. Both cervical vertebrae not only fit together but also manifested osteophytosis[2] in the anterior margins of their bodies and bone degeneration in the right transverse process (Fig. 7.3c). This vertebra was probably displaced from the main chamber when the hole was dug through the altar and roof of the tomb to place the final burial.

The fragmentary and disturbed nature of the skeletal remains does not permit a determination of the sex or specific adult age at death of any one

of these three individuals found in the main chamber. Nor is it possible to determine the original orientation of the burials or the arrangement of any offerings that might have accompanied them. However, the disarticulated foot bones of two of these individuals occur in the rubble layer directly beneath the articulated foot bones of Burial 68-22. This suggests that they were probably buried with their heads to the east and feet to the west, like Burial 68-22. Furthermore, the presence of a mature domestic dog, partially in situ, indicates that it served as an offering accompanying one of the burials.

The human remains in the antechamber included bones that have counterparts among those in the main chamber and an additional two minimum individuals. A multitude of other bones were found in the antechamber, including the remains of at least two immature domestic dogs and eight birds. Some bones from the dogs and one bird skull were among the animal bones found in a cluster outside the tomb in front of the door.

Two fragmentary skulls occur in the antechamber. One of these skulls, located in the south niche, belonged to a female who was perhaps between twenty-five and thirty-five years old when she died. The skull had been painted red with a mineral pigment, perhaps hematite, of which traces were found on the interior of a G-35 bowl from the floor of the antechamber. The second skull, located on the antechamber floor, was probably that of a male who was perhaps between twenty-five and thirty-five years old when he died. His skull manifested no traces of having been painted.

The fact that the five earlier human burials were disturbed and scattered throughout the tomb, before the sixth and last individual (Burial 68-22) was laid to rest atop their remains, cannot be attributed simply to the destruction of the tomb roof. Tomb 2 in Mound 190 at Lambityeco contained numerous disarticulated skeletal remains even though its roof had not been destroyed (Paddock, Mogor, and Lind 1968). Furthermore, virtually all other tombs at Lambityeco and most of the tombs at Monte Albán (Séjourné 1960; Autry 1973; Winter et al. 1995) contain numerous disarticulated skeletal remains. It seems evident, then, that most of the earlier burials in Tomb 6 had been disturbed before the roof was destroyed to place the last burial.

Although remains of six adult individuals occur in the tomb, with the exception of the intact primary (Burial 68-22), not all the bones of the remaining five persons could be accounted for. Whereas smaller hand and foot bones (phalanges in particular) were probably crushed beyond recognition beneath the feet of individuals who entered the tomb to place the successive burials, many of the larger and more durable bones must have been purposefully removed from the tomb in ancient times. This is espe-

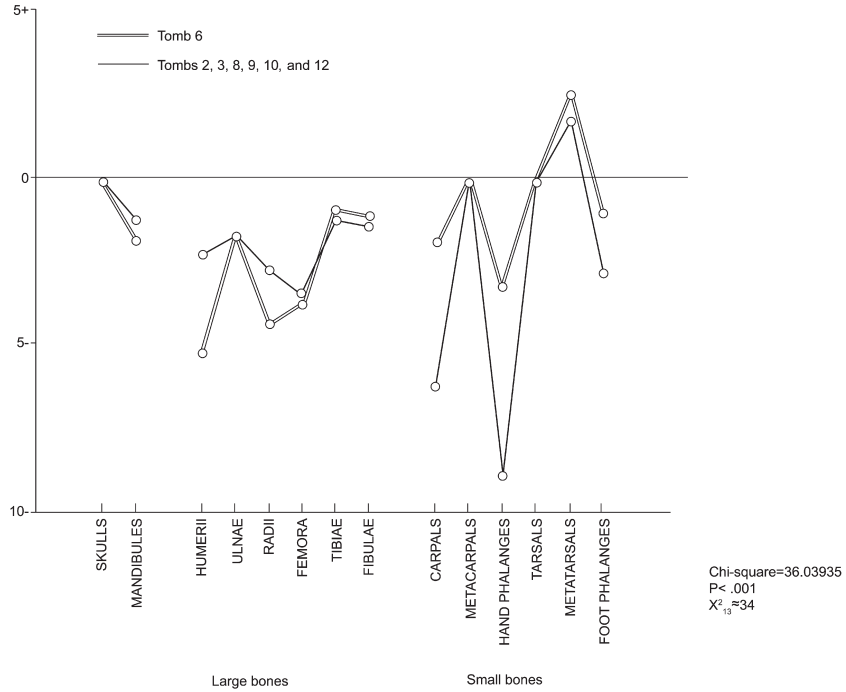
cially true of the femur, the largest and strongest bone in the human body. Only 25 percent of the femora are accounted for in the tomb.

It will be recalled that the male figures depicted in the lower friezes in the altar complex above Tomb 6 are shown carrying a human femur in their hand (see Fig. 6.11). The femur probably came from the individual's most immediate ancestor and may have served as a symbol of his hereditary rights. Additionally, one upper frieze fragment depicts a male with a mandible on his arm, which again may have come from his most immediate ancestor and served as a symbol legitimizing his hereditary rights. From these depictions, it appears that each successive noble had the femur, mandible, and other bones (especially long bones) of his most immediate ancestor removed from the tomb and thereby contributed to the disturbance of the skeletal remains.

As the friezes indicate, the femora and mandibles were evidently publicly displayed as symbols of hereditary rights. However, none of these or other human bones were found outside mortuary contexts to determine what may have happened to them once they were removed from the tomb. Although Fray Pedro de los Ríos, writing in 1547–1548 CE, reported that once the flesh decayed from the bones, the Zapotecs in the mountains south of the valley removed them from the burial and kept them in "ossuaries made of mortar" (Quiñones-Keber 1995:254), no such ossuaries have been found at Lambityeco or any Classic period site in the Valley of Oaxaca. During the Xoo phase, it is possible that the elite placed the bones of their immediate ancestors in sacred bundles that were kept as heirlooms over many generations.

A chi-square analysis of the presence or absence of bones from all the tombs at Lambityeco seems to confirm this hypothesis. In order to determine if there had been intentional removal of human bones from Tomb 6, its skeletal contents were compared to those of the other tombs from Lambityeco taken as a group. When comparing the frequency of inventoried anatomical elements with the expected frequency based on the minimum number of individuals detected in each tomb, a chi-square analysis generates two important observations (Fig. 7.4, Table 7.1).

One of them is that, in general, the human remains from Tomb 6 are poorly represented with regard to the number of minimum individuals. Ten of the fourteen bone categories are underrepresented, especially the long bones. Only metatarsals appear "overrepresented." Because the long bones are large and of compact tissue—which makes their fragmentation and obliteration more difficult—their absence from Tomb 6 and their graphic representations in the associated friezes suggest that the elite purposefully removed certain anatomical elements of their ancestors in order to use them as symbols to validate their status (Lind and Urcid 1983:81).



7.4. Graph of chi-square results from comparisons of bones in tombs at Lambityeco

The absence of small bones in the tombs is most likely due to their obliteration as a consequence of the multiple reentries into the tombs and the continual rearrangements of their contents. The underrepresentation of several other large anatomical elements in Tomb 6, such as the humeri, radii, tibiae, and fibulae, also suggests that this particular tomb was reopened more often than the other tombs used in the comparison. The other tombs yielded comparable minimum numbers of individuals yet conserved more bones per minimum individual than Tomb 6. This may have been the result of Tomb 6 being reopened more frequently to carry out rituals aimed at the invocation and veneration of ancestors that were unrelated to mortuary events.

INTERMENT SEQUENCE

Based on his research at Monte Albán, Winter (1974:986) was the first to point out that married couples who headed households were buried in the household tomb. An analysis of the sequence of houses and associated

TABLE 7.1. Skeletal inventory from the tombs at Lambityeco and chi-square analysis

	Skull	*Mandible*	*Humerus*	*Ulna*	*Radius*	*Carpals*	*Metacarpals*
Tomb 2 (NMI = 7)							
Expected	7	7	14	14	14	112	70
Present	6	7	10	10	9	21	32
Absent	1	0	4	4	5	91	38
Tomb 3 (NMI = 5)							
Expected	5	5	10	10	10	80	50
Present	5	4	10	9	10	52	43
Absent	0	1	0	1	0	28	7
Tomb 6 (NMI = 6)							
Expected	6	6	12	12	12	96	60
Present	4	2	5	4	4	24	33
Absent	2	4	7	8	8	72	27
Tomb 8 (NMI = 5)							
Expected	5	5	10	10	10	80	50
Present	3	3	7	4	9	26	27
Absent	2	2	3	6	1	54	23
Tomb 9 (NMI = 7)							
Expected	7	7	14	14	14	112	70
Present	4	4	8	6	6	29	23
Absent	3	3	6	8	8	83	47
Tomb 10 (NMI = 4)							
Expected	4	4	8	8	8	64	40
Present	2	1	7	3	3	3	4
Absent	2	3	1	5	5	61	36

Tomb 12 (NMI = 3)							
Expected	3	3	6	6	6	48	30
Present	2	2	6	3	6	10	14
Absent	1	1	0	3	0	38	16
Totals							
Expected	37	37	74	74	74	592	370
Present	26	23	53	39	47	165	176
Absent	11	14	21	35	27	427	194
All tombs except no. 6							
Expected	31	31	62	62	62	496	310
Present	22	21	48	35	43	141	143
Absent	9	10	14	27	19	355	167

All tombs except no. 6							
Exp./Present	21.78378	19.27027027	44.40541	32.67568	39.37838	138.2432	147.4594595
*	0.0021461	0.1552632576	0.2909806	0.1653366	0.3330798	0.0549734	0.1348626853
Exp./Absent	9.216216	11.72972973	17.59459	29.32432	22.62162	357.7568	162.5405405
*	0.0050725	0.2550753518	0.7343795	0.1842322	0.5798056	0.0212427	0.1223496526
Tomb 6							
Exp./Present	4.216216	3.72972973	8.594595	6.324324	7.621622	26.75676	28.54054054
*	0.011088	0.8021934978	1.5034	0.8542389	1.720912	0.2840295	0.6967905405
Exp./Absent	1.783784	2.27027027	3.405405	5.675676	4.378378	69.24324	31.45945946
*	0.026208	1.3178893180	3.794294	0.9518662	2.995662	0.1097538	0.6321398718

* Observed variables/expected variables; ^2/expected variables.

TABLE 7.1—*continued*

	Hand Phalanges	*Femur*	*Tibia*	*Fibula*	*Tarsals*	*Metatarsals*	*Foot Phalanges*
Tomb 2 (NMI = 7)							
Expected	196	14	14	14	98	70	196
Present	40	12	11	7	59	52	52
Absent	156	2	3	7	39	18	144
Tomb 3 (NMI = 5)							
Expected	140	10	10	10	70	50	140
Present	92	8	7	8	63	47	57
Absent	48	2	3	2	7	3	83
Tomb 6 (NMI = 6)							
Expected	168	12	12	12	84	60	168
Present	48	3	4	4	51	47	57
Absent	120	9	8	8	33	13	111
Tomb 8 (NMI = 5)							
Expected	140	10	10	10	70	50	140
Present	58	7	7	9	53	38	67
Absent	82	3	3	1	17	12	73
Tomb 9 (NMI = 7)							
Expected	196	14	14	14	98	70	196
Present	58	4	2	3	39	23	61
Absent	138	10	12	11	59	47	135
Tomb 10 (NMI = 4)							
Expected	112	8	8	8	56	40	112
Present	9	4	2	2	13	10	8
Absent	103	4	6	6	43	30	104

Tomb 12 (NMI = 3)							
Expected	84	6	6	6	42	30	84
Present	20	3	2	3	18	13	32
Absent	64	3	4	3	24	17	52
Totals							
Expected	1036	74	74	74	518	370	1036
Present	325	41	35	36	296	230	334
Absent	711	33	39	38	222	140	702
All tombs except no. 6							
Expected	868	62	62	62	434	310	868
Present	277	38	31	32	245	183	277
Absent	591	24	31	30	189	127	591

All tombs except no. 6							
Exp./Present	272.2972972973	34.35135	29.324332	30.16216	248	192.7027027	279.8378378378
*	0.081217892834	0.3875433	0.0957529	0.111983	0.0362903	0.4885372048	0.0287785370845
Exp./Absent	595.7027027027	27.64865	32.675680	31.83784	186	117.2972973	588.1621621622
*	0.371249158509	0.4814932	0.0859321	0.1060891	0.048387	0.8025968365	0.013692352402
Tomb 6							
Exp./Present	52.7027027027	6.648649	5.675676	5.837838	48	37.2972973	54.16216216216
*	0.4196257796258	2.002307	0.4947233	0.5785786	1875000	2.524108892	0.1486891082699
Exp./Absent	115.2972972973	5.351351	6.324324	6.162162	36	22.7027027	113.8378378378
*	0.1918120652298	2.487715	0.4439824	0.5481271	0.25	4.146750322	0.0707438207438

tomb construction and the presence of the portrait heads on the façade of Tomb 6 and the friezes in the altar complex—both of which depict married couples—strongly support Winter's hypothesis. There are at least six individuals buried in Tomb 6 and although the sex of three of them is indeterminate, it is highly probable that they represent three married couples, but which of the couples in the friezes is not possible to determine.

Of the minimum six individuals buried in the tomb, at least four were identified in the main chamber and an additional two in the antechamber. Tomb 6, initially built as a single-chambered tomb in Structure 195-5, served as the burial place for the married couple who occupied Structure 195-5 from ca. 725 to 750 CE. It is possible that the two minimum individuals found among the human remains in the antechamber represent the remains of the elite married couple who headed the Structure 195-5 household and who were buried in the antechamber, which, in Structure 195-5, was the only chamber of Tomb 6.

The remaining four minimum individuals from the main chamber, which was added to the tomb in Structure 195-4 and continued in use in Structure 195-3, could possibly represent the elite married couples who headed these households. The main chamber served as the burial place for the elite married couple who headed the Structure 195-4 household from ca. 750 to 775 CE and for the elite married couple who headed the Structure 195-3 household from ca. 775 to 800 CE. However, the presence of comparable bones from the antechamber and main chamber points to considerable disturbance of the human remains and makes it impossible to demonstrate with certainty which human remains correspond to which specific individuals. Lady 10 Naa, one of the Structure 195-3 household heads, was the last person buried in the main chamber of the tomb and the only intact primary burial.

OFFERINGS

In excavating Tomb 6, two separate clusters of objects were located outside the tomb in front of the façade—one in the area of the lintel and one in front of the tomb door. Other objects occurred within the tomb in the antechamber and main chamber offerings (Fig. 7.5, Table 7.2). Apart from these clusters, many other objects were found scattered throughout the fill in front of the façade of Tomb 6.

The tomb offering consists of 187 separate objects, which may be grouped into thirty-eight categories (Table 7.3). An analysis of these objects may seem a simple and straightforward task. It is not. Tomb 6 was opened repeatedly over a period of perhaps seventy-five years to place six

TABLE 7.2. List of objects from the Tomb 6 offering illustrated in Figure 7.5

No. in Fig. 7.5	*Location*	*Description*
1	Lintel offering	Anthropomorphic effigy vessel
2	Lintel offering	Small jaguar effigy vessel
3	Lintel offering	Double-cup vessel
4	Lintel offering	Anthropomorphic effigy vessel
5	Lintel offering	Bipod effigy vase
6	Lintel offering	Bipod effigy vase
7	Lintel offering	Bipod effigy vase
8	Lintel offering	Cociyo urn
9	Lintel offering	Bipod effigy jar
10	Lintel offering	Bearded man effigy
11	Door offering	Spiked jar brazier
12	Door offering	G-35 bowl
13	Door offering	G-35 bowl
14	Door offering	G-35 bowl
15	Door offering	G-35 bowl
16	Door offering	Spiked conical bowl brazier, fragmented
17	Door offering	Ladle censer, fragmented
18	Door offering	Ladle censer, fragmented
19	Door offering	G-35 bowl, fragmented
20	Door offering	Ladle censer, fragmented
21	Door offering	G-35 bowl, fragmented
22	Lintel offering	Carved stone tablet, fragment
23	Door offering	G-35 bowl
24	Door offering	Ladle censer
25	Door offering	Ladle censer
26	Door offering	G-35 bowl
27	Door offering	Ladle censer
28	Door offering	G-35 bowl, fragmented
29	Door offering	G-35 bowl, fragmented
45	Main chamber	G-35 bowl
46	Main chamber	G-35 bowl
47	Main chamber	Reed mat
48	Antechamber	Tecomate with lid, both with three handles
49	Antechamber	Spiked jar brazier
50	Antechamber	Ladle censer
51	Antechamber	Mano
52	Antechamber	Mano
53	Antechamber	Double-cup vessel

continued on next page

TABLE 7.2—*continued*

No. in Fig. 7.5	*Location*	*Description*
54	Antechamber	Miniature Fine Orange pitcher
55	Antechamber	Spindle whorl
56	Antechamber	Spindle whorl
57	Antechamber	Spindle whorl
58	Antechamber	Patojo
59	Antechamber	K-14 bowl
60	Antechamber	G-35 bowl
61	Antechamber	G-35 bowl, fragmented
62	Antechamber	Ladle censer
63	Antechamber	Obsidian blade
64	Antechamber	G-35 bowl
65	Antechamber	Bone batten
66	Antechamber	Bone batten
67	Antechamber	Bone batten
69	Antechamber	Bone pin or awl
70	Antechamber	Bone pin or awl
71	Antechamber	Bone pin or awl
72	Antechamber	Greenstone bead
73	Antechamber	Spindle whorl
74	Antechamber	Jaguar canine earring
75	Antechamber	G-35 bowl, fragmented
76	Antechamber	K-14 bowl, fragmented
77	Antechamber	G-35 bowl, fragmented
78	Antechamber	G-35 bowl, fragmented
79	Antechamber	G-35 bowl
80	Antechamber	G-35 bowl, fragmented
81	Antechamber	G-35 bowl, fragmented
82	Antechamber	Ladle censer, fragmented
83	Antechamber	Blowgun?
84	Antechamber	Ladle censer
85	North niche	Fifty-eight spindle whorls
86	North niche	Ceramic ball (pellet)
87	North niche	Miniature Fine Orange goblet with lid
88	North niche	Bone tube
89	North niche	Barkcloth bracelet
90	South niche	K-14 bowl
93	Main chamber	Miniature conical cup
94	Main chamber	Miniature conical cup

continued on next page

TABLE 7.2—*continued*

No. in Fig. 7.5	*Location*	*Description*
95	Main chamber	Miniature conical cup
96	Main chamber	Miniature G-35 tripod bowl
97	Main chamber	Hemispherical bowl, fragmented
98	Main chamber	Miniature G-35 bowl
99	Main chamber	G-35 bowl, fragmented
100	Antechamber	G-35 bowl, fragmented
101	Main chamber	G-35 bowl, fragmented
102	Main chamber	G-35 bowl, fragmented
104	Main chamber	Bone batten
105	Main chamber	Bone pin
108	Main chamber	Bone triangular pendant
118	Main chamber	Unworked distal phalanx of a deer (awl?)
119	Intrusion through altar	G-35 bowl
120	Intrusion through altar, Tomb 5	G-35 bowl
121	Intrusion through altar, Tomb 5	G-35 bowl
122	Intrusion through altar, Tomb 5	G-35 bowl
123	Intrusion through altar, Tomb 5	G-35 bowl

burials and their accompanying offerings and, most likely, to retrieve bones from immediate ancestors once the flesh decayed sometime following their burial and perhaps to conduct additional rituals invoking the ancestors. In the course of successive openings of the tomb, objects were broken and scattered, and pieces of them were removed from the vicinity of the tomb. Although the offering clusters certainly correspond to the location of objects associated with the last entry into the tomb via its doorway, there is no reason to believe that all of these objects were initially placed with the last offering.

Most of the objects associated with Tomb 6 occur in the lintel, door, antechamber, and main chamber offerings. The composition of these offering groups includes objects initially placed with the final offering, objects reused from previous offerings and rearranged to form part of the final offering, and objects partially or wholly displaced from earlier offering arrangements. Yet, despite their disturbed states, certain patterns are evident within the lintel, door, antechamber, and main chamber offerings.

7.5. ***Plan and profile of the Tomb 6 offering***


Top of the altar
Floor of the East room of Str. 3 SE
(before the construction of the altar complex)
Floor of the East room of Str. 4 SE
Floor of the East room of Str. 5
Superimposed floors of
the East room in Str. 6
Floor of the patio
in Strs. 3 and 4 SE
Floor of the East walkway
in Str. 5
Original area of Tomb 5
Rubble from collapsed roof
N
0
1m

TABLE 7.3. Distribution of objects in Tomb 6

Objects	*Lintel*	*Door*	*Fill*[1]	*Ante-chamber*	*Main chamber*	*Totals*
1. Urns	4	—	—	—	—	4
2. Fragmentary urns	—	—	4	—	—	4
3. Bipod effigy vases	4	—	—	—	—	4
4. Jaguar effigy	1	—	—	—	—	1
5. Fragmentary jaguar effigy	—	—	1	—	—	1
6. Fragmentary jaguar-claw vessel	—	—	1	—	—	1
7. Spiked braziers	—	2	—	1	—	3
8. Fragmentary braziers	—	—	3	—	—	3
9. Carved stone tablet	—	—	1	—	—	1
10. Double cups	1	—	—	1	—	2
11. Ladle censers	—	7	1	4	—	12
12. Miniature bowls	—	—	1	—	5	6
13. G-35 bowls	—	10	4	12	7	33
14. Hemispherical bowls	—	—	1	—	1	2
15. Fragmentary storage jars	—	—	2	—	—	2
16. Patojo	—	—	—	1	—	1
17. Tecomate with lid[2]	—	—	—	2	—	2
18. Fine Orange pitcher	—	—	—	1	—	1
19. Fine Orange goblet with lid[2]	—	—	—	2	—	2
20. Spindle whorls	—	—	—	62	—	62
21. Manos	—	—	—	2	—	2
22. Ceramic ball (pellet)	—	—	—	1	—	1
23. Blowgun (?)	—	—	—	1	—	1
24. Obsidian blades/awls	—	2	2	1	—	5
25. Greenstone bead	—	—	—	1	—	1
26. Bark-cloth bracelet	—	—	—	1	—	1
27. Tubular shell bead	—	—	1	—	—	1
28. Shell disk	—	—	1	—	—	1
29. Shell pendants	—	—	1	—	1	2
30. Bone pendant	—	—	—	—	1	1
31. Jaguar-tooth earrings	—	—	—	1	1	2
32. Bone battens	—	—	—	4	1	5
33. Bone awls or pins	—	—	—	3	1	4
34. Hollow bone tube	—	—	—	1	—	1
35. Deer phalanx	—	—	—	—	1	1
36. Mat shroud	—	—	—	—	1	1
37. Dogs	—	—	—	2	1	3
38. Birds	—	—	—	8	—	8
Totals	10	21	24	112	21	188

Notes:
1. The objects from the fill in front of the tomb are not from any specific offering context.
2. Lids are counted as separate objects.

7.6. The Tomb 6 lintel offering

THE LINTEL OFFERING

The ten objects composing the lintel offering were purposefully arranged and certainly formed part of the final offering for the Structure 195-3 household head, Lord 1 Lachi. Here it should be noted that the last burial in Tomb 6 (Burial 68-22), that of Lady 10 Naa, does not represent the last opening of the door to Tomb 6 because she was buried in the main chamber by way of a hole dug through the altar and Tomb 5 (Fig. 7.1). It seems unlikely, then, that her burial was associated with the last arrangement of offerings in the antechamber or in the lintel and door areas in front of the tomb façade. Instead, these offerings would seem to be associated with Lord 1 Lachi.[3] However, the arrangement of the last offering does not correspond to his burial because the tomb was reopened at least once following his interment to retrieve his bones.

The lintel offering included two groups of objects—one in the north around the portrait head of Lord 1 Lachi and one in the south around the portrait head of Lady 10 Naa (Fig. 7.6). In the north group, an urn and three bipod effigy vases were arranged in a semicircle. Two nearly identical small ceramic male effigies rested on the ledge directly north of the portrait head of Lord 1 Lachi and a jaguar effigy vessel directly south of it. In the south group, a bearded male effigy and a bipod effigy vase occurred in front and on either side of the portrait head of Lady 10 Naa. A double

cup was situated on the ledge directly north of her portrait head next to the jaguar effigy vessel.

Ceramic urns and effigies are characteristic artifacts of ancient Zapotec material culture (Caso and Bernal 1952:9). They usually consist of a cylindrical vase around which a seated or standing figure is modeled. The lintel offering includes one complete urn. It clearly portrays Cociyo (Fig. 7.7a).

Cociyo urns are the most frequent in Xoo phase tombs at Monte Albán (Caso and Bernal 1952:17). Like all representations of Cociyo, the Tomb 6 urn has a lower mask with a square mouth, projecting teeth, and a forked tongue. The eyes are framed by horizontal scroll-like plaques below and stepped plaques above. Like most representations of Cociyo, the Tomb 6 urn has a Glyph C in the headdress, a sign that appears to be the iconic rendition of a maize bundle over the split image of a mouth with teeth (Urcid 2002). The glyph is known to carry the semantic value of "rain" (Urcid 2001:163–165). The headdress of this urn includes at the bottom a strip that ends on the sides with trefoil elements. Larger trefoil elements appear on either side of the top portion of the headdress. These trefoil elements are graphic references to budding maize (Sellen 2002:11; Urcid and Winter 2003). Hanging on the lateral sides of the headdress are two flaps that may signal the silk of a mature ear of corn.

The Tomb 6 Cociyo urn is a seated figure, 21.5 cm high, with legs crossed and hands resting on the knees. The Cociyo is dressed in a shoulder cape and loincloth. The cape is decorated with incised lines. A necklace with three appliqué knots in the form of the "hairpin" sign hangs from the neck. Based on other contexts, these signs appear to carry a semantic value related to "humidity" or "dew" (Sellen 2002; Urcid 2005). The loincloth manifests horizontal appliqué strips, including one that is undulating and that alludes to "flowing water." Suspended from the lowest strip are three appliqué "hairpin" signs. The Cociyo is adorned with earspools and appliqué bead bracelets on each wrist. The urn is gray in color and complete and intact with only small fragments of the fingers, appliqué bead bracelets, and ends of some "hairpin" signs broken and missing.

The two small ceramic human effigies in the lintel offering are also gray in color but smaller in size than the Cociyo urn—one is 14.7 cm high and the other 14.6 cm high (Fig. 7.7b). The figures have identical facial features. Both are seated figures with legs crossed and hands resting on the knees. Their wrists are adorned with appliqué bead bracelets and their ears sport circular earspools. Both wear loincloths and shoulder capes that, however, differ in details. One has incised parallel lines with incised hash marks between them decorating the loincloth and shoulder cape. The other has an incised herringbone design decorating the loincloth and a simple

7.7. Ceramic effigies found in the Tomb 6 lintel offering

incised line parallel to the edge of the shoulder cape. An appliqué bead necklace also rests on the shoulder cape.

Like the loincloths and shoulder capes, the headdresses differ in detail. One has a headdress decorated with incised parallel lines and hash marks, like those on its loincloth and shoulder cape. Five vertically placed oblong appliqué elements (of which one is missing) top the headdress. These elements may be iconic renditions of mature ears of maize. The other has the lower part of its headdress decorated with incised crosshatching and its top with three appliqué trefoil elements with incised outlines of trefoils within them representing budding maize (Sellen 2002:11; Urcid and Winter 2003). The headdresses of both effigies are backed by large vertical rectangular pieces manifesting numerous panels (feathers?) formed by broad incised lines. Both objects are virtually complete and intact with only a few pieces missing from the headdress, loincloth, and foot of one of them.

A final ceramic effigy from the lintel offering is a male with a pointed beard (Fig. 7.7c). The effigy is 18.2 cm high and is rendered in a seated position. The legs and arms are not outwardly visible, but their presence beneath a shoulder cape and cloak is indicated. The arms appear to be crossed over the chest beneath the cloak, and the legs also appear to be crossed. The cloak is decorated with incised hash marks, and punctuate and appliqué elements occur at the shoulders. The figure is adorned with plain circular earspools and a nose ornament in the septum. The bridge of the nose appears to be decorated with inset elements. A large bow forms the headdress and long hair, or a headcloth, falls from beneath the bow to cover the shoulders. He is also adorned with a necklace that manifests a double-pointed sacrificial knife as a central ornament. The figure is gray in color and is complete and intact.

Urns and similar ceramic effigies apparently functioned exclusively as ritual objects. At Monte Albán, urns occur not only in tombs and (more rarely) burial offerings but also in offerings found in caches in temples or underneath stelae (Caso and Bernal 1952:9–10). Urns at Lambityeco occur as offerings in elaborate and, more rarely, simple tombs, but none occurs in offerings associated with individuals buried in plain graves. Even though most urns are receptacles, they almost never contain any object or traces of any substance (Caso and Bernal 1952:10). None of the Lambityeco urns contains any object or macroscopic evidence of any contents within it.

The bipod effigy vases are gray ceramic vessels with globular bodies, cylindrical necks, and flat horizontal rims. Molded effigies, usually faces of Cociyo with Glyph C elements in his headdress, occur attached to the vessel neck. Two small supports occur on the exterior base of the vessel below where the effigy is attached. These supports probably kept the vessel from

tipping over because of the added weight of the effigy figure attached to the neck; however, they also served to tip the vessel back to prominently display the attached effigy. The supports have incised vertical lines that probably simulate human toes.

Four bipod effigy vases occur in the lintel offering (Fig. 7.7e). These vases are not identical; each has its own unique attributes. The vessels may be grouped into three sizes: one is small, two are medium-size, and one is large. The small vase is complete and intact and measures only 14 cm high. It has a simply molded Cociyo face with a Glyph C headdress.

One medium size vase is 16.5 cm high and has a broken rim. It also has a molded Cociyo face, which, however, differs in some respects from the Cociyo on the small vase. First, it has a headband that looks like a skein of yarn viewed sideways. Second, it has a necklace with a central pendant or plaque. Both of these elements do not occur on the Cociyo on the small vase. Finally, this medium-size vase has a Glyph C headdress element above the Cociyo face, but unlike the small vase, the Glyph C was cast in a separate mold and somewhat shoddily tacked on above the Cociyo face.

A second medium vase is 15.5 cm high and lacks a major portion of its molded effigy face. The missing part was never found and must have been removed from the area of Tomb 6 in ancient times. What remains of the effigy is its headband, similar to the headband on the other medium-size vase (like a skein of yarn), and the upper part of the face. The intact part of the face retains the stepped eyebrows typical of Cociyo, indicating that a molded face of the rain god once decorated the vase. No Glyph C occurs as a headdress on this vase.

The single large vase is 20.5 cm high and has a piece of its rim broken and missing. This vase is unusual because it lacks a molded Cociyo face and instead has a molded human face. The headdress includes a Glyph C element topped by a panoply of feathers, very similar to the headdresses with Glyph C on the plaster busts of Cociyo that decorate a small temple room in Mound 190 (see Fig. 5.3b) (Lind and Urcid 1983:84). No bipod effigy vases with human faces have been reported from Monte Albán but a similar one was found in Tomb 12 at Lambityeco (Zárate 1992:13, fig. 13).

Effigy vases occur in tomb and burial offerings at Monte Albán (Caso and Bernal 1952:40–42). At Lambityeco, they occur in offerings in both elaborate and simple tombs. One has also been found in an offering with an unusual double burial (Burial 67-1) in a plain grave, but none has been found in offerings associated with other individuals buried in plain graves. Although they are receptacles, rarely do the effigy vases from Monte Albán or Lambityeco have any objects or macroscopic evidence of any substances within them.

A single gray ceramic vessel, 13.3 cm high, modeled in the form of a jaguar, occurs in the lintel offering (Fig. 7.7d). The jaguar's body is a bowl-like receptacle with its circular orifice opening in the jaguar's back. The jaguar is realistically modeled with his tongue sticking out from between his fangs. The jaguar had its tail broken and is missing a chip out of one of its ears. Despite being a receptacle, the jaguar effigy vase lacks macroscopic evidence of any kind of contents. Few jaguar effigy vessels occur in tomb offerings at Monte Albán (Caso and Bernal 1952:54–63). Only two jaguar effigy vessels are illustrated by Caso and Bernal (1952:57, fig. 83) and these come from Tomb 1 in the Atzompa sector of Monte Albán. At Lambityeco, jaguar effigy vessels have been found only in offerings in elaborate tombs. None occurs in offerings in simple tombs or plain graves.

A gray ceramic double cup occurs in the lintel offering (Fig. 7.6). One of the two cups is taller (11 cm) than the other (6.8 cm). No double cups were found in excavations at Monte Albán. However, small effigy figures with double cups attached to their backs are illustrated by Caso and Bernal (1952:231–238), although none comes from Monte Albán. The Tomb 6 double cup, though, shows no evidence of having been attached to an effigy figure. Double cups have been found in offerings in both elaborate and simple tombs, but not plain graves, at Lambityeco. None manifests macroscopic contents. Their function is unknown but they may have served as containers for mixing liquids or powders.

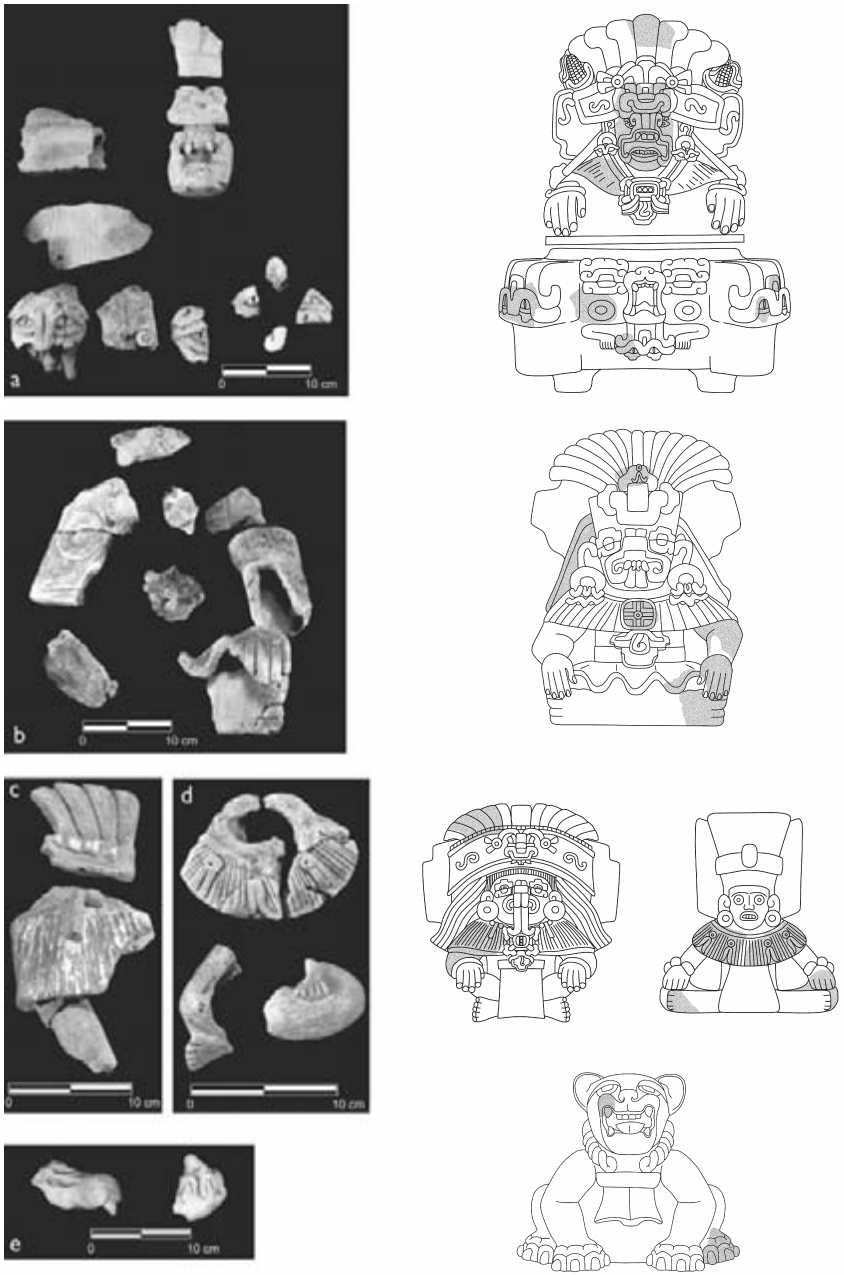
DISPLACED OFFERINGS IN THE LINTEL AREA

Fragmentary remains of several urns, a jaguar effigy vessel, a jaguar claw vessel, and a carved stone tablet were found scattered throughout the fill in front of the lintel of Tomb 6 (Fig. 7.8). These fragments must have formed parts of lintel offerings that had been broken and scattered during any of the many reopenings of the tomb to place later burials, retrieve bones of immediate ancestors, and enact rituals for the ancestors. As noted above, the lintel offering had to be removed each time the tomb was opened.

There were twenty-seven urn fragments scattered throughout the fill in front of the lintel. Although some of these fragments could be pieced together, none could be assembled to form a complete, or even partially complete, urn. An analysis of these fragments suggests that they come from at least four different urns. Most of the fragments depict parts of bodies or clothing—arms, legs, hands, feet, capes, and loincloths—and parts of probable headdresses. The faces of the urns are, for the most part, missing, which suggests that they may have been purposefully removed in ancient times.

7.8. ***Distribution of urn fragments in front of Tomb 6***

Only one of the four urns represented among the fragments had its face preserved intact (Fig. 7.9a). This effigy vessel was unusual because it was orange in color instead of gray as most urns. Originally, it formed a lid



7.9. Ceramic effigy fragments from the fill in front of Tomb 6 and their hypothetical reconstruction

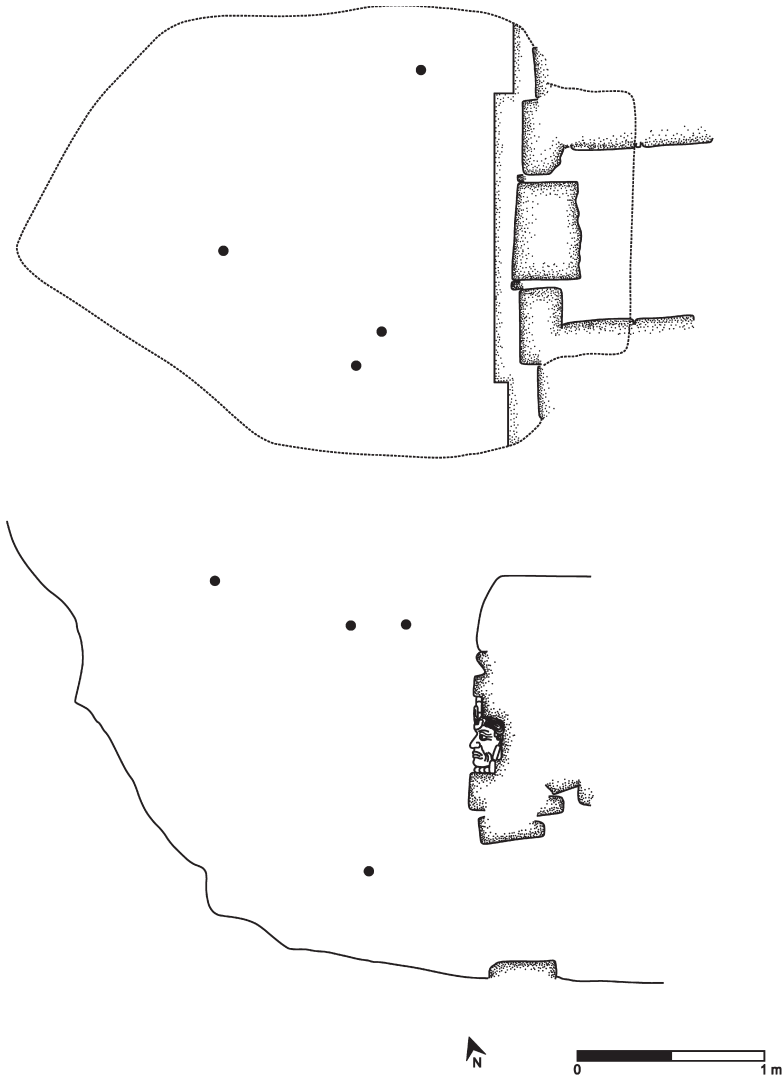
that covered a box. Like all known urn boxes, this one had attributes of the alligator, indicating that the box represented the surface of the Earth. The effigy lid atop the box must have measured some 40 cm high and the box 20 cm for a total height of 60 cm.

The urn is represented by twelve fragments of which six come from the box and six (including the face) come from the lid. Fragments indicate that the seated effigy on the lid had a shoulder cape decorated with incised lines and a feather headdress with a Glyph C. The face is of a male whose two eyes and mouth are visible behind a mask that is over his nose and extends to the sides of his mouth. Caso and Bernal (1952:94–96) describe this type of mask as a plaque with three curved elements above and teeth below, and two scrolls that curve downward over the cheeks and inward on either side of the mouth. Above each eye is a scroll, which Caso and Bernal (1952:94) identify as Glyph L. The effigy has all of the attributes associated with the Zapotec deity Pitao Cozobi, the God of Maize (Caso and Bernal 1952:94). Effigies and boxes of this type have been found at Monte Albán; however, all have Cociyo effigies as lids, making the Pitao Cozobi lid from Tomb 6 unique (Caso and Bernal 1952:44–45, 93).

None of the other three urns represented among the fragments had its face preserved nor manifested any special accoutrements that might allow for the identification of a particular deity. One of these was a very large gray urn that must have measured about 60 cm high. It was represented by nine fragments, including one with a large hand resting on a knee with the foot below and a portion of a wavy skirt. Other fragments appear to have come from the arm, from one of the laterally hanging flaps of the headdress with an incised circle, from a pectoral that included an appliqué Glyph E, and from a diadem with an appliqué "hairpin" sign within a trefoil element (Fig. 7.9b). This constellation of attributes suggests that the urn represented Cociyo.

The fragments from the two remaining effigy figures indicate that they were smaller in size than the previous two urns. One of these was represented by three fragments including a complete shoulder cape with an arm fragment projecting from beneath it and a fragment of a feather headdress (Fig. 7.9c). The shoulder cape was decorated with incised lines and an appliqué element, possibly the end strap of a beaded collar. In the known corpus of urns, shoulder capes with incised lines are exclusive features in the representations of Cociyo and Pitao Cozobi. The urn was gray but all its fragments manifested traces of white and red paint. It must have stood 30 cm high.

The other small effigy figure was also represented by a complete shoulder cape (Fig. 7.9d). It consisted of fragments including part of an arm and



7.10. ***Distribution of fragments of a jaguar effigy vessel in front of Tomb 6***

hand and a portion of a foot and leg. The shoulder cape was decorated with incised lines and appliqué "hairpin" signs. It must have measured around 15 cm high. This effigy may have been part of a set of four that included the two effigies illustrated in Fig. 7.7b.

Four fragments from a large jaguar effigy vessel were found scattered throughout the fill in front of the façade of Tomb 6 (Fig. 7.10). Unlike the

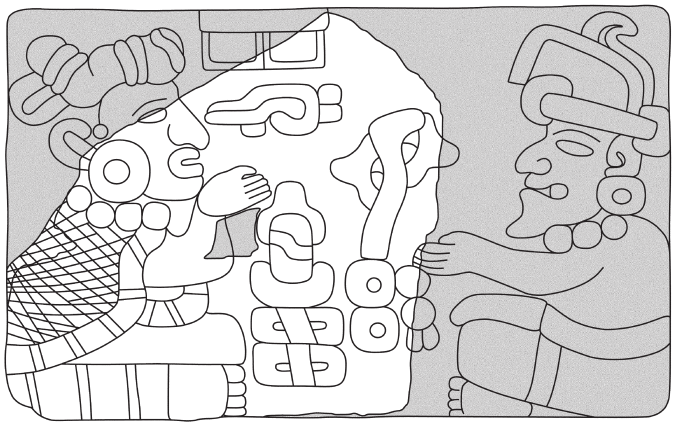
small gray jaguar effigy vessel from the lintel offering, the large jaguar effigy vessel probably measured 50 cm high and was orange instead of gray. The four fragments, of which two are illustrated, include a portion of the upper jaw, part of an eye, and parts of two paws with claws (Fig. 7.9e). Because of its orange color, it is tempting to suggest that the jaguar effigy vessel formed part of the offering that included the unusual orange Pitao Cozobi urn.

An orange ceramic claw from a jaguar claw vessel was found in the fill but no photo or three-dimensional location of this object is available. The claw had a horizontal appliqué strip at its proximal end, simulating the area of a feline foot where the claw retracts into the paw, which is why it is considered a jaguar, and not bat, claw vessel. Because it was large and orange in color it may have formed part of the offering that included the orange jaguar effigy vessel and orange Pitao Cozobi urn.

Two fragments of a stone tablet with a carved inscription on it were widely separated from one another in the fill in front of the tomb's facade. One fragment was located on the far north side of the façade at a level just below the lintel, and the other was on the south side in the area of the door offering. The assembled fragments measure 28 cm long and 17 cm high (Fig. 7.11).

Only one side of the tablet is carved and its right half is missing. A conventionalized, not realistic, depiction of a noble female profiled in a seated position occurs on the left half of the tablet. The top of her head above the eye was broken and missing so that it is not possible to determine what type of hairstyle or headdress she might have worn. She is adorned with a bead necklace and large circular earspools. She is barefoot and wears a shawl decorated with incised crosshatching. Although her arm comes out from beneath the shawl, it is in a damaged area of the stone and only her hand extending from beneath the chin is preserved. Immediately in front of her, between her hand and feet, are two bar numerals with a Glyph J on top of them rendering her name, Lady 10 Naa, whose portrait head decorates the façade of Tomb 6. A speech scroll with two marks emanates from the area above her nose.

The preserved far right side of the stone manifests a great deal of damage. In its lower section, directly in front of the name glyph Lady 10 Naa, are traces of two dots in a vertical column indicating the numeral 2. The area above the coefficient has traces of a Glyph V, two eyes of an alligator placed at either side of an undulating band in a vertical position. This suggests that the male figure who was rendered on the missing right half of the tablet was the apical ancestor of the altar, Lord 2 Alligator, adding the important detail that his calendar name included the numeral 2. The



7.11. ***Fragments of carved stone tablet and its hypothetical reconstruction***

carved stone tablet most likely corresponds to an offering placed in association with Lady 10 Naa's husband, Lord 1 Lachi, who occupied Structure 195-3 and whose portrait head decorates the façade of Tomb 6.

THE DOOR OFFERING

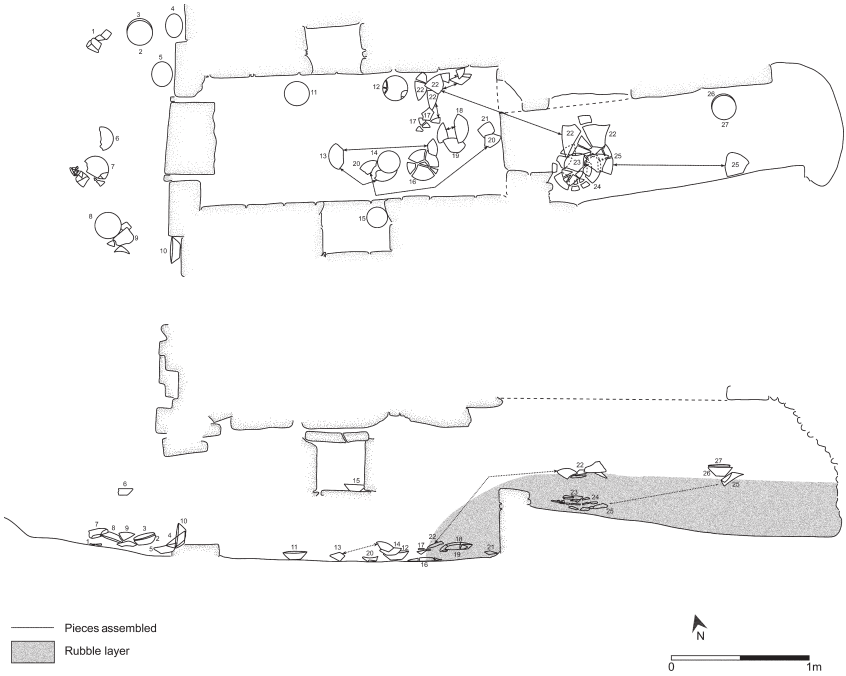
Like the objects in the lintel offering, the twenty-one objects in the door offering occur in two separate spatial clusters—one to the north of the door and one to the south (Fig. 7.12). Only nineteen of the twenty-one objects in the door offering were located three-dimensionally. Two tiny obsidian awls were sifted from the earth around the area of the door. Of the nineteen objects located three dimensionally, eleven occur to the north of the door and eight to the south. The north group includes two spiked braziers, four

7.12. ***The Tomb 6 door offering***

ladle censers, and five small G-35 bowls. The south group consists of three ladle censers and five small G-35 bowls (Fig. 7.5).

The distribution of the ten G-35 bowls in the door offering appears patterned (Fig. 7.13, Table 7.4). Two small G-35 bowls were placed in a vertical position on either side of the door jambs (#4 and #10 in Fig. 7.13). In front of each of these are an additional two small G-35 bowls on top of one another. The two in the north (in front of #4) occur one (#2) inside the other (#3) in a nearly upright position. The two in the south (in front of #10) are inverted, one (#8) on top of the other (#9). In addition, a small G-35 bowl (#5) in a nearly upright position is situated in front of the north door jamb. For the pattern burnished designs on the interior bases of these G-35 bowls see Figure 7.14 and Table 7.4.

G-35 bowls were most likely used as food-serving vessels in Zapotec daily life during the Xoo phase, as common at Zapotec meals as dinner plates are with us (Fig. 7.15a). As mortuary offerings, however, no G-35 bowls have been noted to contain macroscopic remnants of food. Frequently, G-35 bowls are found stacked one inside another, inverted, or placed on edge in tomb and burial offerings, as in the Tomb 6 door offering. Although this suggests that they may not have been containers for offerings of food but symbolic offerings of food bowls the deceased was to take to the hereafter, it seems more likely that the stacking, inverting, or placing on edge reflects reuse of the bowls from previous offerings once



7.13. ***Plan and profile of the distribution of G-35 and K-14 bowls in Tomb 6***

the food in them had decayed. However, at least two examples (#1 and #3 in Fig. 7.13) contain remnants of white plaster in them, which suggests that they were reused from earlier offerings to hold wet plaster that was applied to the façade or other parts of Tomb 6.

The seven gray ladle censers in the door offering have tiny holes in their bases made by poking a stick-like object through them when the clay was moist and pliable. All of the "pans" have smudged interiors, indicating that they were used to carry copal, a sweet-smelling incense (Fig. 7.15b, Table 7.5). All except two of the ladle censers in the door offering are broken. Both of the complete and intact examples were located next to one another directly south of the door (Fig. 7.5). One of these had traces of carbon within its "pan," probably from the glowing coals placed within to serve as a base on which to place and ignite the copal resin. The other had traces of copal adhering to the interior of its "pan." It seems evident, then, that these two intact ladle censers formed part of the last door offering.

Ladle censers are among the most frequent type of offering found in Xoo phase tombs at Monte Albán and Lambityeco. At Monte Albán, 423 Xoo phase ladle censers occur as tomb offerings whereas only eight were found as offerings associated with individuals buried in plain graves (Caso,

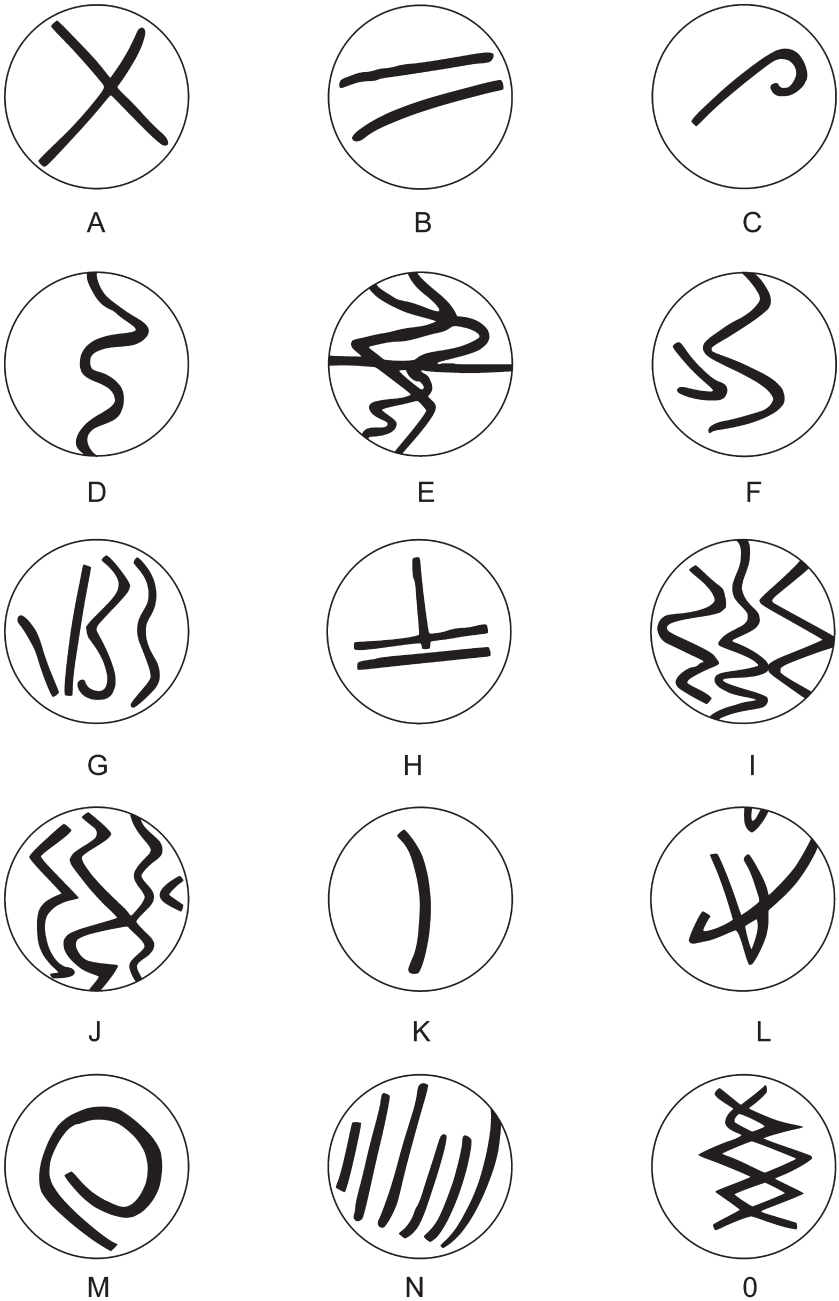
TABLE 7.4. G-35 bowls in the door offering

No. in Fig. 7.13	*Field no.*	*Description*[1]
1	7334	Small G-35 bowl. Gray. Dia. 18.5 cm, ht. 4.9 cm. Base design: G. Broken and incomplete. Plaster on interior base.
2	7327	Small G-35 bowl. Light gray. Dia. 18.4 cm, ht. 4.1 cm. Base design: None. Intact but chipped. No contents.
3	7335	Small G-35 bowl. Gray. Dia. 17.4 cm, ht. 5.2 cm. Base design: A. Broken but complete. Plaster on interior base.
4	7323	Small G-35 bowl. Light gray. Dia. 18 cm, ht. 5.7 cm. Base design: None. Broken but complete. No contents.
5	7328	Small G-35 bowl. Gray. Dia. 19.3 cm, ht. 5.2 cm. Base design: C. Broken but complete. No contents.
6	7245	Small G-35 bowl. Dark gray. Dia. 17 cm, ht. 4.5 cm. Base design: F. Broken and incomplete. No contents.
7	7320	Small G-35 bowl. Gray. Dia. 18.7 cm, ht. 5.7 cm. Base design: A. Broken but complete. No contents.
8	7318	Small G-35 bowl. Dark gray. Dia: 18.5 cm, ht. 5.5 cm. Base design: None. Broken but complete. No contents.
9	7333	Small G-35 bowl. Gray. Dia. 18.6 cm, ht. 5.3 cm. Base design: A. Broken but complete. No contents.
10	7319	Small G-35 bowl. Gray. Dia. 19.3 cm, ht. 5.6 cm. Base design: None. Complete and intact. No contents.

Note:
1. For base designs see Figure 7.14.

TABLE 7.5. Ladle censers in the door offering

Field no.	*Description*
7325	Ladle censer. Pan: dia. 13.8 cm, ht. 5.1 cm. Handle: L 12.5 cm, dia. 3.3 cm. Broken but complete. Pan interior smudged.
7329	Ladle censer. Pan: dia. 14 cm, ht. 5 cm. Handle: L 11.7 cm, dia. 3.5 cm. Broken but complete. Pan interior smudged. Handle manifests red and white paint
7331	Ladle censer. Handle: L 12 cm, ht. 3 cm. Broken, pan missing. Handle manifests red and white paint.
7324	Ladle censer. Pan: dia. 15 cm, ht. 4.5 cm. Handle: L 10.8 cm, dia. 3.6 cm. Broken and incomplete. Pan interior smudged. Handle manifests red and white paint.
7321	Ladle censer. Pan: dia. 13.3 cm, ht. 4.9 cm. Handle: L 13.3 cm, dia. 3.5 cm. Broken and incomplete. Pan interior smudged.
7342	Ladle censer. Pan: dia. 12.6 cm, ht. 4.5 cm. Handle: L 12.3 cm, dia. 3.3 cm. Complete and intact. Pan interior smudged, contained carbon.
7322	Ladle censer. Pan: dia. 13.2 cm, ht. 5 cm. Handle: L 11.7 cm, dia. 3.7 cm. Complete and intact. Pan interior smudged, contained traces of copal resin (incense).



7.14. ***Pattern-burnished designs on the bases of G-35 and K-14 bowls from Lambityeco***

7.15. ***G-35 bowls, ladle censers, and spiked braziers from Tomb 6***

Bernal, and Acosta 1967:434–435). At Lambityeco, ladle censers are common offerings in both simple and elaborate tombs, but none has been found as an offering associated with individuals buried in plain graves. The exceptionally high frequency of ladle censers in Xoo phase tombs at Monte Albán and Lambityeco and their total absence or rare occurrence in plain graves may have been for practical, as well as ritual, reasons. Because the tombs at Lambityeco and Monte Albán were opened repeatedly, the sweet-smelling copal incense carried in the ladle censers may have served to dispel unpleasant odors as well as to ritually purify the area.

Two braziers with tiny cone-like projections or "spikes" occur in the door offering. They were found next to one another on the north side of the door (Figs. 7.5 and 7.12). One of these vessels is in the form of a small jar and one is in the form of a conical or flat-based, straight-walled bowl. Both are gray ceramic vessels, but the jar was also coated with a lime whitewash on its exterior surface (Fig. 7.15c).

The spiked jar has a rim diameter of 12.1 cm and a height of 11.4 cm. Two vents, one in the form of a cross and the other in the form of an inverted "T," occur on opposite sides. The "T," or "cloud sign," was partly broken, leaving a sherd from the wall of the vessel missing. This jar had two handles, on opposite sides of the vessel, but both were broken and missing. The exterior base of the jar had a white "X" painted on it.

The spiked conical bowl has a rim diameter of 31.9 cm and a height of 15.6 cm. Unlike the jar, this bowl was not coated with a lime whitewash and did not have conical projections over its entire surface. Instead, the exterior wall was decorated on each of its four opposing sides by two vertical parallel lines of conical projections. Four simply incised crosses occur in the areas between these parallel lines of "spikes" on the exterior vessel wall, and an additional four simply incised crosses occur on opposing sides of the interior vessel wall. Four horizontally placed loop handles modeled to resemble rope occurred on the bowl rim but were broken, leaving only their stubs intact. The bowl was broken and several large pieces are missing from its rim.

Both vessels probably functioned as braziers in which incense may have been burned. Unlike the ladle censers, which were incense burners meant to be carried in processions, the braziers were incense burners meant to be set in one place. Although the spiked bowl does manifest a smudged interior, suggesting incense was burned within it, the jar shows no evidence of having had anything burnt within it. No spiked braziers are reported from tomb or burial offerings at Monte Albán. At Lambityeco, however, spiked braziers have been found in offerings in elaborate tombs (Paddock, Mogor, and Lind 1968:9–10).

Two obsidian awls, sifted from the earth around the door offering, were formed by bilaterally flaking the distal ends of obsidian blades to a central point. Both were gray obsidian, probably from the Pico de Orizaba source in Veracruz. One was 2.2 cm long, 1.3 cm wide, and 2 mm thick. The other was 3.6 cm long, 7 mm wide, and 2 mm thick.

In Zapotec daily life, obsidian awls functioned both as ritual and utilitarian items. As ritual items, they were used to pierce ears, tongues, and, in the case of males, the genitals, in order to obtain blood as a self-sacrificial offering. As utilitarian items, awls functioned to bore holes in leather and other materials. The precise function of the Tomb 6 awls is unknown, although one expects from their context within a mortuary offering that they might have been awls destined to a ritual function

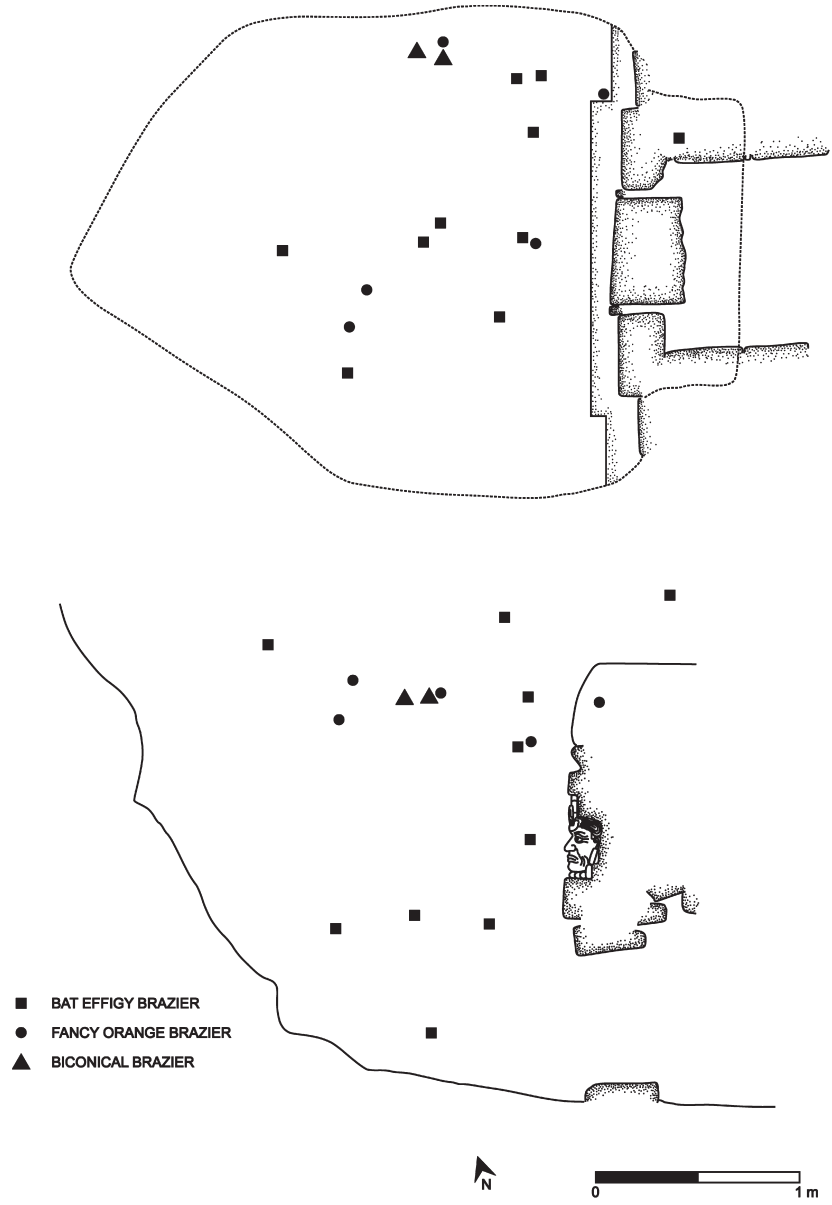
DISPLACED OFFERINGS

An additional sixteen objects, mostly fragmentary, were located outside any offering context in the fill in front of Tomb 6. Among the objects are three braziers, four G-35 bowls, one miniature subhemispherical bowl, one hemispherical bowl, two large storage jars, two obsidian blades, and three shell ornaments. The shell ornaments probably came from previous antechamber or main chamber offerings.

Fragments from at least three braziers were recovered and none of these appears to have been of the spiked type. Instead, among the seventeen brazier fragments are pieces from a large bat effigy brazier, a biconical one, and a fancy bowl-type brazier with appliqué decoration (Fig. 7.16).

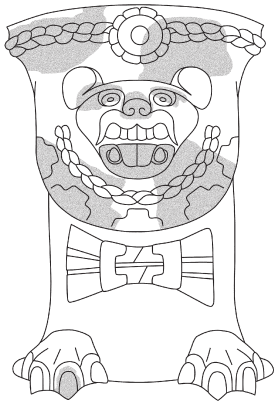
The bat effigy brazier is represented by ten fragments, including a lower jaw with fangs and tongue, portion of an upper jaw with a fang, part of an eye, a complete nose, a claw, most of a wide collar or "bib," and a piece of the rim to which the effigy was attached (Fig. 7.17a). The rim of this gray ceramic brazier measures approximately 30 cm in diameter. It is decorated with two parallel appliqué strips modeled to resemble a rope and a modeled appliqué "bow" or "clasp" that joins the two ends of the rope in a semblance of binding them together. The bat had a fancy wide collar or "bib" around his neck. The collar was decorated along its edge by two parallel appliqué strips modeled to resemble a rope, like that on the rim. The fringe beneath the "rope" was decorated with incised stepped lines like fringes of cloaks or blouses. Caso and Bernal (1952:88–91) illustrate a number of bat effigy braziers with similar attributes, although none comes from Monte Albán. The Tomb 6 bat effigy brazier probably stood more than 70 cm high.

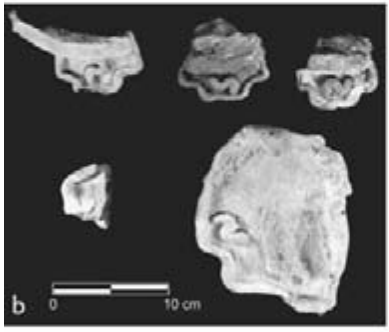
The fancy bowl-type brazier is represented by five fragments (Fig. 7.17b). This vessel had a rim diameter of about 22 cm and stood approximately 20

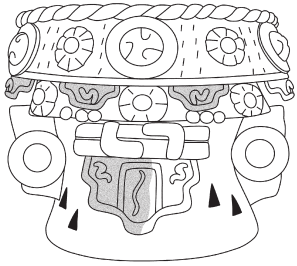


7.16. ***Distribution of brazier fragments in front of Tomb 6***

cm high. The fragments include several pieces from the rim, which had plaques in the form of stepped elements attached to it. The plaques had their edges outlined by appliqué strips and were decorated with appliqué







7.17. ***Brazier fragments from the fill in front of Tomb 6 and their hypothetical reconstruction***

TABLE 7.6. Bowls from the fill in front of Tomb 6

Field no.	*Description*[1]
20,883B	Small G-35 bowl. Gray. Dia. 18.3 cm, ht. 5.7 cm. Base design: None. Broken but complete. No contents.
22,593	Small K-14 bowl. Brown. Dia. 19.6 cm, ht. 5.6 cm. Base design: None. Broken and incomplete. Interior has traces of white paint (not plaster).
22,595	Small G-35 bowl. Gray. Dia. 20.3 cm, ht. 5 cm. Base design: A. Broken and incomplete. No contents.
22,597	Small G-35 bowl. Gray. Dia. 17.6 cm, ht. 4.2 cm. Base design: B. Broken but complete. No contents.

Note:
1. For bowl base designs see Figure 7.14.

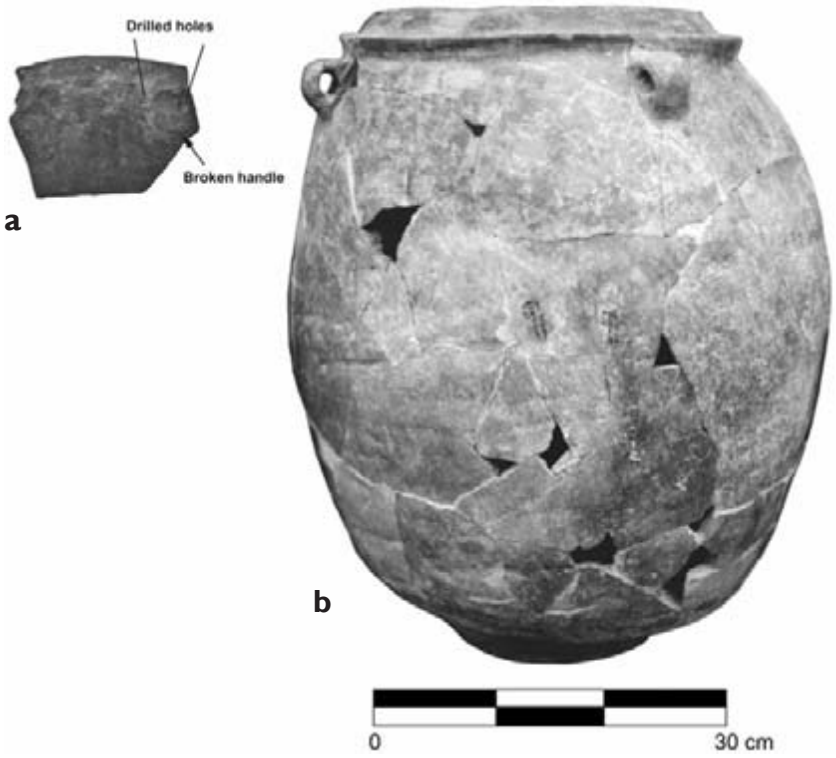
elements in the form of an "S." Based on epigraphic comparisons, this type of decoration appears to symbolize "rain clouds" (Sellen 2002:11). This brazier was unusual because it was orange instead of gray. It seems probable that this fancy orange brazier was associated with the offering that included the orange jaguar effigy vessel, jaguar claw vessel, and the Pitao Cozobi urn. A similar, but smaller, fancy bowl-type brazier was found in Tomb 2 in Mound 190 at Lambityeco (Paddock, Mogor, and Lind 1968:18, fig. 24). Caso and Bernal (1952:108) illustrate two fancy bowl-type braziers (neither of which comes from Monte Albán) that have attributes similar to the one just described.

The biconical brazier, a burnished brown ceramic vessel, is represented by two fragments (Fig. 7.17c). It probably measured about 20 cm high and had a rim diameter of approximately 18 cm. A wide appliqué band with a narrow appliqué strip atop it encircles the center of the brazier. This vessel had a smudged interior presumably from the incense burned within it.

Four bowls were assembled from sherds screened from the fill in front of Tomb 6. Three were gray ceramic G-35 bowls and one was a brown K-14 bowl (Caso, Bernal, and Acosta 1967:385). K-14 bowls are brown in color and otherwise identical to the G-35 bowls (Table 7.6).

A miniature subhemispherical bowl was reconstructed from numerous small sherds screened from the fill in front of Tomb 6 (Fig. 7.22a). The vessel is well-burnished and manifests a light gray interior and a dark-gray exterior body. It had a rim diameter of 11 cm and a height of 4 cm. The bowl was broken and had several pieces missing. Similar bowls have been found in two different tombs at Monte Albán (Caso, Bernal, and Acosta 1967:403, fig. 330i).

A burnished gray ceramic hemispherical bowl was located in the fill in front of Tomb 6. It was less than half complete. It had a rim diameter of 20 cm and a height of 16 cm (Fig. 7.22b). Similar hemispherical vessels,

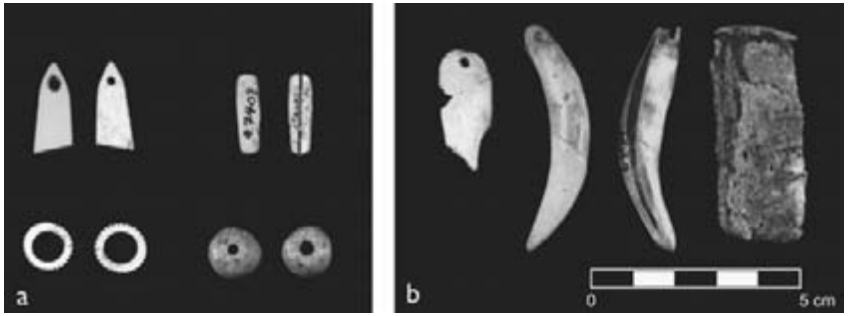


7.18. ***Flanged-neck tecomates from Lambityeco (photo of reconstructed tecomate courtesy of Marcus Winter)***

classified as G-3 bowls, occur in both mortuary and nonmortuary contexts at Monte Albán (Caso, Bernal, and Acosta 1967:383, table XVI; 397). The bowls probably functioned as serving vessels for beverages.

Two large rim sherds, one from a large olla and the other from a large flanged-neck tecomate, occur in the fill in front of Tomb 6. The olla rim sherd came from a large gray vessel with a rim diameter of 32 cm. Large gray ollas are fairly common in tomb and burial offerings at Monte Albán (Caso, Bernal, and Acosta 1967:427).

The tecomate rim sherd came from a large yellow vessel with a rim diameter of 32 cm (Fig. 7.18a). A flange occurs just below the rim and remnants of strap handles with drilled perforations on either side are visible. It appears that these perforations were made to insert a cord handle when the ceramic handle broke. No similar tecomates have been found in tombs or burials at Monte Albán. At Lambityeco, however, a complete large flanged-neck tecomate with strap handles and a lid was found in front



7.19. Shell, bone, stone, and bark ornaments from Tomb 6

of Tomb 11 in Mound 185 just north of Mound 195 (Fig. 7.18b) (Winter, personal communication, 1998; Winter, Deraga, and Fernández 1979).

Two small obsidian blades were found in the fill in front of the tomb. Both were of black obsidian and probably came from the Altotonga source in Veracruz. One measured 3.4 cm long, 6 mm wide, and 2 mm thick; the other measured 3.7 cm long, 8 mm wide, and 2 mm thick. They may have been used in self-sacrificial bloodletting rituals performed in front of the tomb.

Three shell ornaments were found in the fill and may represent offerings that were originally with the individuals buried in the antechamber or main chamber. These include a tubular bead, a disk, and a pendant (Fig. 7.19a; no photograph of the pendant is available). The tubular bead is 2.1 cm long, 6 mm wide, and 3 mm thick. It has a groove the length of its underside that indicates it was broken in half. The shell is pink and pitted on its underside and chalky white on its topside. This bead may have been part of a necklace or bracelet. The disk was screened from the upper layers of the fill in front of the tomb façade. It is in the form of a ring (too small and too fragile to have served as any kind of finger ring) with a series of notches around it. Its maximum diameter is 1.4 cm and inner diameter 9 mm, and it is 1 mm thick. Three other notched shell rings or disks have been found at Lambityeco but none is from a mortuary context. The pendant (3.3 cm long, 1.9 cm wide, and 2 mm thick) has a pointed upper end that is notched on either side but has no hole drilled through it. Its lower end was cut off horizontally. A similar shell pendant was found in Tomb 11 at Lambityeco (Winter, personal communication, 1998).

Most of the objects screened from the fill in front of the façade of Tomb 6 almost certainly pertained to displaced offerings placed below the lintel area or in front of the door. With the repeated reopenings of the tomb, these offerings were broken and scattered throughout the fill. A few

objects, such as the shell ornaments, may have been displaced from offerings originally placed with the individuals buried in the antechamber or main chamber of the tomb.

THE ANTECHAMBER OFFERING

A total of 103 objects plus the remains of two immature dogs and eight birds occur in the antechamber offering. Even if the fifty-eight spindle whorls that were strung together and left in the north niche are considered a single object, instead of separate objects, the total number of objects placed in the antechamber is still more than double that of any other offering context in the tomb. Furthermore, there are twenty-one different types of objects in the antechamber, which is nearly double the number of different types of objects in any other offering context in the tomb. Clearly, the quantity and the variety of objects placed in the antechamber make it the principal and most complex locus of offerings in the tomb.

There is little patterning evident in the distribution of objects within the antechamber. Most of the objects are clustered at the far east end and any purposeful arrangements that might have occurred appear, for the most part, to have been greatly disturbed and displaced during the repeated openings of the tomb (Fig. 7.5).

There are nine G-35 and three K-14 bowls in the antechamber and at least five of these appear to have been purposefully arranged as part of the last offering (Fig. 7.13, Table 7.7). Two small bowls, a G-35 and K-14 (#11 and #12 in Fig. 7.13), occur in an upright position on the antechamber floor on either side of the north niche, and two other G-35 bowls (#13 and #14) also occur in an upright position on the floor on either side of the south niche—although it appears that one (#13) was moved partially out of position. A small K-14 bowl (#15) was in an upright position in the south niche.

Six additional G-35 bowls and a K-14 bowl occur in the antechamber offering and all are located near the east end where considerable disturbance is evident. Four of these are broken and incomplete and most likely served as previous offerings. Two others were broken but complete. One of these (#16 in Fig. 7.13) was inverted and rested directly on the antechamber floor. The other (#18) was upright and contained traces of red pigment on its interior. This bowl was probably reused from a previous offering as a container for red paint. The paint may have been used to decorate the panels on the tomb façade or to paint the skull of the individual who was buried in the antechamber. Finally, one large G-35 bowl had its sherds scattered between the antechamber and main chamber (#22 in Fig. 7.13).

TABLE 7.7. Bowls from the antechamber offering

No. in Fig. 7.13	*Field no.*	*Description*[1]
11	7289	Small G-35 bowl. Dark gray. Dia. 18 cm, ht. 5.1 cm. Base design: E. Complete and intact. No contents.
12	7293	Small K-14 bowl. Brown. Dia. 18.5 cm, ht. 5 cm. Base design: A. Broken but complete. No contents.
13	7297	Small G-35 bowl. Light gray. Dia. 18.5 cm, ht. 5.6 cm. Base design: A. Broken but complete. No contents.
14	7296	Small G-35 bowl. Light gray. Dia. 16 cm, ht. 4.5 cm. Base design: None. Broken but complete. No contents.
15	7353	Small K-14 bowl. Brown. Dia. 14.9 cm, ht. 4.2 cm. Base design: A. Complete and intact. No contents.
16	7349	Small G-35 bowl. Gray. Dia. 19 cm, ht. 5.2 cm. Base design: B. Broken but complete. No contents.
17	7298	Small K-14 bowl. Brown. Dia. 17.6 cm, ht. 5.7 cm. Base design: A. Broken and incomplete. No contents.
18	7313	Small G-35 bowl. Light gray. Dia. 18.5 cm, ht. 5.2 cm. Base design: A. Broken but complete. Contains traces of red pigment on interior.
19	7312	Small G-35 bowl. Gray. Only half complete. No further information available.
20	7292	Small G-35 bowl. Dark gray. Dia. 17.7 cm, ht. 4.7 cm. Base design: A. Broken and incomplete. No contents.
21	7299	Small G-35 bowl. Dark gray. Dia. 18.5 cm, ht. 5.6 cm. Base design: H. Broken and incomplete. No contents.
22	7277	Large G-35 bowl. Gray. Dia. 38.5 cm, ht. 10 cm. Base design: A. Broken but complete. No contents.

Note:
1. For base designs see Figure 7.14.

Four ladle censers occur in the antechamber offering (Table 7.8). Two of them were broken. One of these was in the center of the antechamber near the floor and the other was located in the doorway between the antechamber and main chamber (Fig. 7.5). The two complete ladle censers were intact. One was on the antechamber floor just inside and directly north of the tomb entrance. The other was situated near the center of the eastern end of the antechamber in front of the door to the main chamber. It rested above some broken vessels and other offerings and below some of the rubble from the roof of the main chamber. Its location and unbroken condition demonstrate that it was part of the last offering before the hole was dug through the tomb roof to place the final burial. This ladle censer contained traces of copal resin and pieces of carbonized wood and corncobs that were submitted for radiocarbon analysis and yielded a calibrated date

TABLE 7.8. Ladle censers in the antechamber offering

Field no.	*Description*
7287	Ladle censer. Pan: dia. 13.5 cm, ht. 4.5 cm. Handle: L 10.5 cm, dia. 3.2 cm. Complete and intact. Pan interior smudged, contains carbon.
7294	Ladle censer. Pan: dia. 14 cm, ht. 5 cm. Handle: L 12.5 cm, dia. 3.7 cm. Broken, pieces missing from pan. Pan interior smudged.
7300	Ladle censer. Pan: dia. 13.7 cm, ht. 5 cm. Handle: L 12.8 cm, dia. 3.5 cm. Complete and intact. Pan interior smudged. Contained carbonized corncobs and charcoal (calibrated C14 date of 800 CE) and traces of copal resin.
7343	Ladle censer. Pan: dia. 13 cm, ht. 3.5 cm. Handle broken and missing. Pan interior smudged, contains carbon.

of 800 CE. This appears to date the removal of Lord 1 Lachi's bones from Tomb 6 by his heir or wife, Lady 10 Naa, sometime before her death. No complete primary corresponding to his burial was found beneath the rubble from the roof; therefore, his bones had been removed before her burial.

The spiked brazier in the antechamber offering is in the form of a jar with two loop handles modeled to look like rope. It is a gray ceramic vessel coated with a lime whitewash very similar to, only smaller than, the spiked jar in the door offering (Fig. 7.15c); its rim diameter measured 8.4 cm and it was 7.5 cm tall. Unlike the spiked jar in the door offering, which had large vents cut in its walls, this brazier had small holes poked through its walls in the areas between the spikes. The brazier was complete and intact. Braziers are assumed to have been vessels in which incense was burned but this one showed no evidence of having been used.

One unburnished gray ceramic vessel in the form of a patojo was found in the antechamber offering (Fig. 7.20a). The vessel is 21 cm long and has a rim diameter of 11.1 cm and a height of 11.7 cm. Present-day Mixes use patojos to cook beans (Paddock, personal communication, 1983). The Tomb 6 patojo is smudged from cooking fires on its exterior lower half and has traces of lime on its interior from the water boiled within it. Two nubbin handles located on opposite sides of the vessel probably facilitated its removal from the cooking fire with the sides of the hands when hot. Remnants of a loop handle that had extended from the rim to the toe of the patojo were visible but the handle was broken and missing.

At Monte Albán, patojos are apparently scarce and occur in tomb and burial offerings of only the Pe (Monte Albán I) and Chila (Monte Albán V) phases (Caso, Bernal, and Acosta 1967:460). In the Tlacolula arm of the valley, however, a patojo was found in a Nisa phase (Monte Albán II) tomb offering at the site of Brawbehl and, of course, the Tomb 6 patojo dates to the Xoo phase. In addition, patojos have been found in Chila phase deposits

at Macuilxóchitl (Markens, Winter, and Martínez 2008:206). Apart from the Tomb 6 example, no other patojo has been found in a tomb or burial offering at Lambityeco.

A single, well-burnished gray ceramic tecomate, with a conical bowl-like lid occurs in the antechamber offering. The vessel has a rim diameter of 15.5 cm and a height of 16.6 cm. Three small vertically placed handles occur on the body. A well-burnished, black-slipped ceramic lid, 20.3 cm in diameter and 8.5 cm high, covered the top of the tecomate. The lid also manifested three vertically placed handles. Similar tecomates, but without handles and lids, have been found on occasion in tomb and burial offerings at Monte Albán (Caso, Bernal, and Acosta 1967:429, 430, fig. 364). The tecomate was located directly on the floor in the northeast corner of the antechamber with the lid in place on top of it (Fig. 7.5). Both were complete and intact. In Chapter 3, this tecomate with a lid was discussed and interpreted as a spinning kit, used to spin cotton fibers into thread (see Fig. 3.6b). The spinning kit was probably placed as an offering for one of the females buried in the tomb. The tecomate had within it two small manos, three spindle whorls, one double cup, and a small Fine Orange pitcher.

The sixty-two spindle whorls (*bigus* in modern Mitla Zapotec), represent the most numerous object of any single type in the Tomb 6 offering. The spindle whorls are reddish-brown (K-14 ware) in color and have small round holes near their centers. All were complete and intact and all were found in the antechamber. Fifty-eight spindle whorls were found together like beads on a necklace from which the string has disintegrated. They were located in the north niche and probably served as an offering for one of the females buried in Tomb 6. They ranged between 3.4 cm and 4.1 cm in diameter and were from 3 mm to 4 mm thick.

Four other spindle whorls were found separate from the above fifty-eight. Three of these were inside the tecomate with the lid discussed above. Their diameters measured 3.1 cm, 3.5 cm, and 3.7 cm and all were 3 mm thick. The fourth spindle whorl was found directly on the antechamber floor and measured 3.6 cm in diameter and was 3 mm thick. Whether all of these spindle whorls were intended as an offering for a single female or constituted parts of separate offerings for more than one of the females buried in Tomb 6 is uncertain. In Chapter 3, these spindle whorls were illustrated and discussed as implements for spinning cotton (see Fig. 3.6a).

Two stone manos were found in the antechamber offering located inside the tecomate with a lid. Both were complete and intact and manifested parallel scratch marks on their surfaces, which showed that they had been used (see Fig. 3.6b). One of the manos is oblong in shape and has a triangu-

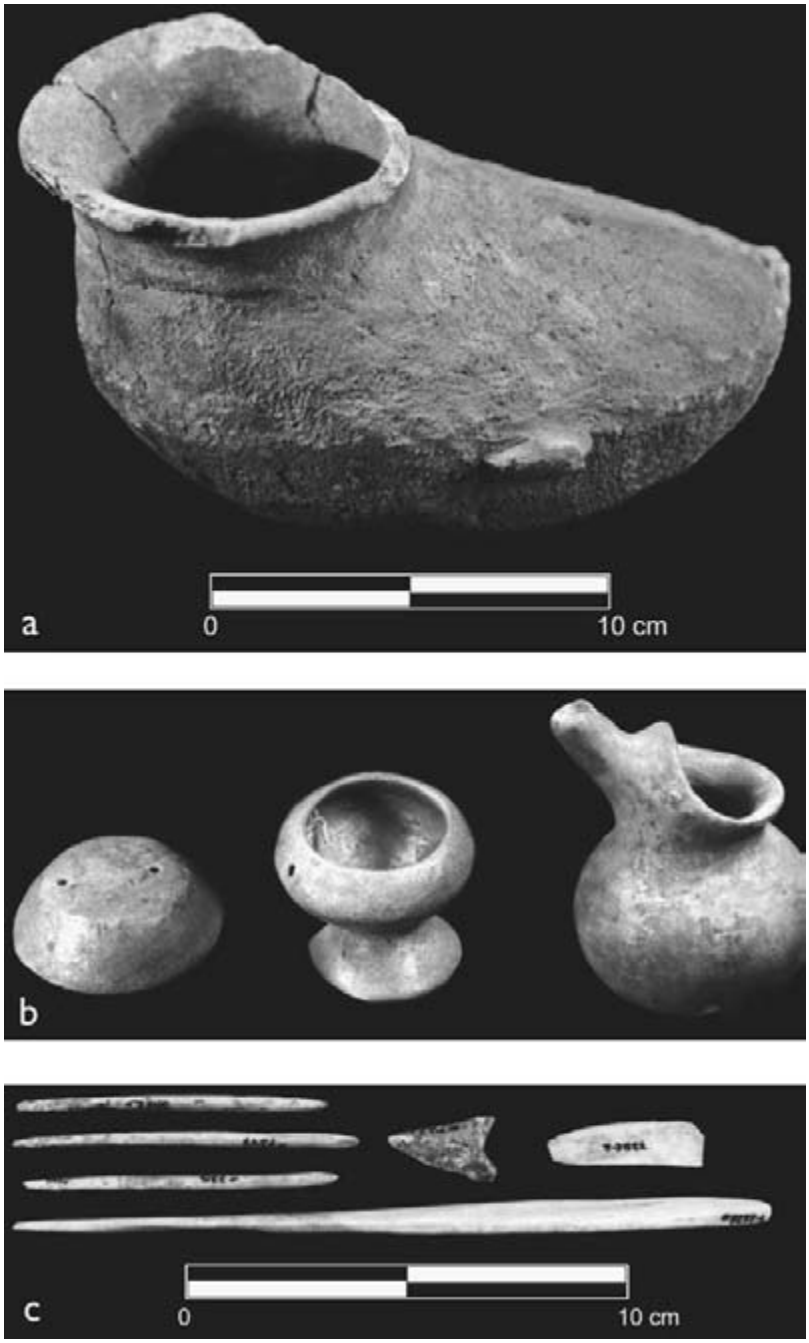
lar cross-section. It was made of a fine-grain gray rock, probably basalt. All three of its surfaces were very smooth and two showed striations, indicating use in a back-and-forth rubbing motion. Both of these surfaces manifested traces of red pigment. This mano measured 12.2 cm long, 6 cm wide, and 5.9 cm thick. The second mano is oval in shape and has a somewhat elliptical cross-section. It measured 10.1 cm long, 7.6 cm wide, and 5.7 cm thick and was made from a whitish coarse-grain rock, probably granite. Because of its shape it had only two grinding surfaces. One of these was smooth and showed striations, indicating use in a back-and-forth rubbing motion. This surface had traces of red pigment on it. The other surface was rough and heavily pitted and lacked traces of any pigment.

At Lambityeco, manos occur in offerings in elaborate tombs, simple tombs, and plain graves. Manos functioned as grinding stones, somewhat like rolling pins, and served principally to grind corn into meal but also to grind chocolate. The Tomb 6 manos show only slight wear and had obviously been used to grind red pigment, probably hematite. The red pigment may have been used to dye threads or to paint parts of the tomb, bones, or other objects. Therefore, the manos, like the spindle whorls, may have formed part of the spinning kit contained within the tecomate with a lid or simply left in the tecomate after having been used to grind hematite for the red paint used in the tomb.

In her study of manos from excavations at Lambityeco, Victoria Bach (1971) demonstrated that a difference exists between manos from mortuary offerings and those found in middens or other household contexts. The household manos were all heavily worn and broken following daily use in Zapotec kitchens and had been discarded in middens. Those in mortuary offerings were in good condition—unbroken and showing little signs of wear. No study of the manos from tomb and burial offerings at Monte Albán has been published.

A single double cup was found in the antechamber offering. It is a gray ceramic vessel but was coated with a lime whitewash. Both of the cups forming the double cup were virtually the same size—one was 9.3 cm high and the other 9.2 cm high. Although this double cup was found inside the tecomate with a lid (see Fig. 3.6b), it does not appear to be associated with the spinning kit, as mentioned in Chapter 3, and may have been picked up and placed in the tecomate following one of the many reopenings of the tomb. Like the double cup in the lintel offering, the function of the example in the antechamber offering is unknown, although it may have been used for mixing liquids or powders.

Two vessels, one with a lid, constitute the three pieces of Fine Orange from the antechamber offering (Fig. 7.20b). One vessel is a small pitcher



7.20. ***Patojo, Fine Orange vessels, and bone implements from Tomb 6***

with a maximum diameter of 6.8 cm and a height of 9.1 cm. Similar Fine Orange pitchers occur at Monte Albán (Caso, Bernal, and Acosta 1967:383, table XVI). No macroscopic traces of contents were found within the Tomb 6 pitcher. The pitcher was complete and intact.

The vessel with the lid is in the form of a small goblet (Fig. 7.20b). This vessel has a rim diameter of 4 cm and is 5 cm high. Two tiny holes 3 mm in diameter occur just below the rim on opposite sides of the vessel. The lid, which fits over the mouth of the goblet, is in the form of a circular cap 5.7 cm in diameter and 1.5 cm tall. Two tiny holes 2 mm in diameter occur on opposite sides of the top of the lid. The presence of the holes in the lid and in the goblet suggests that both parts could be securely fastened by means of a string.

A virtually identical goblet and lid, but of G-7, or black-slipped, ware and not Fine Orange, was found in Tomb 92 at Monte Albán (Caso, Bernal, and Acosta 1967:438, fig. 372). Several other "goblets" with lids but without pedestal supports occur in tomb offerings at Monte Albán (Caso, Bernal, and Acosta 1967:418) and one example is Fine Orange (Caso, Bernal, and Acosta 1967:430, fig. 364d). The function of these receptacles with lids is unknown. The Tomb 6 goblet lacked macroscopic traces of any contents. The goblet was intact, although a small fragment was broken from its pedestal base and missing from the vicinity of the tomb.

The tiny pitcher and the tiny goblet with a lid appear to have formed a set that served as an offering for one of the individuals buried in Tomb 6. The pitcher was located inside the tecomate with a lid, and the goblet and lid were situated in the north niche with the string of fifty-eight spindle whorls wrapped around them (Fig. 7.5). Although intact, all three pieces were located in places that would inhibit accidental breakage. This, combined with the fact that a piece was broken and missing from the goblet, suggests that these Fine Orange vessels had been placed with an earlier, instead of the last, offering.

Four bone battens were found in the antechamber offering (Fig. 3.6c). Three of the battens were large and made from deer tibiae split lengthwise and cut and rounded or squared off at the distal ends. All three have the proximal ends intact and were made from the posterior halves of left tibiae—one of these from an immature deer. All three also had traces of red paint near their proximal ends. One measured 25.5 cm long and was 2.2 cm wide and 9 mm thick at the small end. Its end was squared. The second measured 24.6 cm long and was 1.5 cm wide and 1 cm thick at the small end. Its end was rounded. The third measured 21.8 cm long and was 2 cm wide and 1.1 cm thick at the small end. Its end was concave. All three occur directly on the antechamber floor—two near one another and the

third a short distance away. In Chapter 3, these battens were discussed and interpreted as weaving implements.

The fourth bone "batten" was similar in form to the above three but was very small (Fig. 7.20c). It measured only 3.8 cm long and was 8 mm wide and 4 mm thick at the small end. Its end was squared. It was broken but complete and the type of animal bone and anatomical element from which it was made is unknown.

Three bone pins or awls were clustered together above the floor of the antechamber (Fig. 7.20c). The type of animal bone from which they were made is not known. Each is rounded on its thick end and narrows to a point at its thin end. All have more or less round cross-sections. One is 8.2 cm long and 3 mm thick. The second is 9 cm long and 4 mm thick, and the third is 7.4 cm long and 4 mm thick. All are heavily pitted near their pointed ends as if they had been chewed, or perhaps this texture merely reflects the trabecular tissue[4] of the bones used to make these objects.

In their size, shape, and pitted ends, the small awls or pins appear remarkably similar to the small awls used by the Dugum Dani (illustrated in Robert Gardner's film *Dead Birds*) to weave funerary bands. In the process of weaving these bands, the Dani are constantly sticking the awls between their teeth to free their hands so that they can pull the cord through the loops they have made with the awls. The ones from Tomb 6 may have served a similar function, and been used in a similar manner, or they may have served to weave baskets.

A single obsidian blade occurred in the antechamber offering. It was a whole blade, complete and intact, with a ground striking platform. It measured 9.3 cm long, 1.2 cm wide, and 3 mm thick. The whole blade was unmodified and showed no evidence of use retouch, which indicates that it was a "new" and unused item when placed in the tomb as an offering. In Zapotec daily life, unmodified blades functioned as cutting implements. Similar blades are found in offerings in elaborate tombs, simple tombs, and plain graves at Lambityeco. The Tomb 6 blade was black and probably came from the Altotonga source in Veracruz.

An object that had been coated with a veneer of green paint was found in the antechamber offering near the floor. Although only the green painted veneer was preserved for a length of 21.5 cm and a width of 3 cm, it appears that it had once coated a wooden object. This object may have been a blowgun. Parsons (1936:48–49) mentions that the Zapotecs of Mitla and Huilá used angular, not round, green painted blowguns and clay pellets to hunt birds and rabbits. She states that the blowguns were about eight feet long and that the mouth end into which the clay pellet was placed narrowed down to an inch in diameter. It is possible, then, that this was the remnants

of a blowgun that had been placed in the antechamber as an offering for one of the males. Reinforcing this interpretation is a solid ceramic ball or sphere 4 cm in diameter that was located in the north niche of the antechamber. It was reddish-brown in color, like the spindle whorls, and was complete and intact. It most likely served as a pellet for a blowgun. Tiny ceramic balls or pellets have also been found in tomb offerings at Monte Albán (Caso, Bernal, and Acosta 1967:437, 440, fig. 374). Ceramic pellets occur in offerings in both elaborate and simple tombs at Lambityeco, but none has been found in offerings in plain graves.

A single greenstone bead, 1.4 cm in diameter and 9 mm thick, was found in the antechamber offering (Fig. 7.19a). Greenstone beads occur in offerings in elaborate and simple tombs as well as plain graves at both Lambityeco and Monte Albán. The widespread Mesoamerican custom of placing a greenstone bead in the mouth of the deceased does not appear to have been followed at Lambityeco, because no primary burials have been found to have had greenstone beads placed in their mouths. However, given the disturbed nature of tomb burials, it is possible that some individuals, particularly in elite tombs, were interred with a greenstone bead in the mouth.

An earring made from a single large canine tooth, probably from a jaguar or mountain lion, occurred on the antechamber floor near the greenstone bead (Fig. 7.19b). The earring was made by splitting the canine longitudinally—one half forming this earring was found in the antechamber and the other half came from the main chamber. Both earrings were 5.7 cm long, 1.3 cm wide, and 1 cm thick. The pointed end of the canine formed the lower end of the earring and two holes 2 mm in diameter were drilled horizontally, perforating the upper (root) end of the tooth for suspension. The main chamber example had its upper end partially broken near the top of the holes. The jaguar tooth earring pendants are like those rendered in the portrait head of Lord 1 Lachi that decorates the façade of Tomb 6. These were most likely the earrings he was wearing when he was buried in the main chamber of Tomb 6. The two earrings probably became scattered between the main chamber and antechamber when his bones were removed from the tomb.

A single bracelet that may have been made from bark cloth was found in the north niche of the antechamber (Fig. 7.19b). It was squashed nearly flat and measured 5.4 cm long, 2.4 cm wide, and 4 mm thick. The interior edges on both sides of the bracelet are notched. If it was a bracelet, it either had not been worn by one of the individuals buried in the tomb or was removed from their bones and placed in the north niche.

A single hollow bone tube was found in the north niche of the antechamber. It measures 7.6 cm long and is 8 mm in diameter. It is broken at

both ends, which makes it impossible to determine if the ends had been cut purposefully to shape it into a small hollow tube. Perhaps the tube was open on one end and closed on the other, forming a case for the bone awls or pins found in the antechamber.

Most of the remains of two immature dogs occur in the antechamber. The immature dogs had their remains scattered outside the tomb in the area of the door offering, indicating that they had formed part of an earlier offering in the antechamber. Canseco (1580:145, 149) reports that Zapotecs sacrificed dogs to ancestral coqui, and Parsons (1936:152) cites Mitla Zapotecs, who refer to dogs who help them cross a big river when they die. At Lambityeco, dogs occur as offerings associated with individuals buried in elaborate tombs, simple tombs, and plain graves (Urcid 1983; Zárate 1992).

The remains of at least eight small birds occur in the tomb; two in the south niche of the antechamber and six scattered between the antechamber and main chamber. One bird skull was found together with some of the remains of the immature dogs in the area of the door offering outside the tomb. It appears that originally all the birds were in the antechamber and some of their remains were displaced to the main chamber and outside the tomb door.

Although the bird remains have not been identified yet, two varieties are represented. Sacrificial offerings of birds were quite common at the time of the Conquest. Zapotecs from Mitla and Tlacolula were reported to have sacrificed quail, turkeys, and other birds (Canseco 1580:149). Because the birds in Tomb 6 are small (none is a turkey), it is possible that they are the remains of quail (*gidgish* in modern Mitla Zapotec) and *mitreños* (*bigin* in modern Mitla Zapotec)—small crested birds—both of which occur in the area and probably served as sacrificial offerings in Prehispanic times (Parsons 1936:495, 553). Birds occur as offerings in elaborate tombs at Lambityeco.

THE MAIN CHAMBER OFFERING

Few artifacts, in comparison with the antechamber, were placed in the main chamber. Only twenty-one objects, mostly serving vessels, were left as offerings (Fig. 7.5). The last burial (68-22) placed in the main chamber, that of Lady 10 Naa, did not have her body passed through the tomb door and antechamber. Instead, she was buried directly in the main chamber by way of a hole dug through the altar and Tomb 5 (Fig. 7.1). The hole collapsed the roof of the main chamber, which was made of adobes arranged to form a vault. These adobes and the fill above them

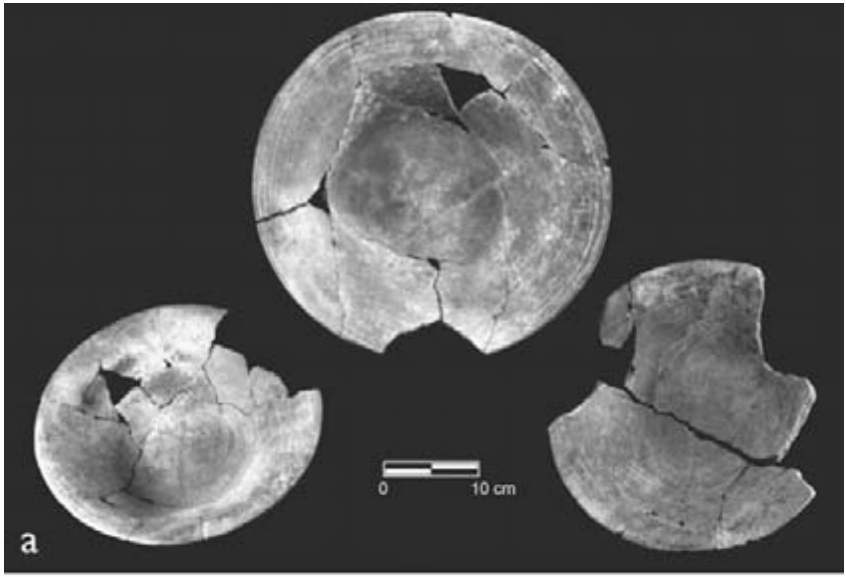
fell onto the main chamber floor and some spilled out into the east end of the antechamber. Lady 10 Naa was buried directly on top of the rubble formed by the collapsed roof and fill. A mat shroud was placed over her body and two G-35 bowls, one inside the other, were placed in an upright position near her right elbow. These two G-35 bowls and the mat shroud appear to have been the only offerings accompanying her remains (Fig. 7.3).

The remaining offerings in the main chamber were mixed in with the rubble and fill from the collapsed roof or near the main chamber floor beneath the fill. Most of the bones of the individuals buried in the main chamber before her had been partially removed some time prior to the placement of her body. Most of the earlier offerings were left mixed with the rubble from the collapsed roof and fill, and five G-35 bowls appear to have been removed from the main chamber and placed in what was left of Tomb 5 coincident with her burial (see Figs. 5.6 and 5.7; Table 5.2).

Apart from the two G-35 bowls associated with Lady 10 Naa, four others occur in the main chamber offering. One was assembled from sherds scattered throughout the rubble from the collapsed roof and therefore was not located three-dimensionally. Three G-35 bowls, placed upright one inside another (#23, #24, and #25 in Fig. 7.13) and located in the southwest corner of the main chamber near the floor, were covered by rubble from the collapsed roof (Fig. 7.21b). One of these is a small G-35 bowl (#23) and the other two are large (#24 and #25). All of these G-35 bowls were broken and certainly formed offerings for one or more of the earlier burials in the main chamber (Fig. 7.21a). No macroscopic contents were found in any of the G-35 bowls (Table 7.9).

Five miniature bowls occur in the main chamber offering (Fig. 7.22a, Table 7.10). Three of these are conical cups. All are gray and unburnished. Similar miniature conical cups occur in tomb and burial offerings at Monte Albán (Caso, Bernal, and Acosta 1967:396, fig. 325a; 397). Two other miniatures are G-35 bowls. One is burnished and lacks supports, and the other is also burnished but had solid tripod supports that were broken and missing. A total of 149 Xoo phase tripod-supported miniature G-35 bowls, but only two without supports, occurs in offerings (including tomb and burial offerings) at Monte Albán (Caso, Bernal, and Acosta 1967:400, 401, fig. 330a). The function of these miniatures is unknown, although they may have served as receptacles for condiments.

A single hemispherical bowl, very similar to one found in the fill in front of the tomb, was found in the main chamber offering (Fig. 7.22b). It was burnished and had a rim diameter of 16 cm and a height of 11 cm. The bowl, although broken and missing a piece, was nearly complete. The bowl



7.21. ***G-35 bowls in the main chamber of Tomb 6***

TABLE 7.9. G-35 bowls in the main chamber

No. in Fig. 7.13	*Field no.*	*Description*[1]
23	7282	Small G-35 bowl. Dark gray. Dia. 17.8 cm, ht. 4.6 cm. Base design: D. Broken but complete. No contents.
24	7283	Large G-35 bowl. Gray. Dia. 29.5 cm, ht. 8 cm. Base design: A. Broken and incomplete. No contents.
25	7284	Large G-35 bowl. Gray. Dia. 32 cm, ht. 8.5 cm. Base design: E. Broken and incomplete. No contents.
26	7267	Small G-35 bowl. Dark gray. Dia. 18.2 cm, ht. 5.6 cm. Base design: None. Complete and intact. No contents.
27	7266	Small G-35 bowl. Light gray. Dia. 17.8 cm, ht. 5.5 cm. Base design: None. Complete and intact. No contents.
(—)	22,596	Small G-35 bowl. Gray. Dia. 18.3 cm, ht. 5.6 cm. Base design: A. Broken and incomplete. No contents. Assembled from sherds sifted from the rubble layer.

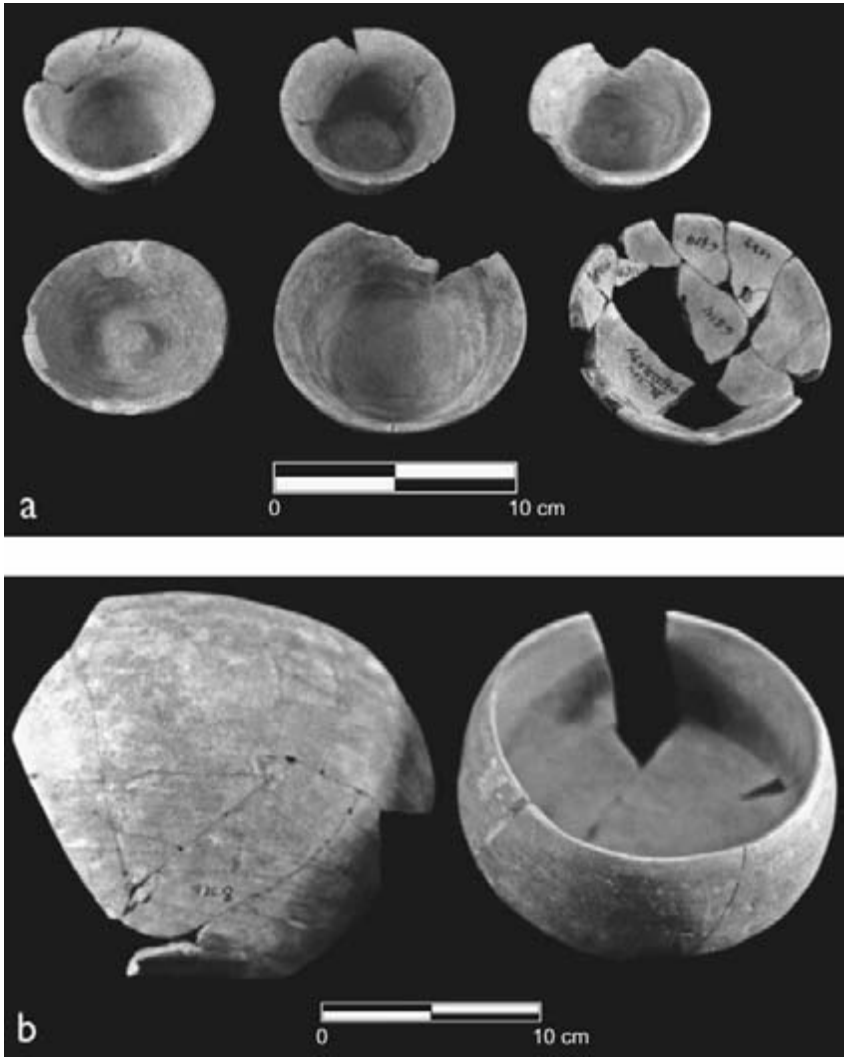
Note:
1. For bowl base designs see Figure 7.14.

TABLE 7.10. Miniature vessels from Tomb 6

Field No.	*Description*
7271	Miniature G-35 bowl. Gray. Dia. 10.5 cm, ht. 3.5 cm. Base design: None. Broken and incomplete. No contents.
7274	Miniature G-35 tripod bowl. Gray. Dia. 8.5 cm, ht. 2.5 cm. Base design: None. Broken, chipped rim, solid tripod supports broken and missing. No contents.
7281	Miniature conical cup. Gray. Dia. 8.3 cm, ht. 3.5 cm. Base design: None. Broken and incomplete. No contents.
7280	Miniature conical cup. Gray. Dia. 8 cm, ht. 4.4 cm. Base design: None. Broken but complete. No contents.
7285	Miniature conical cup. Gray. Dia. 8.5 cm. Ht. 4 cm. Base design: None. Broken but complete. No contents.

probably functioned as a serving vessel for beverages. However, it lacked macroscopic traces of contents.

A single bone batten was found in the main chamber. It was virtually identical to the three large bone battens from the antechamber (see Fig. 3.6c). It measured 21.3 cm long and was 2 cm wide at the base and 8 mm thick. Its end was slightly concave. Like the battens in the antechamber, this one was made from a deer tibia split lengthwise and cut off at the distal end. The proximal end of this batten is cut, precluding identification of the side of the deer tibia from which it was manufactured. However, like the others, its proximal end contained traces of red paint.



7.22. ***Miniature and hemispherical bowls from Tomb 6***

A large bone pin was also left in the main chamber offering (Fig. 7.20c). Unlike the much smaller bone awls or pins from the antechamber, this one measures 17.7 cm long and has an elliptical cross-section that is 9 mm wide and 3 mm thick. Although large bone pins occur in other elaborate tombs at Lambityeco, their function is unknown. It is possible that the pin served as a weaving implement or perhaps to secure a fancy headdress or coiffure like a hat pin.

A single distal phalanx from a deer was uncovered in the main chamber. It measured 2.6 cm long and, because of its pointed configuration, may have been used as an awl (Fig. 7.20c).

A triangular-shaped shell pendant was found in the main chamber offering (Fig. 7.19a). It is 2.5 cm long, 1 cm wide at the base, and 4 mm thick. Its upper (pointed) end has a hole drilled through it for suspension. The hole measures 4 mm in diameter on one side, narrowing to 2 mm in diameter on the opposite side. The lower half of the pendant was cut off diagonally. Its color is reddish-brown on one side and off-white on the other.

A bone pendant found in the main chamber was assembled from fragments screened from the rubble layer (Fig. 7.19b). The pendant was made from a piece of bone cut from a large mammal. It is highly polished and rounded at its upper part where a 2 mm hole was drilled through it for suspension. The pendant measures 1.3 cm wide and 3 mm thick and has a length (as far as its broken end) of 3.2 cm.

Part of the skeletal remains of a mature dog was found in situ on the floor of the main chamber. However, some of its remains were also found in the antechamber and a few of its bones were outside Tomb 6 on top of the altar through which the hole had been dug to gain access to the main chamber. Whether the dog was sacrificed in the main chamber to accompany his master to the hereafter or had been sacrificed before putting it into the main chamber is unknown.

PATTERNS IN THE TOMB 6 OFFERINGS

Despite considerable disturbance, patterns are evident in the offerings associated with Tomb 6. Both earlier and later lintel offerings contain all of the urns, effigy figures, and bipod effigy vases as is attested by their presence in and around the vicinity of the lintel and by the final arrangement in front of the portrait heads that decorate the façade above the lintel. No urns, urn fragments, effigy figures (with the possible exception of the bat effigy brazier in the door offering), or bipod effigy vases were found within the door, antechamber, or main chamber offerings. Even a piece of the carved stone tablet was found in the area of the lintel, suggesting that it may have formed part of a lintel offering.

The function of these urns and effigy figures has been debated. Caso and Bernal (1952) considered them to embody Zapotec deities. Marcus (1983) interpreted them as deceased ancestors impersonating supernatural forces. Sellen has taken a middle ground between these positions, suggesting that they represent noble ancestors impersonating deities in various ritual activities and that "these images accompanied the impersonator to

his or her grave, where perhaps they continued to play a ritual role in the afterlife" (Sellen 2002:17).

We posit, following Sellen, that the Cociyo urn from the lintel in Tomb 6 represents an ancestral impersonator of the Zapotec deity of rain and lightning. Three of the bipod effigy vases depict Cociyo and the fourth has a human face with a Glyph C in the headdress that relates to Cociyo. Caso and Bernal (1952:40) noted that most bipod effigy vases are associated with the rain god. The large plaster busts of Cociyo decorating a small room in Mound 190 at Lambityeco (see Fig. 5.3) show Cociyo pouring water from similar vases (Lind and Urcid 1983:84, fig. 12b). The bipod effigy vases, then, were clearly ritual items associated with the rain deity and were certainly used in rituals aimed at petitioning rain and hence good maize crops. The latter theme is also evident in the two nearly identical human effigy figures with renditions of mature and budding maize in their headdresses. Originally, these two effigies and the incomplete one similar to them found in the fill (Fig. 7.9d) may have formed a set of five, the smaller ones occupying the four quadrants of the world and the larger one representing Lord 1 Lachi as the axis mundi. Such a tableau would have construed the ruler as overseer of the four corners in rituals involving the planting, growth, and harvesting of maize. Such rituals were probably conducted by Lord 1 Lachi during his lifetime.

A similar tableau may have been formed by the box and lid urn, with the representation of one of the previous rulers embodying Pitao Cozobi placed in the center and four now missing box and lid urns of Cociyo in the four corners. This other tableau may have been deployed in rituals related to rainmaking that were enacted by the household heads during their lifetimes.

The bearded male effigy figure may also represent Lord 1 Lachi in yet another ritual role. Given the long robe that covers him and the sacrificial knife hanging from a necklace around his neck, it is possible that this depicts him in his role as a sacrificer. The carved tablet depicts Lady 10 Naa addressing the highly venerated apical ancestor of the noble lineage, Lord 2 Alligator, perhaps making an important legitimatizing claim upon the death of her husband. Finally, the jaguar effigy vessel is a symbol of the noble status of those venerated ancestors buried in the tomb.

Many of the objects in the door offering reflect rituals performed before and during the opening or following the closing of the door to the tomb. The seven ladle censers are more or less symmetrically arranged in front of the north and south door jambs, and the two spiked braziers together with the three braziers (including the bat effigy brazier) from displaced offerings testify to a great deal of activity involving the ritual

burning of incense. Likewise, the two obsidian awls (and two additional obsidian blades found in the fill) most likely relate to bloodletting rituals in front of the tomb door to invoke the ancestors.

Apart from rituals involving bloodletting and incense burning, the objects in the door offering also imply offerings associated with food. Ten small G-35 bowls, which most likely functioned as food-serving dishes, were purposefully arranged on either side of the door and an additional four bowls were recovered from the fill. Likewise, a hemispherical bowl from the fill probably functioned as a beverage container. Remnants of two large storage vessels found in the fill, an olla and tecomate, may have served as water and/or food storage containers.

The door offering, then, appears to have been the principal locus of ritual incense burning and bloodletting preparatory to opening the tomb door and perhaps following the closing of the door. It was also the locus for placing offerings of food and drink in serving and storage vessels—an activity that took place as a last rite subsequent to closing the tomb door.

Despite the quantity and diversity of objects left in the antechamber, certain patterns are evident. The twelve G-35 and K-14 bowls indicate that the antechamber, even more than the door, was a locus for offerings of food. Besides food-serving bowls, the antechamber offering included four ladle censers and a spiked brazier that are artifacts related to the burning of incense. The small number of incense burners in comparison with the door offering suggests that these incense burners were carried into the antechamber by the few people allowed in there and were left following their use in ritually purifying the area.

The remains of two immature dogs and eight birds were left in the antechamber. It is possible that they were sacrificed in front of the tomb door and their remains deposited inside. The dogs were most likely immolated in accordance with a pan-Mesoamerican belief that they would aid their masters in the journey to the hereafter. Bird sacrifice was a common Zapotec ritual for the invocation of ancestors at the time of the Conquest and clearly formed part of elite Zapotec rituals during the Xoo phase, as further evidenced by their representation in several carved monuments.

Most, nearly 75 percent, of the objects in the antechamber appear to be personal items or special items intended as offerings for specific individuals buried in the tomb. Artifacts corresponding to spinning, weaving, food preparation, hunting, and personal adornments occur in the antechamber offering. The personal adornments are scarce and include a jaguar tooth earring (whose counterpart was found in the main chamber), a bark-cloth bracelet, and a greenstone bead. Two objects, a possible blowgun and ceramic pellet, most likely relate to hunting and were probably placed in the

tomb as an offering for one of the males. One item, a patojo, is associated with food preparation and most likely formed an offering for one of the females.

Items associated with spinning are the most common. These include sixty-two spindle whorls, of which fifty-eight were found strung together and left in the north niche, and the spinning kit formed by the tecomate with a lid, which also contained three spindle whorls. The other spindle whorl was found on the antechamber floor. These items probably formed offerings for the females buried in the tomb. Two manos were also found in the tecomate with a lid and may have been used to grind pigments to produce dyes. However, these may not have been offerings at all but simply manos left in the tomb after grinding pigment for paint or powder either to paint the tomb or to sprinkle on the remains of the deceased.

The one small and three large bone battens found in the antechamber were weaving implements. Although spinning is a female activity, there is no reason to assume weaving is female associated. Today, Zapotec men from Teotitlán del Valle, Santa Ana del Valle, and Mitla are the weavers, but this may result from the introduction of mechanized wooden looms after the Conquest; women appear to have been the weavers before the Conquest. The three bone awls or pins were also most likely weaving implements; none had an eye for sewing. They may have been used to weave baskets but their specific gender association is uncertain.

The small Fine Orange pitcher and tiny Fine Orange goblet with a lid appear to have formed a matched set. These exceptionally fine pieces must have been a prized possession or offerings for one of the individuals buried in the tomb. The single complete and intact obsidian blade found on the antechamber floor was new and unused and may have been intended as a cutting implement or a blade to be used in ritual bloodletting in the hereafter. Finally, the double cup found inside the tecomate with a lid, like the double cup in the lintel offering, is of uncertain function. The small size and double nature of these cups suggest that they may have been used to mix liquids or powders.

The main chamber from the time of its construction as part of Structure 4 was the mortuary facility set apart to house the mortal remains. However, with the exception of the last interment, most of the bones of earlier burials in the main chamber had been removed. Few objects were left as offerings and most of those that were appear to have been limited to a few carefully arranged serving vessels and in one case at least a sacrificed dog placed next to its master. The food-serving bowls include two large and four small G-35 bowls; in addition, the four small and one large G-35 bowl found in Tomb 5 should be included because they were most likely removed from

the main chamber when the hole was dug to place the last burial. The five miniature bowls probably served as containers for condiments, although the three conical ones may have been used for beverages. The hemispherical bowl was likely a container for beverages.

The remaining objects in the main chamber appear to have been objects with which the bodies were attired for burial. These include the jaguar tooth earrings (of which one was found in the antechamber) that were probably worn by Lord 1 Lachi. In addition, the shell and bone pendants were most likely worn by individuals buried in the main chamber, and it is possible that the tubular shell bead and pendant sifted from in front of the tomb had been displaced from the main chamber along with the shell disk during one of the reopenings of the tomb. The long bone pin (if it was not a weaving implement) may have been used to secure a fancy headdress or functioned as a hairpin for an elaborate coiffure.

The bone batten and awl made from a deer phalanx originally may have been left as offerings in the main chamber or may have been displaced from the antechamber during one of the reopenings of the tomb. The bone batten is almost identical to three other bone battens in the antechamber and all four probably formed a matched set for one of the individuals buried in the tomb.

The traces of a mat shroud with the last burial are important. No other burial in any tomb in Oaxaca has produced evidence of a shroud. It is possible that other burials at Lambityeco and elsewhere in the Valley of Oaxaca were covered with shrouds of which no traces remain.

NOTES

1. This chapter represents a revised and expanded version of an earlier article on Tomb 6 published by Lind (2002).

2. Osteophytosis refers to the development of nodules of dense bone along the margins of articulations related to the aging process or to trauma.

3. By its very nature, the lintel offering had to be removed each time the tomb was opened and replaced each time the hole in front of the façade was filled. The hole in front of the façade was opened and filled at least five times to place five burials before the sixth and final burial was interred through the roof of the main chamber. However, the tomb was also most likely reopened an additional number of times to retrieve the bones of immediate ancestors once the flesh had decayed and also to conduct rituals invoking the ancestors.

4. Trabecular tissue, in contrast with dense cortical tissue, characterizes the inner structure in the ends of long bones or in other anatomical elements such as the bodies of vertebrae, sacrum, or pelvic bones. This beam-like structure reduces the overall weight of bones at the same time that it provides strength for the attachment of muscles.

chapter eight

The Houses of Tomb 3 and Tomb 4

In the process of excavating trenches across the north platform of System 195 to locate its northern limits, the remnants of two houses of commoners were found—the House of Tomb 3 and the House of Tomb 4 (Fig. 8.1). Apart from sections of their patios and the tombs associated with them, nothing remained of the rooms surrounding the patios of these houses. It was clear, however, that the houses had been leveled to build the north platform of System 195, which took place in association with the construction of Structure 195-2. These two houses of commoners, then, were probably razed in ca. 800 CE when construction began on Structure 195-2 and System 195—the plaza and platforms surrounding it. It is evident, therefore, that these two houses were built and occupied sometime before 800 CE and probably corresponded in time to one or more of the elite houses of Mound 195 Sub. Each of these houses of commoners will be discussed in turn beginning with the House of Tomb 3.

THE HOUSE OF TOMB 3

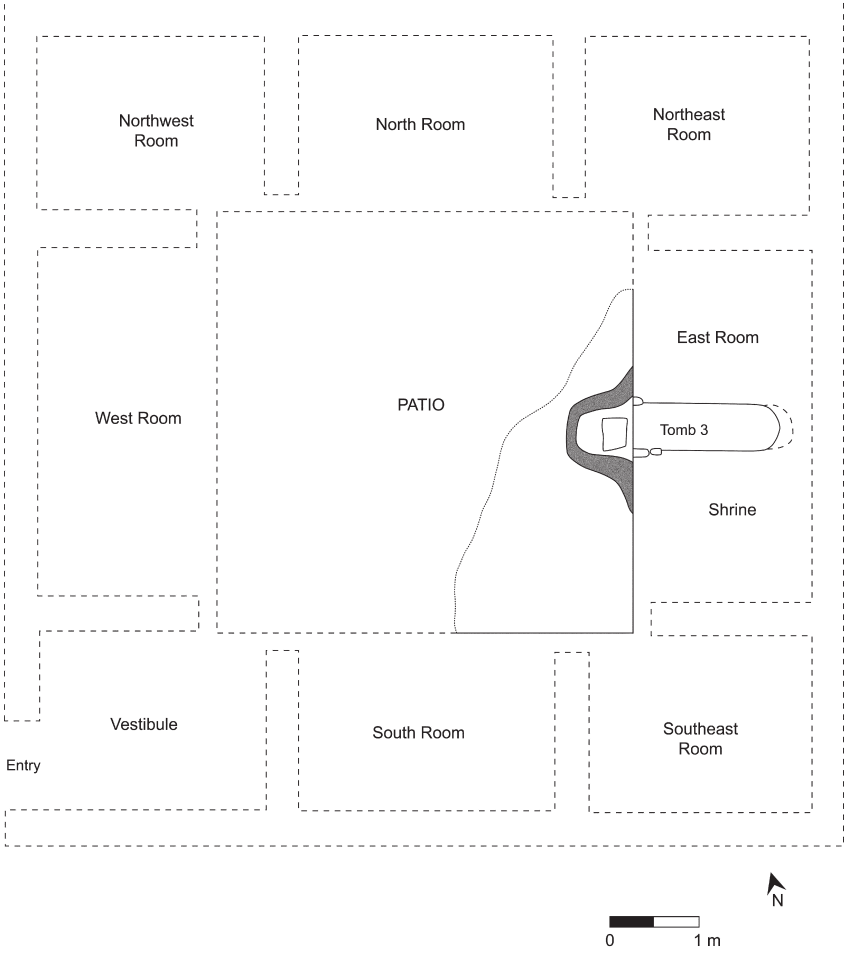
The southeastern corner of the patio is located 45.8 m west and 7.6 m north of the northwest corner of Structure 195-3NE. All that remained of the house was a section of its patio floor and Tomb 3 (Fig. 8.2). Skeletal evidence from the tomb indicates that the house was occupied for three

8.1. ***Trenches across the north platform of System 195***

generations. Likewise, the patio floor shows evidence for three phases of construction with floors placed directly on top of one another. Artifactual crossties between Tomb 3 and Tomb 6 suggest that the House of Tomb 3 was occupied from ca. 725 to 800, that is, coincident with Structures 195-5, 195-4, and 195-3 in Mound 195 Sub.

Much of the eastern and part of the southern edge together with the southeastern corner of the patio of the House of Tomb 3 were preserved intact (Fig. 8.3a). Tomb 3 was situated along the eastern edge of the patio and, assuming that it was centered on the patio as are virtually all tombs at Lambityeco, the north-south dimension of the patio was 4.7 m. Most likely the patio was square.

The plaster patio floor curved up along the east and south edges, indicating that rooms had been located above. The south room was a step above the patio floor, may have had a plaster floor, and probably was enclosed on three sides by adobe walls, leaving the north side open, facing on the patio. The east room was the ancestral shrine above Tomb 3. It was a step above the patio, probably had a plaster floor, and most likely was enclosed on three sides by adobe walls with the west side open, facing on the patio. A southeast corner room probably existed between the south and east rooms and may have had a plaster floor and adobe walls on all four sides with an entrance opening on the patio. It is possible that rooms occurred along the

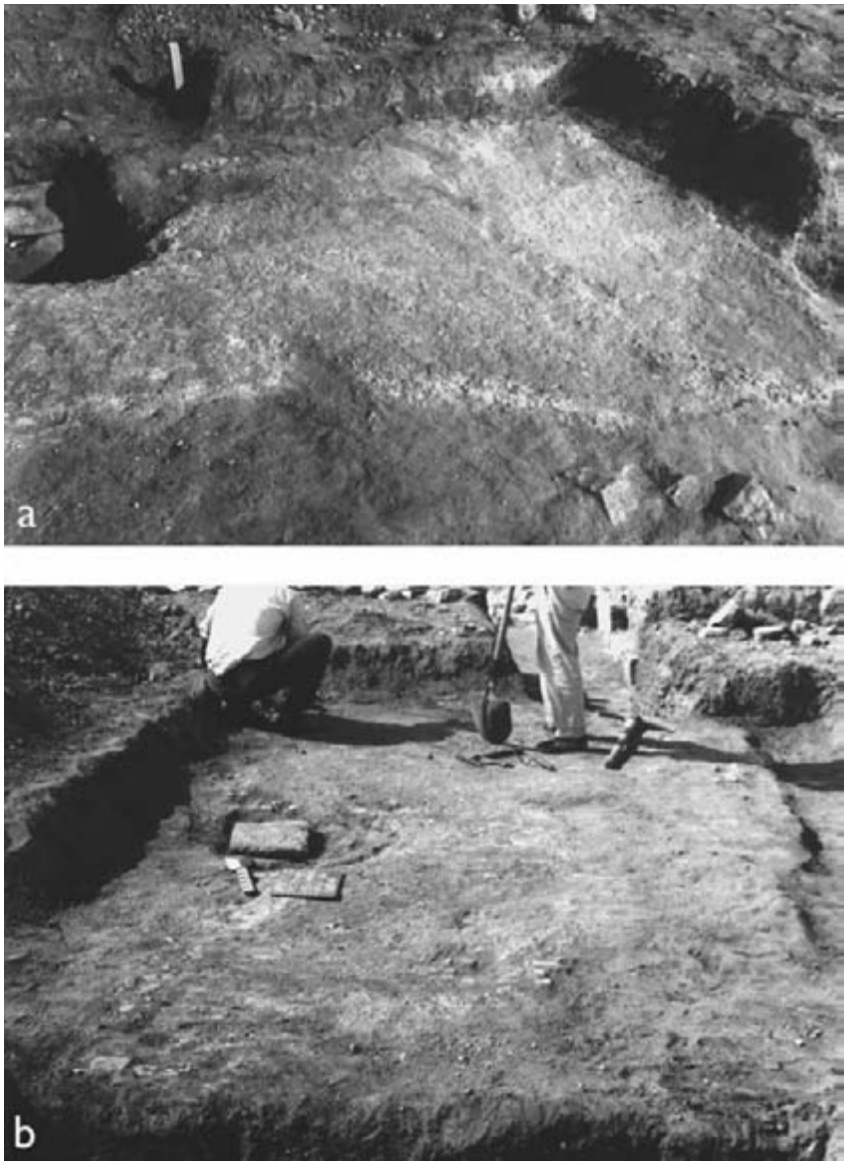


8.2. ***Plan of the House of Tomb 3***

north and west sides of the patio as well, with corner rooms in the northeast and northwest and an entryway at the southwest corner. However, because of the destruction, it will never be known for sure how many rooms occurred around the patio. Therefore, the reconstruction of the House of Tomb 3 in Figure 8.2 is mostly hypothetical.

TOMB 3

A break in the plaster floor of the patio with a neatly worked rectangular stone in its center marked the ancient cut leading to the entry to Tomb 3



8.3. ***Patio of the House of Tomb 3***

(Fig. 8.3b). The tomb consisted of a single chamber excavated into compact sterile soil. It was oriented east-west, with the door in the west, and measured 1.84 m long, east-west, and 56 cm wide, north-south. None of the walls manifested niches or masonry construction. The floor was not

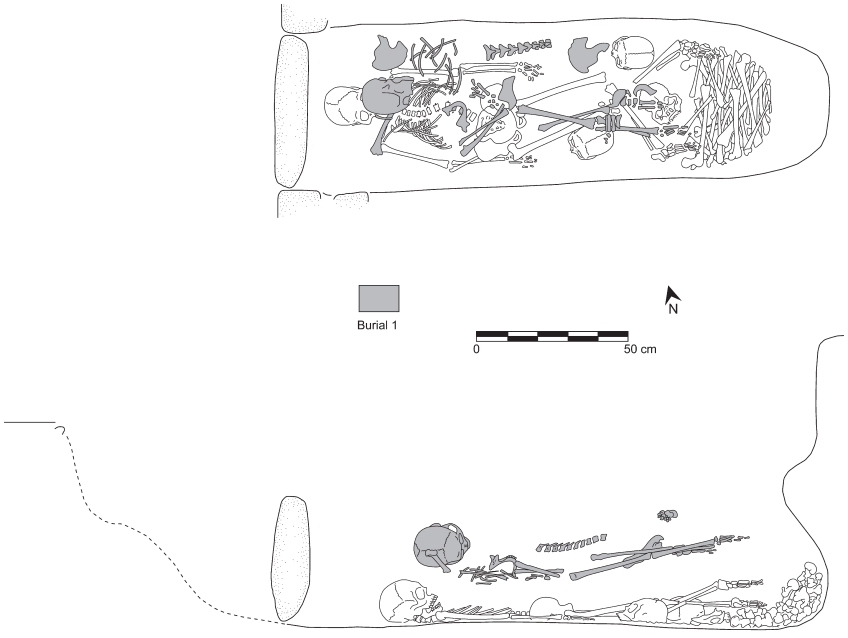
plastered. Instead, the entire tomb was formed by the compact sterile soil into which it had been cut. The rear, or east end, was rounded and concave in its profile instead of being squared off. No roof was preserved. However, the presence of fragments of adobe blocks within the tomb suggests that the roof, if any existed, was probably made of adobes. The distance from floor to probable roof (highest part of the tomb walls) was about 55 cm.

A large stone metate (40 cm high, 50 cm wide, and 12 cm thick) served as the tomb door (Fig. 8.6a). The entrance was framed by simple door jambs composed of a series of stones. Remnants of a "lintel," also composed of a series of stones, were found above the door jambs. The base of the door was 65 cm beneath the level of the patio floor, and the hole cut through the patio floor in front of the tomb door measured 65 cm long, east-west, and about 58 cm wide, north-south.

SKELETAL REMAINS

The tomb contained the skeletal remains of five adults and one young adolescent. Only the skeletal remains of the adults were identified during the excavation (Fig. 8.4). The first of these was a disturbed, but partially articulated, primary labeled Burial 1 (Field No. Burial 68-11) that rested at a level of about 20 cm above the tomb floor. Next, an undisturbed primary designated Burial 2 (Field No. Burial 68-12) was found in a supine position resting directly on the floor beneath Burial 1. The feet and lower legs of Burial 2 were found to rest on top of a stack of disarticulated bones and three skulls at the back (east end) of the tomb. Three totally disturbed primaries represented by three skulls were labeled Burial 3 (Field No. Burial 68-13), Burial 4 (Field No. Burial 68-17), and Burial 5 (Field No. Burial 68-18). An analysis of the skeletal remains indicates that most of the bones of these five adults can be accounted for within the tomb (see Table 7.1).

In contrast to the adults buried in Tomb 3, the young adolescent, ten to thirteen years old, was represented by only a handful of bones. Most of the bones were from the lower part of the left leg and left foot. Some of these bones were found mixed with Burial 1 and a few others came from the fill in front of the door outside Tomb 3. Because children or young adolescents are almost never buried in tombs at Lambityeco (Urcid 1983) and Monte Albán (Séjourné 1960; Autry 1973; Winter et al. 1995), it seems unlikely that the fragmentary and disarticulated remains of this youngster represent a sixth burial in Tomb 3. One probable explanation for the presence of these bones is that the hole dug to build Tomb 3 disturbed the young adolescent's burial, or part of it, and these bones became mixed with the fill in the tomb.

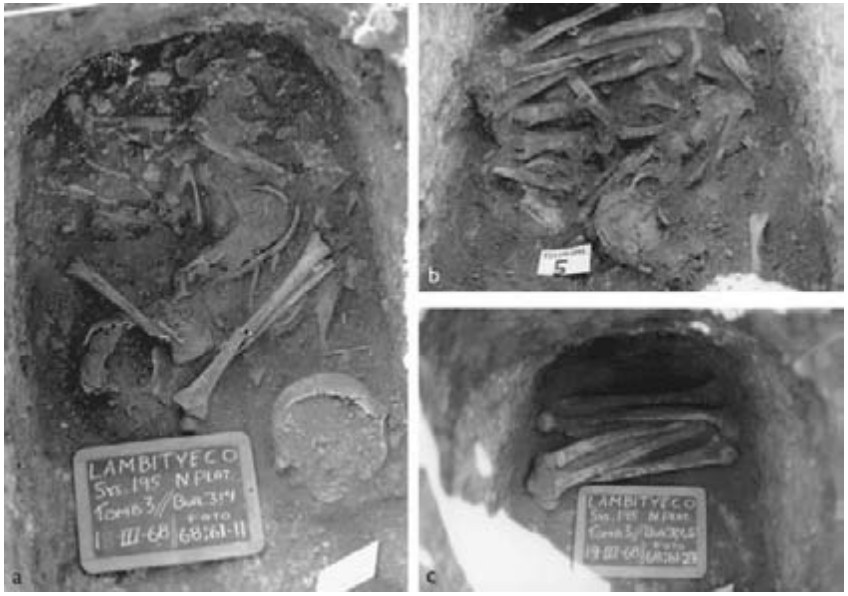


8.4. ***Plan and profile of the human skeletal remains in Tomb 3***

The first, or earliest, burials placed in Tomb 3 were the disturbed and disarticulated primaries represented by the three skulls and a stack of bones at the back of the tomb (Fig. 8.5). The three skulls were on the tomb floor in front of the stack of bones. Burial 3, represented by the skull on the south side of the tomb, is the remains of a male forty-five to fifty-five years old. Burial 4, the skull on the north side, is the remains of a female twenty-five to thirty-five years old (Fig. 8.5a). Burial 5, the skull at the center of the tomb, is also a female twenty-five to thirty-five years old (Fig. 8.5b). Although it was not possible to determine with certainty which of the skulls corresponded to which of the thoroughly mixed postcranial remains in the stack of bones at the back of the tomb, all were remains of adults (Fig. 8.5c).

Burials 1 and 2 were subsequently placed in the tomb. Burial 1, a disturbed but partially articulated primary, was a male thirty to forty years old. Although the skeletal remains were obviously removed from their original position, it seems likely that this male was buried in the tomb with his head to the west and feet to the east (Fig. 8.6a).

Burial 2, the only undisturbed primary in Tomb 3, was a female twenty to twenty-five years old. She was buried lying on her back on the floor of the tomb with her head to the west and feet to the east. Her arms were



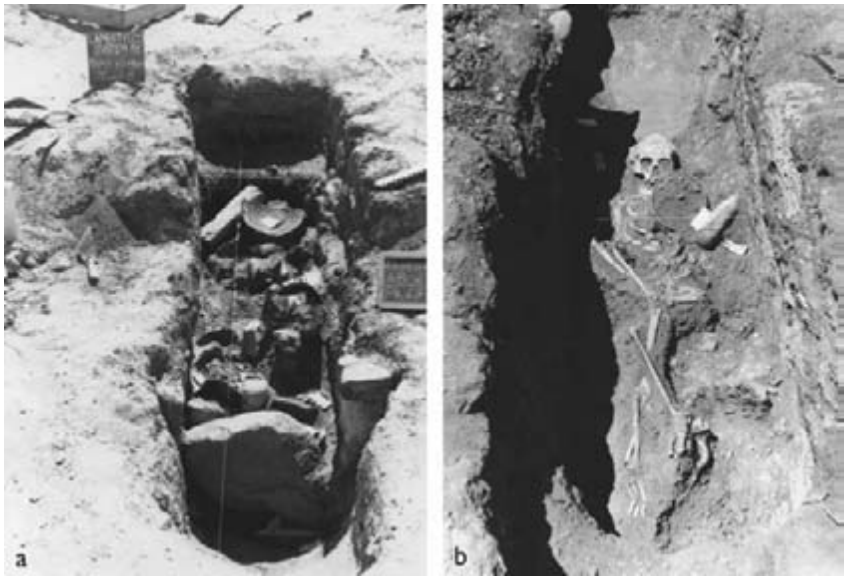
8.5. ***Burials 3–5 in Tomb 3***

fully extended and rested at her sides. Because of the stack of bones at the back of the tomb, it was necessary to elevate her feet and legs to place them on top of the pile of bones. Her legs were crossed at the knees with the right leg on top of the left (Fig. 8.6b).

Her skull manifests intentional cranial reshaping of the tabular oblique type. She also exhibited spondylolysis, a separation of the neural arch in the pars interarticularis present in the fifth lumbar vertebra. This variation is known to run in families and is most prevalent in some populations, suggesting a hereditary condition of a tendency toward thin vertebral bone and/or faulty ossification. Spondylolysis can also be caused by stress fracture of the bone and is associated with certain activities, such as heavy lifting (Castriota-Scanderberg and Dallapiccola 2005:218; Mann and Murphy 1990:52–53). However, long-term studies of controlled groups have found no evidence that the condition is accompanied by slip progression or lower back pain (Beutler et al. 2003).

INTERMENT SEQUENCE

Because the earliest interments are located side by side with respect to the skulls and have their postcranial remains thoroughly mixed in a pile at the back of the tomb, it is impossible to determine which of these burials may



8.6. ***Burials 1 and 2 in Tomb 3***

have been placed before or after the others. Burial 3, a male, certainly represents remains corresponding to the earliest married couple who headed the household. One of the females, Burial 4 or 5, was most likely his wife. They probably occupied the House of Tomb 3 between ca. 725 and 750 CE, around the same time as Structure 195-5 was occupied.

Burial 1, a male, is the penultimate burial and represents the second generation of married couples who headed the household. It is evident that his wife (Burial 4 or 5) preceded him in death and had her skeletal remains displaced upon his interment. This second generation of household heads probably occupied the House of Tomb 3 between ca. 750 and 775 CE, perhaps around the same time that Structure 195-4 was occupied.

The disposition of the skeletal remains of Burial 1 within the tomb suggests that he was wrapped in a shroud or petate when buried. Only in this way can it be explained that his skeletal remains became only partially disarticulated when they were lifted to make room for the final interment, Burial 2. Even then, he was probably disturbed when his bones were not completely free of flesh, which suggests that Burial 2, a female who represents the third generation of married couples that headed the household, died not long after he did.

Burial 2, the only undisturbed primary, was the last burial placed in the tomb. Because the hole in front of the tomb was filled and the rect-

angular stone carefully placed in its center following her burial, it seems that the house was not abandoned following her interment. Her husband, however, was not buried in the tomb. Because the House of Tomb 3 was most likely leveled in ca. 800 CE to build the north platform of System 195, he probably moved and, upon his death, was buried elsewhere. The third generation evidently occupied the House of Tomb 3 from ca. 775 to 800 CE, around the same time that Structure 195-3 was occupied.

OFFERINGS

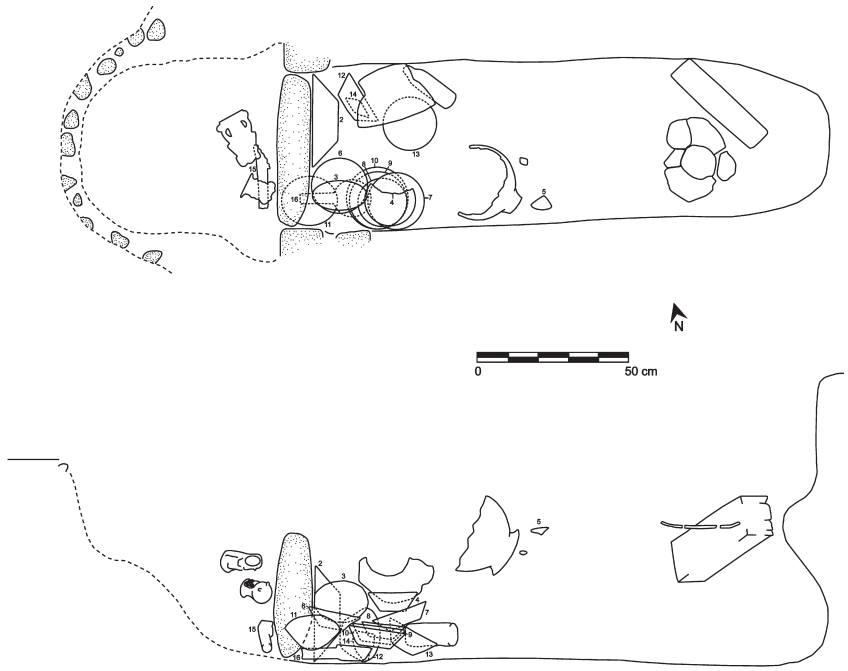
Twenty-five objects that may be grouped into ten different categories constitute the tomb's offering. These objects are located in three different contexts. One group was found near the top of the door outside the tomb and will be referred to as the "lintel" offering. A second context was near the base of the door outside the tomb and will be referred to as the door offering. Most of the objects occur within the tomb and will be called the main offering (Fig. 8.7; Table 8.1).

The "lintel" offering consists of two objects. One was an urn placed horizontally and face-down near the top of the center of the door. The other was a bipod effigy vase placed at a forty-five-degree angle near the top of the southern part of the door. The Cociyo effigy on this vase was facing upward (Fig. 8.8a).

The gray ceramic urn measures 17.4 cm tall and was complete and intact except for a small portion along the bottom of the loincloth that was broken and missing. Like most urns, it depicts a seated figure with the legs crossed (left over the right) and hands resting on the knees. The urn sports

TABLE 8.1. Objects in the Tomb 3 offering

Objects	*"Lintel"*	*Door*	*Main*	*Totals*
Urn	1	—	—	1
Bipod effigy vase	1	—	—	1
G-35/K-14 bowls	—	1	13	14
Ladle censers	—	1	1	2
Ollas	—	—	2	2
Tecomate	—	—	1	1
Mano	—	—	1	1
Bone batten	—	—	1	1
Miniature replica of tomb façade	—	—	1	1
Figurine head (fragment)	—	—	1	1
Totals	2	2	21	25

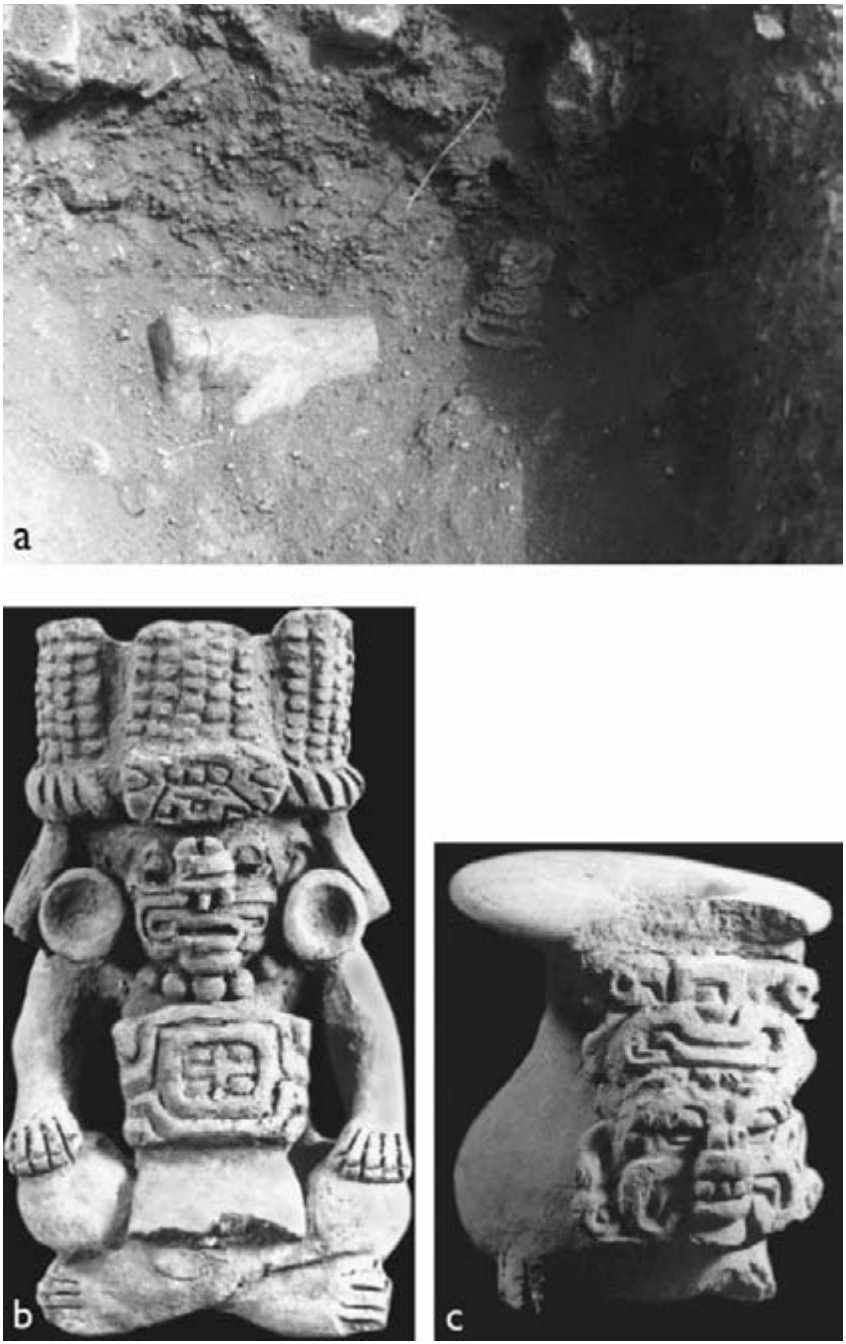


8.7. ***Plan and profile of the Tomb 3 offerings***

concave circular earspools and an appliqué bead necklace. A large rectangular plaque or pendant decorated with a Glyph E (Earthquake) covers the chest area above the plain loincloth (Fig. 8.8b).

Although the bucal mask of the urn represents Pitao Cozobi (Caso and Bernal 1952:99), the scrolls above and below the eyes typical of this deity are not evident. Instead, the eyes are framed by the scroll-like lower plaques and stepped upper plaques characteristic of the representations of Cociyo. The headdress is composed of three vertically placed ears of corn bound by a rope or cord that is secured by a clasp in the form of a cartouche with a Glyph C. A cloth cape drapes down from beneath the rope to cover the sides of the head and the shoulders. Although the headdress with the ears of corn is also a characteristic attribute of Pitao Cozobi, the Glyph C and the cloth cape are shared as well by Cociyo (Caso and Bernal 1952:96–100).

The gray ceramic bipod effigy vase measures 9.6 cm tall and is complete and intact (Fig. 8.8c). The small vase has a mold-made Cociyo face with a Glyph C headdress attached to the neck and body. Two small supports, one slightly chipped, have a pair of incised vertical lines decorating their fronts, a possible allusion to human toes.



8.8. *Ceramic effigies from the lintel offering in Tomb 3*

The door offering consists of only two objects—a ladle censer and a small G-35 bowl. The former was resting in a horizontal position parallel to the base of the door (#15 in Fig. 8.7 and Table 8.2). It showed signs of having had incense burned within it. The handle was complete and intact but the pan was broken with a quarter of its rim missing (Fig. 8.9d). The small G-35 bowl was not located three-dimensionally because it was assembled from numerous small sherds screened from the fill in front of the tomb door. Its original location in the door offering, therefore, is not known (#1 in Table 8.2).

Twenty-one objects were found inside the tomb. Most of these objects were left near the west end, close to the inside of the door. Many of the objects are G-35 bowls that were arranged around the skull of Burial 2 (Fig. 8.9a). A single ladle censer (#16 in Fig. 8.7 and Table 8.2) was located on the floor just inside the door along the south side of the tomb. The end of its handle was nearly against the tomb door. It was broken but complete and showed evidence of having had incense burned within it (Fig. 8.9d).

There were also eleven G-35 and two K-14 bowls in the main offering (Fig. 8.9b). A large G-35 bowl (#2 in Fig. 8.7 and Table 8.2) was placed vertically with its mouth facing the inside of the door directly west of the top of the skull of Burial 2 (Figs. 8.9a and c). Three small G-35 bowls (#12, #13, and #14) were located north of the skull of Burial 2. Along the south side of the skull were two "loose" stacks of bowls. One with three bowls (#3, #6, and #11) occurred near the top of the skull. The second was located near the mandible of the skull and included five bowls (#4, #7, #8, #9, and #10). A final G-35 bowl (#5) was broken and occurred near the east end of the tomb.

Two sandy brown ceramic ollas were found in the tomb (Fig. 8.10a). Both were broken and incomplete. One (Field No. 6905) was located in the northwest part of the tomb and contained the skull of Burial 1 within it. This olla had a rim diameter of 22 cm and had only half of its upper portion preserved. The second olla (Field Nos. 6906/6907) was nearly complete. Its upper half was located on the south side near the midpoint of the tomb and its base was located near the south side toward the back (east) of the tomb. This olla had a rim diameter of 19.2 cm, a maximum diameter of 25 cm, and an estimated height of 30 cm. Both ollas were smudged on the exterior, indicating that they were used and had been placed on a fire. These ollas are different in shape from salt boilers and were probably used for cooking, not salt boiling (compare Figs. 3.1d and f with Fig. 8.10a).

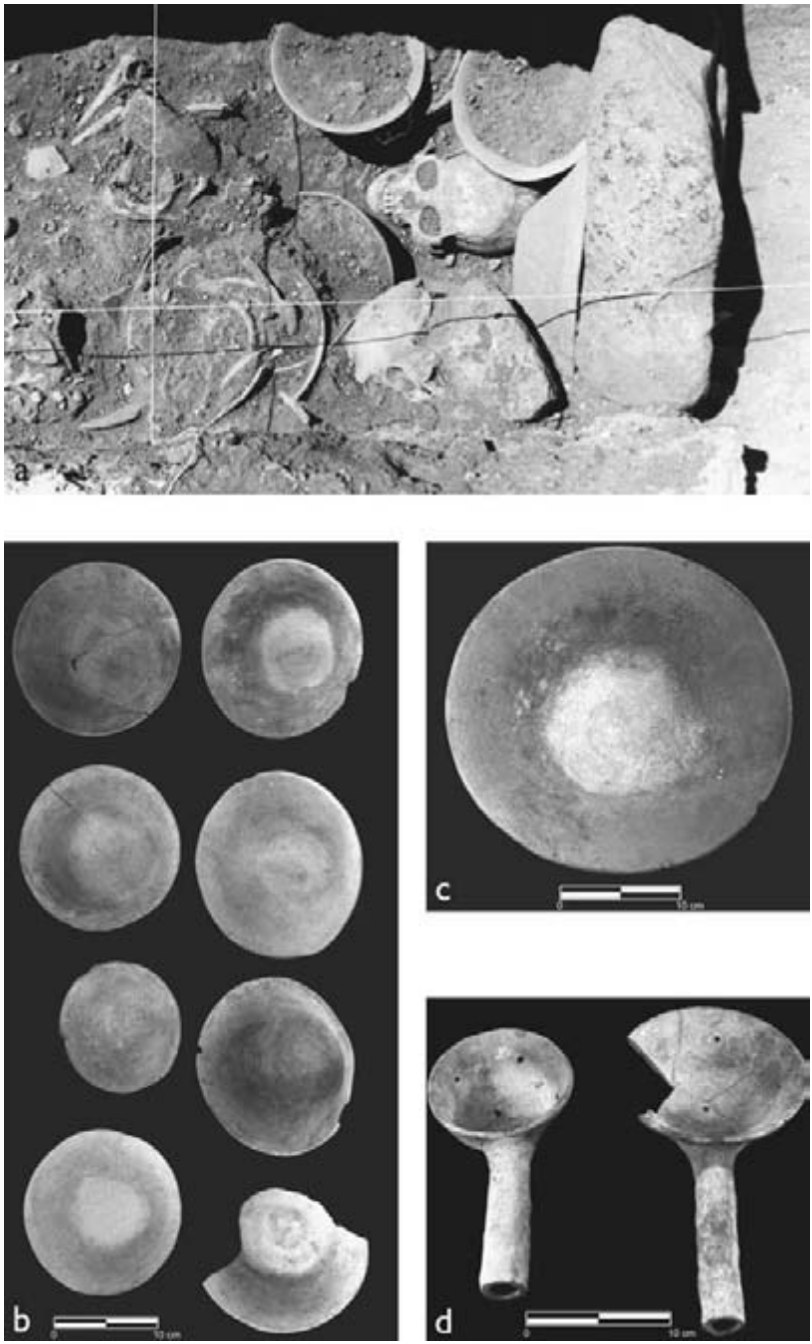
Fragments of a gray ceramic tecomate (Field No. 6998) were screened from within the tomb (Fig. 8.10b). Although some of the fragments fit together, the tecomate was not complete enough to obtain rim diameter

TABLE 8.2. Bowls and ladle censers from Tomb 3

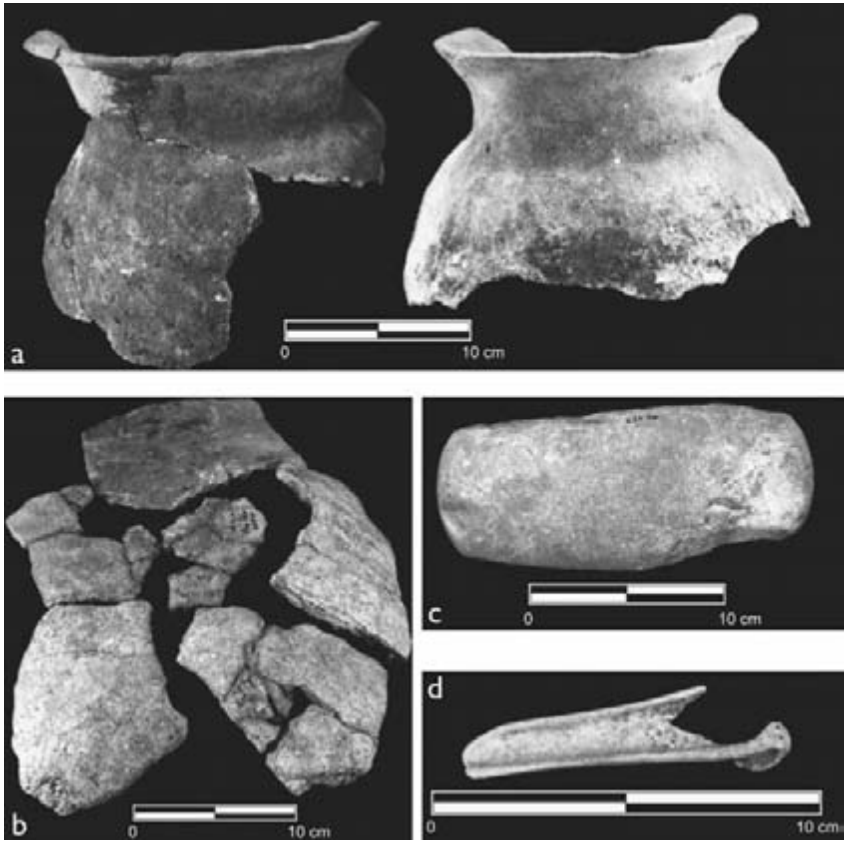
No. in Fig. 8.7	*Field no.*	*Description*[1]
1[2]	6995	Small G-35 bowl. Gray. Dia. 18.2 cm, ht. 6.2 cm. Base design: K. Broken and incomplete. No contents. Door offering.
2	6909	Large G-35 bowl. Gray. Dia. 31.3 cm, ht. 8.2 cm. Base design: None. Complete and intact. No contents. Main offering.
3	6910	Small K-14 bowl. Brown. Dia. 18.8 cm, ht. 5 cm. Base design: K. Complete and intact. No contents. Main offering.
4	6911	Small G-35 bowl. Gray. Dia. 19.1 cm, ht. 6.5 cm. Base design: L. Complete but broken. No contents. Main offering.
5	6914	Small G-35 bowl. Gray. Dia. 18 cm, ht. 5 cm. Base design: ? Broken and incomplete. No contents. Main offering.
6	6915	Small G-35 bowl. Gray. Dia. 19.8 cm, ht. 5.6 cm. Base design: A. Complete and intact. No contents. Main offering.
7	6916	Small G-35 bowl. Gray. Dia. 19.2 cm, ht. 4.9 cm. Base design: M. Complete and intact. No contents. Main offering.
8	6917	Small G-35 bowl. Gray. Dia. 15.1 cm, ht. 4.9 cm. Base design: N. Complete and intact. No contents. Main offering.
9	6918	Small G-35 bowl. Gray. Dia. 18.5 cm, ht. 5.8 cm. Base design: H. Complete but broken. No contents. Main offering.
10	6919	Small K-14 bowl. Brown. Dia. 19 cm, ht. 6.1 cm. Base design: O. Complete and intact. No contents. Main offering.
11	6920	Small G-35 bowl. Gray. Dia. 18.5 cm, ht. 7 cm. Base design: F. Complete and intact. No contents. Main offering.
12	6921	Small G-35 bowl. Gray. Dia. 17.5 cm / 19.2 cm, ht. 5.2 cm / 6.5 cm. Base design: K. Complete but broken. No contents. Very poorly made with rim bent. Main offering.
13	6922	Small G-35 bowl. Gray. Dia. 19 cm, ht. 7.4 cm. Base design: K. Complete and intact. No contents. Very poorly made. Main offering.
14	6923	Small G-35 bowl. Gray. Dia. 19.5 cm, ht. 6.1 cm. Base design: D. Broken and incomplete. No contents. Main offering.
15	6912	Ladle censer. Pan: Dia. 14.8 cm, ht. 5.5 cm. Handle: L. 13 cm, dia. 2.9 cm. Broken and incomplete. Pan smudged. Door offering.
16	6924	Ladle censer. Pan: Dia. 11.6 cm, ht. 4.5 cm. Handle: L. 11.5 cm, dia. 3.3 cm. Complete but broken. Pan smudged. Main offering.

Notes:
1. For designs on bowl bases see Figure 7.14.
2. This bowl is not shown in Figure 8.7.

or other metric measurements. Likewise, because the sherds were scattered throughout the tomb fill it was not possible to locate the tecomate three-dimensionally.



8.9. ***Bowls and ladle censers from Tomb 3***



8.10. ***Ollas, tecomate, mano, and bone batten from Tomb 3***

A complete and intact mano (Field No. 6925) was found near the floor along the north side of the tomb, placed near the left arm of Burial 2 (Fig. 8.10c). It measures 20 cm long and is 9 cm by 6 cm. The mano is battered on one end and has two working surfaces, which show traces of lime and red paint.

A small bone batten (Field No. 6984), 6.5 cm long, 2 cm wide at the large end and 1.1 cm wide at the small end, and 6 mm thick, was screened from the upper levels of Tomb 3 near the plow zone (Fig. 8.10d). For this reason it was not located three-dimensionally. Although it appears that it was probably intended as an offering, its location in the extreme upper limits of the tomb makes this uncertain.

The upper portion of a miniature stone replica of an elite tomb façade (Field No. 6908) was found near the back (east end) and toward the north

8.11. ***Fragment of a miniature stone replica of the Tomb 6 façade, its hypothetical reconstruction, and comparison with similar replicas***

side of the tomb (Fig. 8.11). It was broken and incomplete and measured 38 cm long, 12.7 cm high, and 8.5 cm thick. The lower half was broken and missing. The intact part includes two panels framed by double cornices. The panels have traces of plaster and red paint. A horizontal groove runs along the top surface (Fig. 8.11a). A reconstruction of this small replica is presented in Fig. 8.11b and similar examples are shown in Figures 8.11c and d.

A fragment of a figurine head (Field No. 6913) was found near the center and well above the floor of the tomb. Because it was broken and incomplete and because figurine heads are commonly located in fill, it seems likely that this figurine head was part of the fill in Tomb 3 (Fig. 8.7).

PATTERNS IN THE TOMB 3 OFFERING

The offering in this tomb appears to parallel the patterns observed in the Tomb 6 offering but in a simpler way, reflecting the commoner status of the household. As was the case with Tomb 6, the urn and effigy vessel relating to Zapotec ancestor and deity themes occur in the "lintel" offering. The door offering also parallels the Tomb 6 door offering in a very modest way. In both cases there is evidence for the burning of incense upon the opening or final closing of the tomb door and an offering of food was placed in front of the door following its closing.

Most of the offerings were placed within the tomb together with the skeletons of five adults. Again, certain parallels occur with the antechamber and main chamber offerings in Tomb 6. A large number of bowls were placed in Tomb 3 and Tomb 6 as offerings of food. In addition, incense burning in accompaniment with the interments occurred.

Like the antechamber of Tomb 6, the main offering in Tomb 3 included a number of different kinds of objects representing personal items or items intended as offerings for specific individuals buried there. The bone batten (if it was an offering) indicates that one of the individuals in the tomb practiced weaving. The mano, ollas, and tecomate may have been placed as an offering for any one of the females buried in the tomb. The broken stone replica of the façade of an elite tomb may have been a memento, although it may have been simply a reused stone placed in the tomb's roof with no particular meaning to the commoners who occupied the house.

Conspicuously absent from the Tomb 3 offering are personal adornments that those interred within the tomb might have worn. There are no pendants from necklaces, bracelets, earspools, or even a single bead. It appears that the individuals buried in Tomb 3 were either interred without their personal adornments or that none had any personal adornment. The lack of personal adornments reflects the status of those buried in the tomb as commoners.

THE HOUSE OF TOMB 3 AND THE HOUSES OF MOUND 195 SUB

The question arises as to where the commoners of the House of Tomb 3 obtained an urn, bipod effigy vase, and broken miniature stone replica of the façade of an elite tomb. The broken stone replica might have been scavenged from an elite midden, but the urn and bipod effigy vase certainly were not. There are two possibilities for where these latter objects might

8.12. ***Bipod effigy vases from Tombs 3 and 6 with the same moldmade Cociyo face***

have been obtained. First, it is possible that urns and bipod effigy vases were produced for and sold on the open market by the ceramic specialists who made them, permitting even commoners who could afford the price the possibility of purchasing them. Second, commoners may have received these mortuary items from nobles who rewarded them for a lifetime of loyal service. Evidence from Tomb 3 favors the latter interpretation and indicates a relationship between the commoner married couples who headed the Tomb 3 household and the elite households who occupied the last three houses of Mound 195 Sub.

The bipod effigy vase from Tomb 3 and one from Tomb 6 have identical Cociyo faces, suggesting that they were made by the same potter from the same mold (Fig. 8.12). There are four bipod effigy vases in the Tomb 6 offering and only one of them is identical to the one from Tomb 3 (see Fig. 7.7e). In fact, of all the bipod effigy vases found in tomb and burial offerings at Lambityeco, none is identical to another except the two from Tomb 3 and Tomb 6. This suggests that one of the elite household heads who occupied the last three houses of Mound 195 Sub presented a mortuary offering for one of the individuals who headed the Tomb 3 household that included the bipod effigy vase and, most likely, the Pitao Cozobi urn as well.

Another object in the tomb indicates a connection between one of the last three households of Mound 195 Sub and the Tomb 3 households. The stone replica of the façade of an elite tomb from Tomb 3 is an exact copy

in miniature of the façade of Tomb 6 minus the portrait heads. In fact, a comparison of the measurements of the façade of Tomb 6 and the stone replica revealed that the replica is a one-quarter scale copy of the façade. This, combined with the fact that both have horizontal grooves along their tops and both have their panels painted red, demonstrates that the object was indeed a miniature replica of the façade of Tomb 6.

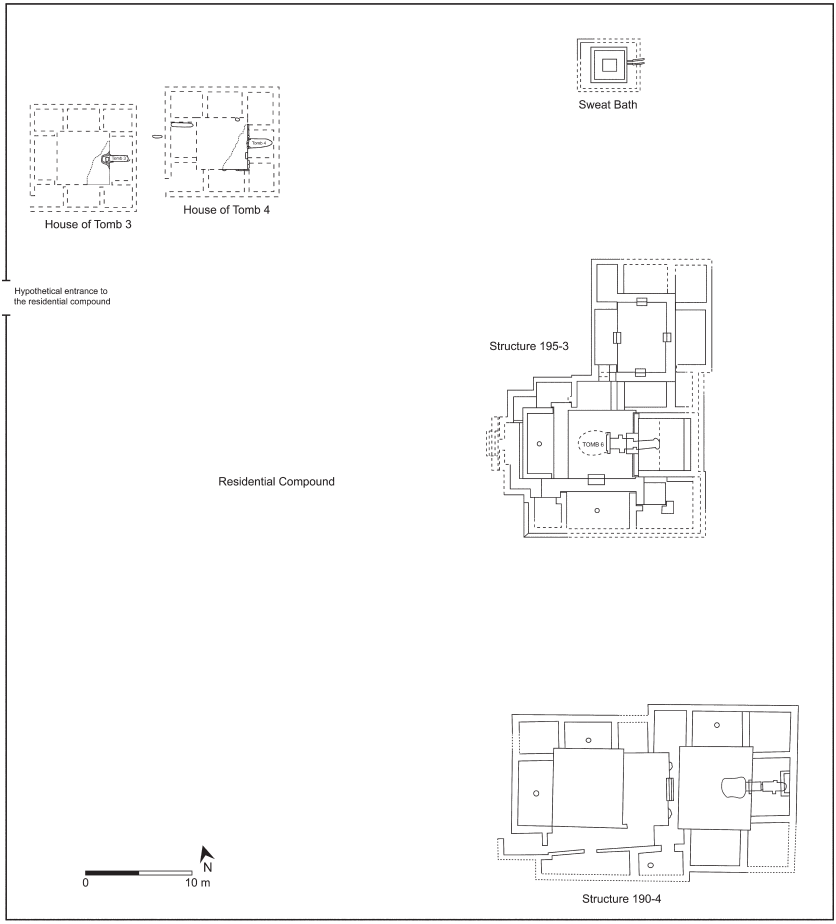
The presence of the miniature replica in Tomb 3 suggests that a member of one of the Tomb 3 households was either given the upper part of the broken replica or scavenged it when it was discarded by one of the elite households of Mound 195 Sub. This indicates that a member or one of the married couples who headed the household had access to the elite households of Mound 195 Sub, or at least to their middens. It is possible that one or more of the married couples that headed the Tomb 3 household worked for the elite households of Mound 195 Sub. The broken fragment of the miniature replica may have been kept as a memento that finally ended up in the Tomb 3 offering or was simply reused as a stone in the tomb's roof.

The presence of these objects in Tomb 3 indicates a relationship between the Tomb 3 household and the elite households of Mound 195 Sub over a period of three generations between ca. 725 and 800 CE. The relative proximity of the two households, only 45 m apart, suggests that the commoners who occupied the House of Tomb 3 were retainers who served the elite households of Mound 195 Sub on a fulltime basis. It also seems likely that the House of Tomb 3 was within the western limits and near the entrance to the large residential compound belonging to the elite households of Mound 195 Sub, which also included the elite households of Mound 190 occupied by their noble relatives. Having been constructed there by the Tomb 3 household or built and maintained by the elite households, the House of Tomb 3 was well-situated as a point from which to control access to the large residential compound (Fig. 8.13).

THE HOUSE OF TOMB 4

The southeast corner of the patio of the House of Tomb 4 was located 9.5 m north and 34 m west of the northwest corner of Structure 195-3NE. The southeast corner of the patio of the House of Tomb 4 was likewise located 1.9 m north and 11.8 m east of the southeast corner of the patio of the House of Tomb 3, which places the houses very near one another within the large residential compound (Fig. 8.13).

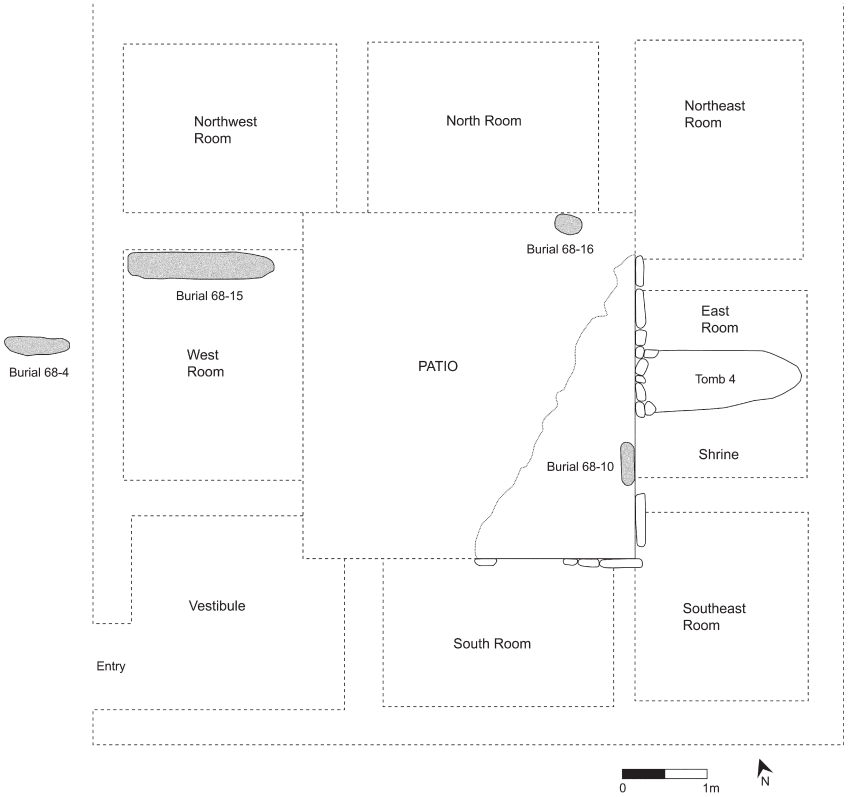
All that remains of the House of Tomb 4 is a portion of its patio, Tomb 4, and four burials (Fig. 8.14). Evidence from the tomb indicates that the house was only occupied for a single generation from ca. 775 to 800 CE.



8.13. ***Houses of Tombs 3 and 4 within the residential compound***

The stone foundation along much of the east side of the patio and part of the south side was preserved intact, but the rooms above the patio were destroyed and missing (Fig. 8.15a). The patio was not paved with a white plaster floor. Instead, it was paved with crushed ignimbrite, a white chalky substance that occurs in natural deposits below the red gravelly tepetate at Lambityeco.

Tomb 4 was located along the east side of the patio under what would have been the east room of the house. Assuming that Tomb 4 was centrally located, the patio would have measured about 4 m north-south. The east-west dimensions of the patio are unknown. However, a burial occurred



8.14. ***Plan of the House of Tomb 4***

between 4 m and 6 m west of the eastern limits of the patio. If this burial had been placed in the northwest corner of the patio, the patio would have measured 6 m east-west. On the other hand, if the burial had been placed beneath the north side of the west room of the house, then the patio would have measured 4 m east-west. Because there are houses of commoners at Lambityeco with patios that measure about 4 m by 4 m (Markens, personal communication, 2006), it will be assumed that the patio of the House of Tomb 4 also measured 4 m by 4 m.

The House of Tomb 4 certainly had rooms on its east and south sides as attested by the presence of foundation stones in these areas. The east room was a step above the patio floor and probably had adobe walls on three sides with the west side open, facing on the patio. It served as the ancestral shrine room for the household ancestor buried below in Tomb 4. The south room was a step above the patio with adobe walls on three sides and the north side open, facing on the patio. A southeast corner room probably occurred

8.15. ***House of Tomb 4, stone foundations, and Tomb 4***

between the south and east rooms. It may have been a step above the patio and probably had adobe walls on all four sides with a narrow entrance opening on the patio.

A west room may be inferred from the burial placed beneath it. It probably had adobe walls on three sides, leaving the east side open, facing on the patio. A corner room probably occurred at the northwest corner of the patio. It also seems likely that a north room and a northeast corner room may have occurred with a possible entryway to the house in the southwest corner. Because the patio floor was not plaster, it seems unlikely that any of the room floors were plaster. They may have been compact earthen floors or surfaced with crushed ignimbrite like the patio but their destruction makes this impossible to ascertain. Because most of the House of Tomb 4 was destroyed, its reconstruction in Figure 8.14 is mostly hypothetical.

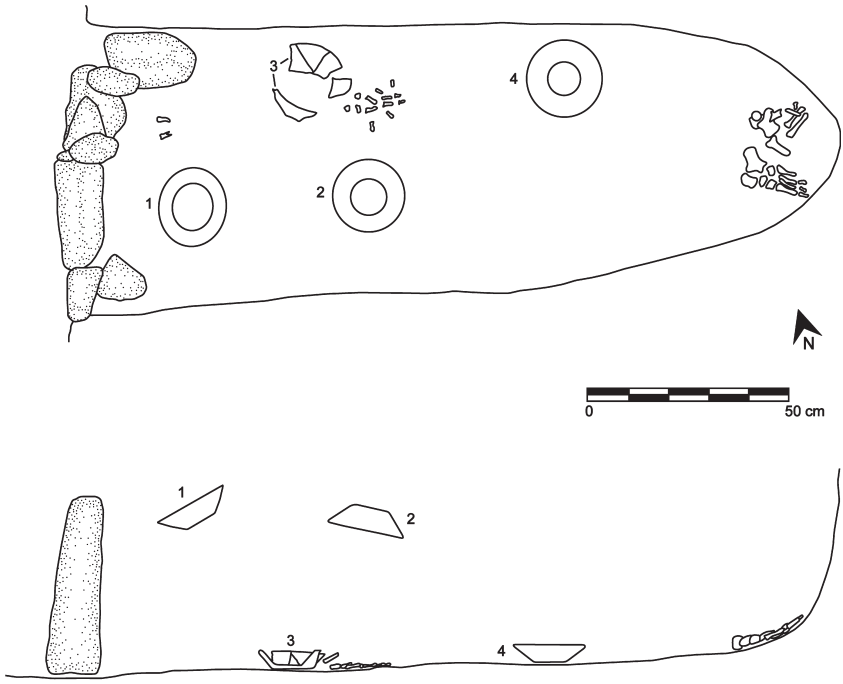
TOMB 4

This tomb consisted of a single chamber excavated into compact sterile soil (Fig. 8.15b). It was oriented east-west, with the door in the west, and measured 1.92 m long, east-west, and 68 cm north-south at its widest point. None of the walls manifested niches or masonry construction and the floor was not plastered. Instead, the tomb was formed by the compact sterile soil into which it had been cut. The rear, or east end, was elliptical and rounded in its profile instead of being squared off. No roof was preserved but the distance from floor to a probable roof (highest part of the tomb walls) was about 50 cm.

The tomb door was formed by three stones, the largest of which was 44 cm high, 26 cm wide, and 13 cm thick. Smaller stones were placed to fill the gap between two of the stones and complete the door. A series of stones on either side of the door formed the jambs. The base of the door was about 55 cm beneath the level of the patio floor.

SKELETAL REMAINS

A single disturbed primary burial (Burial 68-14) was found within the tomb (Fig. 8.16). Virtually all of the bones of this burial had been removed, presumably when the house was abandoned during the construction of the north platform of System 195. The incomplete remains included the still articulated feet, some partially articulated hand phalanges, and two teeth. By their distribution within the tomb, the skeletal remains suggest that the individual was buried in an extended position with the head to the west and feet to the east. The right arm appears to have been parallel to the body, judging from the position of the hand phalanges. The individual buried in the tomb was clearly an adult but it was not possible to determine the sex or age at death.



8.16. ***Plan and profile of Tomb 4***

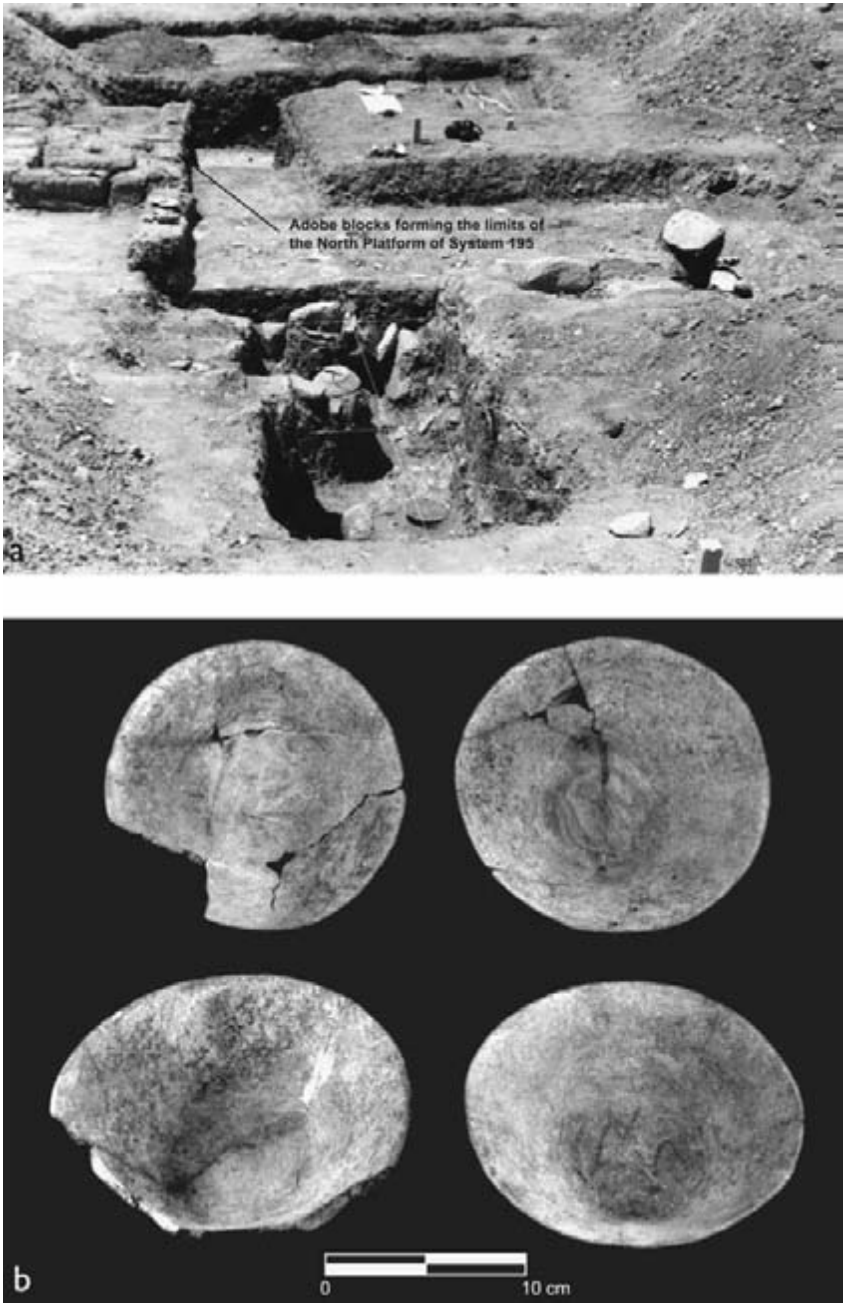
OFFERINGS

All the offerings, four G-35 bowls, were contained within the tomb (Fig. 8.17b). Two of the bowls were in upright positions on the floor. One (#3 in Fig. 8.16 and Table 8.3) was broken and incomplete and located near the left hand of the burial. The other (#4) was complete and intact and located near where the left knee must have been.

The other two bowls were in fill 37 cm above the tomb floor (Fig. 8.15). One (#1 in Fig. 8.16 and Table 8.3) was broken and incomplete and located near the center of the tomb close to the door. The other (#2) was broken but complete and located near the midpoint of the tomb. Whether other offerings were taken away when the skeleton was removed from the tomb is unknown.

BURIALS ASSOCIATED WITH THE HOUSE OF TOMB 4

Four burials were found in association with the House of Tomb 4. Because only married couples who headed households were buried in tombs, these



8.17. ***The House of Tomb 4, adobe blocks atop the patio floor, and G-35 bowls from Tomb 4***

TABLE 8.3. G-35 bowls in the Tomb 4 offering

No. in Fig. 8.16	*Field no.*	*Description*[1]
1	6940	G-35 bowl. Dark gray. Dia. 18.7 cm, ht. 5.5 cm. Base design: None. Broken and incomplete. No contents.
2	6941	G-35 bowl. Dark gray. Dia. 18.5 cm, ht. 6 cm. Base design: None. Broken but complete. No contents.
3	6942	G-35 bowl. Gray. Dia. 17.7 cm, ht. 4.2 cm. Base design: F. Broken and incomplete. No contents.
4	6943	G-35 bowl. Gray. Dia. 17.5 cm, ht. 4.2 cm. Base design: F. Complete and intact. No contents.

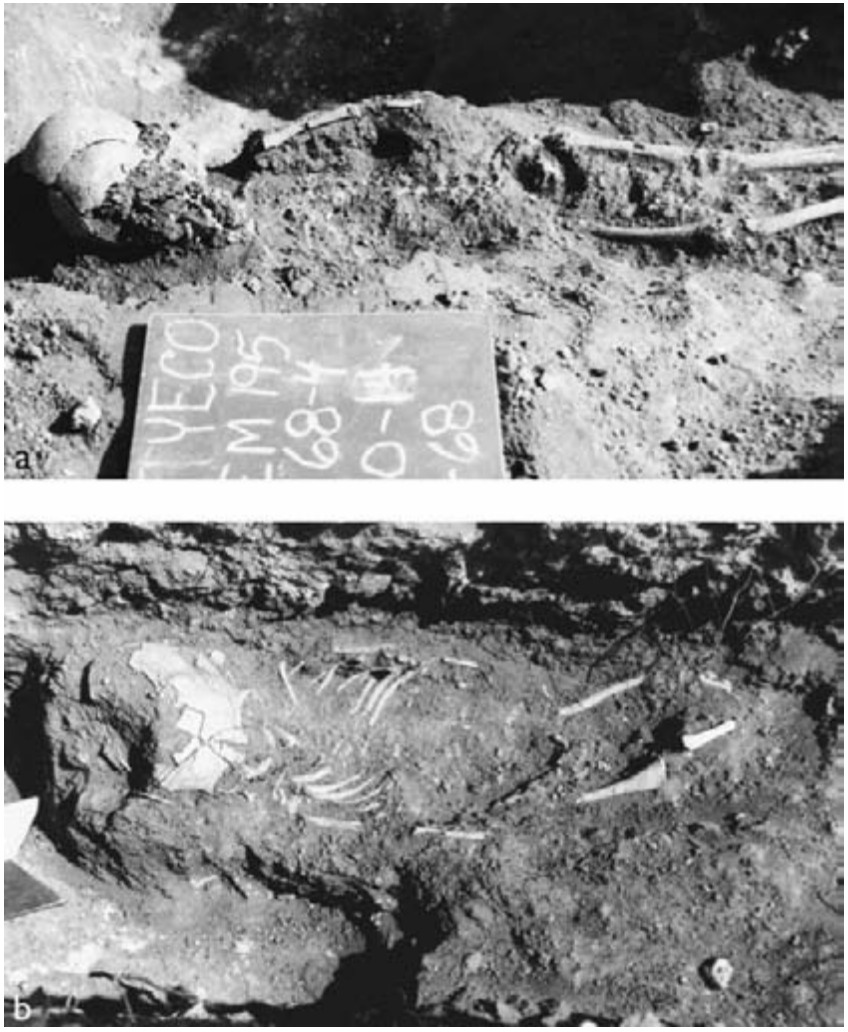
Note:
1. For designs on bowl bases see Figure 7.14.

burials represent individuals who belonged to the household and who were buried under the patio floor, under a room floor, or just beyond the confines of the house (Fig. 8.14).

Burial 68-4 was an undisturbed primary located just beyond the confines of the house in a grave that had been dug directly west of the probable west room of the house (Fig. 8.18a). The burial was that of a child between one and three years old. It was buried in an extended position with its head to the west and feet to the east. The skeleton rested on its back with the legs extended and the arms extended at the side of the body. The trunk of the body was twisted slightly toward the south and the skull with the right side down was facing south. No intentional cranial reshaping is evident (Urcid 1983:104). No offering was present with the burial.

Burial 68-10 was an undisturbed primary located beneath the patio floor of the House of Tomb 4 (Fig. 8.18b). It was placed in a grave dug parallel to the eastern edge of the patio only 40 cm south of the south side of the door to Tomb 4 (Fig. 8.14). The remains were those of an infant six to nine months old. It was buried on its back in an extended position with the head to the north and feet to the south. The arms were extended alongside the body. The skull exhibits intentional cranial reshaping of the tabular oblique type. No offering was present with the burial.

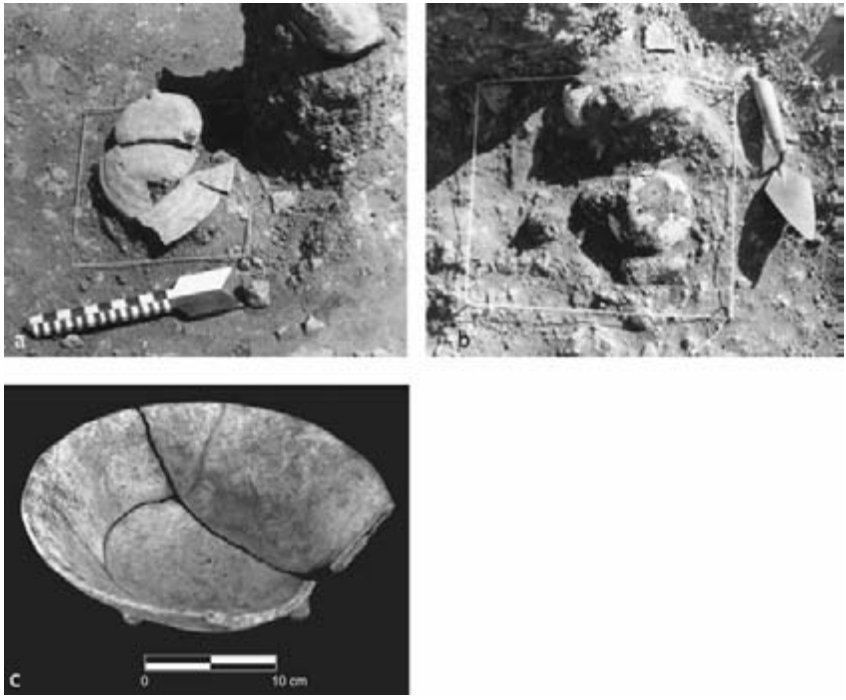
Burial 68-16 was an undisturbed primary located beneath the patio floor. It was placed in a grave dug parallel to the northern edge and 60 cm west of the northeastern corner of the patio. The burial was that of a child between one and three years old. It was buried on its back in an extended position with the head to the west and feet to the east (Fig. 8.19b). The arms were parallel to the body. The skull, which exhibits no evidence of intentional cranial reshaping (Urcid 1983:104), was covered by a large inverted G-35 tripod bowl (Fig. 8.19a). The bowl had solid tripod supports



8.18. ***Burials 68–4 and 68–10 from the House of Tomb 4***

and measured 28.7 cm in diameter and was 9.5 cm high (Fig. 8.19c). It was broken and incomplete and had a type J pattern burnished base design (see Fig. 7.14) on its interior base.

Burial 68–15 was an undisturbed primary located under what would have been the west room. The grave was dug inside the room parallel to the north wall. The remains were those of an adult male between thirty-five and forty years old. He was buried on his back in an extended position with the head to the east and feet to the west. His arms were bent at the elbows



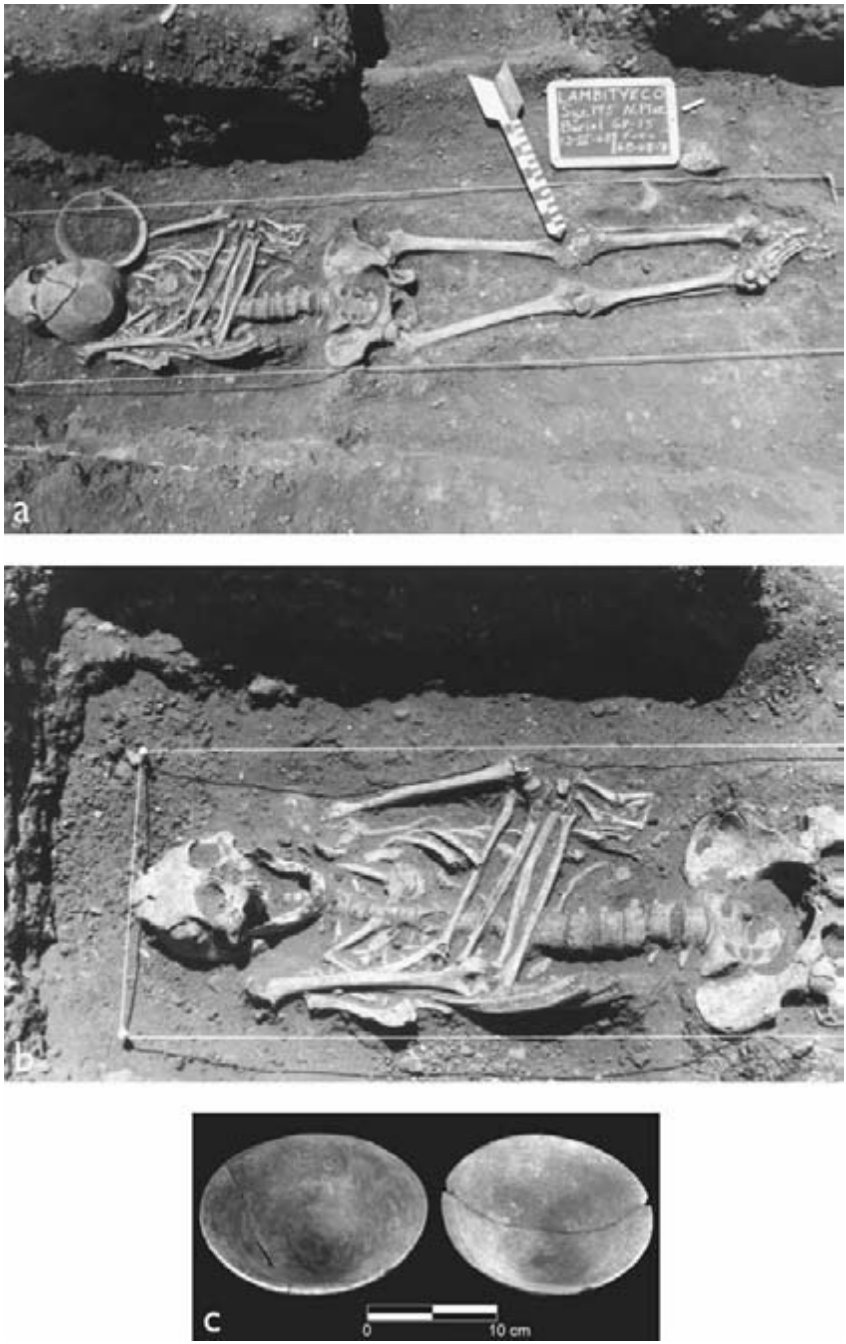
8.19. ***Burial 68-16 from the House of Tomb 4***

and crossed over his chest. The feet were crossed with the right foot over the left. His skull manifested intentional cranial reshaping of the tabular oblique type (Fig. 8.20b).

An offering of two G-35 bowls accompanied the burial. One was inverted over the right side of the face and neck (Fig. 8.20a). It was a small gray G-35 bowl (Field No. 6945) that was broken but complete. Its rim diameter was 18.2 cm and its height 5.3 cm. It had no design on its interior base. The second was located in an upright position on top of the left shoulder. It was also a small gray G-35 bowl (Field No. 6946) that was broken but complete. Its rim diameter was 18 cm and its height 6 cm. It had a cross or type A pattern burnished design (see Fig. 7.14) on its interior base (Fig. 8.20c). There were no visible contents in the bowl.

THE TOMB 4 HOUSEHOLD

Tomb 4 and the burials found associated with the house provide insight into the possible nature of the household. The skeletal remains in the



8.20. ***Burial 68-15 from the House of Tomb 4***

tomb correspond to either the husband or wife who headed the household. However, one adult male thirty-five to forty years old was buried beneath the floor of the west room (Burial 68-15). This individual was obviously not a household head. Given the high frequency of joint family households in indigenous communities (Carrasco 1964; Romney and Romney 1966), it seems likely that he was a married relative of the married couple who headed the household. Because he was buried under the west room, it seems likely that he and his family occupied the west room. Likewise, the child (Burial 68-4), one to three years old, who was buried beyond the confines of the house behind the west room, was probably a household member.

Two other members of the household who died and were buried within the house were also children. Burial 68-10, located a short distance south of the door of Tomb 4, was an infant six to nine months old. Because the infant's burial was so close to the door of Tomb 4, the baby may have belonged to the married couple who headed the household. Burial 68-16, a child one to three years old, was the only child with an offering. It is possible that this child also belonged to the married couple who headed the household. According this child an offering probably reflects the fact that he or she was older than Burial 68-10. The House of Tomb 4, then, was probably occupied by a joint family household between ca. 775 and 800 CE.

COMPARISON OF THE HOUSES OF TOMB 3 AND TOMB 4

The House of Tomb 3 was probably occupied between ca. 725 and 800 CE by three successive generations of married couples who headed the household. The bipod Cociyo effigy vase and the Pitao Cozobi urn were probably mortuary offerings provided by the elite household heads of Mound 195 Sub to one of the Tomb 3 household heads in recognition of loyal service as retainers. One of these retainers may have obtained the broken miniature replica of the façade of Tomb 6 that found its way into the Tomb 3 offering or roof.

Whereas the House of Tomb 3 was occupied for three generations, the House of Tomb 4 was occupied for only a single generation from ca. 775 to 800. Their proximity to one another might suggest that they were occupied by related families, perhaps resulting from the Tomb 3 household outgrowing its capacity to house all its members. However, it is more likely that the House of Tomb 4 was occupied by a joint family completely unrelated to the Tomb 3 household as is indicated by the presence of Tomb 4, a separate household tomb. In either case, the Tomb 4 household represents

an additional group of commoner retainers who either built or had their house built for them within the large residential plot belonging to the elite households of Mound 195 Sub.

THE ABANDONMENT OF THE HOUSES OF TOMBS 3 AND 4

The Houses of Tombs 3 and 4 were abandoned and leveled in conjunction with the construction of the north platform of System 195, which was begun around 800 CE. Clear evidence for this comes from the patio of the House of Tomb 4. The northern limits of the north platform were built directly over the southern portion of the patio of the House of Tomb 4. These limits were defined by a row of adobe blocks with a series of adobe blocks south of them used to level the top of the north platform (Fig. 8.17a). The demolition of these houses and the construction of the platform over their remains again indicate that the Houses of Tombs 3 and 4 had been built on land belonging within the large residential compound of the elite households of Mound 195 Sub (Fig. 8.13).

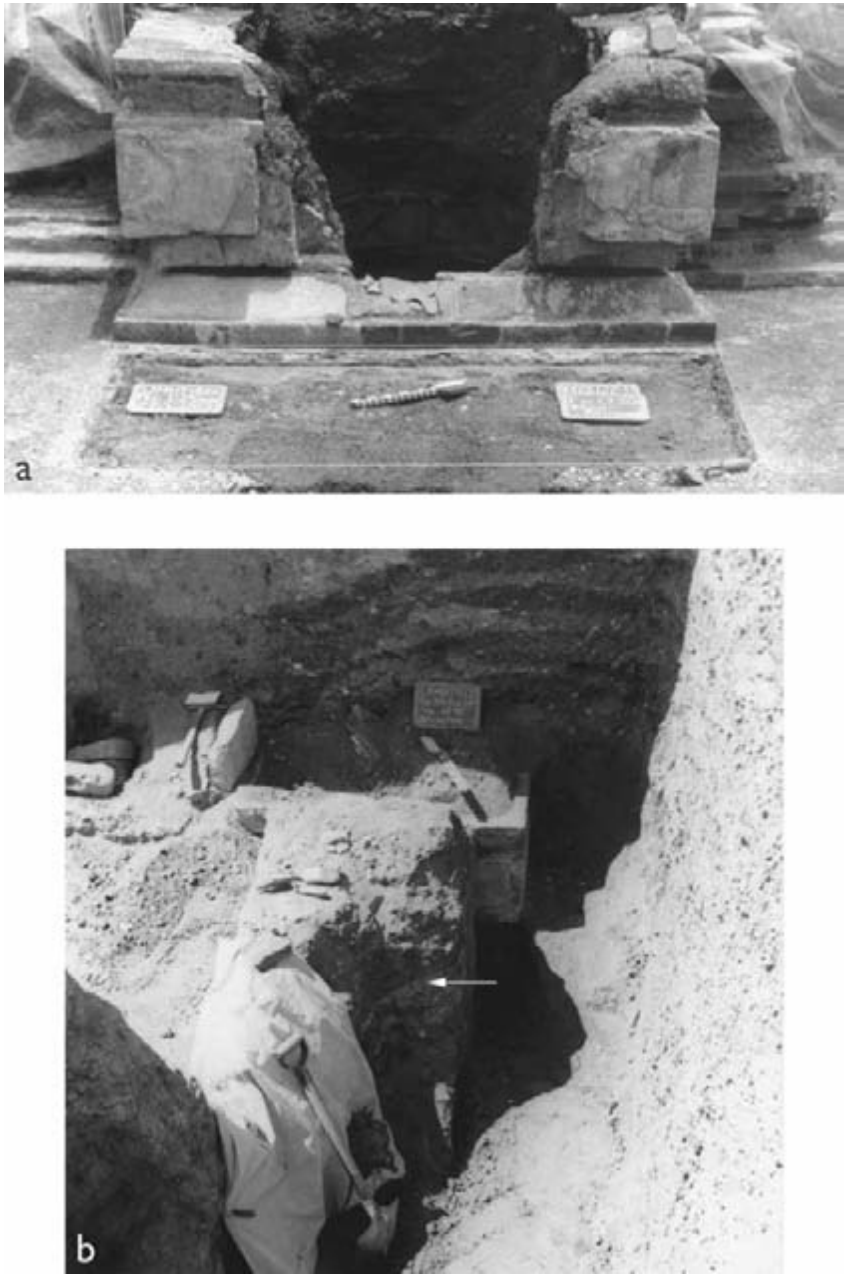
chapter nine

Mound 195: Structures 195-2 and 195-1

Structures 195-2 and 195-1 were the final residences built atop Mound 195. Structure 195-2 was the first to be erected and it served as a temporary residence pending completion of Structure 195-1, which was the final residence. The sequence of events leading up to the building of Structure 195-2 begins with activities surrounding the abandonment of Structure 195-3SE.

Several features in the archaeological remains of Structure 195-3SE correspond to those final activities. These features relate to events taking place just before abandonment and accommodations made during the first stages of construction of Mound 195, which was to cover the houses of Mound 195 Sub and provide a platform atop which first Structure 195-2 and then Structure 195-1 were to be built.

Structure 195-3SE was the first part of the house to be abandoned. Major activities centered on Tomb 6 and the last burial placed in it, the Structure 195-3 female household head, Lady 10 Naa. As noted earlier, she was buried in Tomb 6 by way of a hole dug through the center of the altar to gain direct access to the main chamber. Following her burial the hole was only partially filled and the altar was never repaired. Structure 195-3SE was abandoned following her interment. The hole through the altar was not completely filled until later construction material used to raise Mound 195 was deposited over Structure 195-3SE. The fill clearly dipped into the hole (Fig. 9.1).



9.1. ***The hole through the altar and later fill***

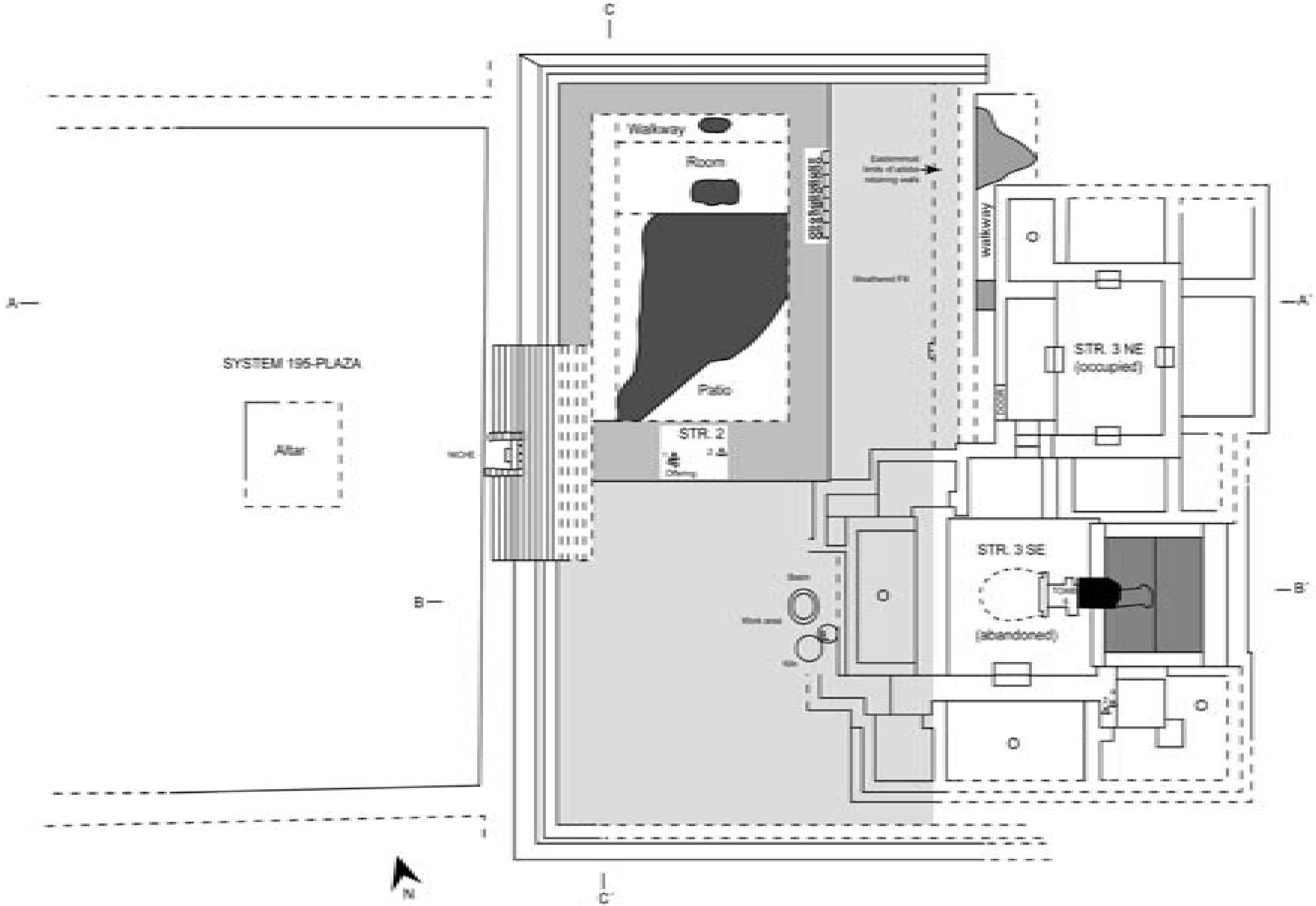
Lady 10 Naa died and was buried in Tomb 6 some time following the death of her husband, Lord 1 Lachi. The final opening of Tomb 6 to retrieve his bones was associated with a calibrated radiocarbon date of 800 CE. If this date is reasonably accurate for the removal of his bones, then Lady 10 Naa died sometime after 800 CE and immediately before the abandonment of Structure 195-3SE. Because she was apparently at least forty-five years old when she died, it seems unlikely that her death occurred more than ten years after the removal of her husband's bones. Therefore, her death and the abandonment of Structure 195-3SE probably occurred around 810 CE.

STRUCTURE 195-3SE POST-ABANDONMENT ACTIVITIES

Excavations revealed that, following abandonment, adobe retaining walls had been built projecting westward from the west side (front) of Structure 195-3SE and construction fill was used to raise Mound 195 in this area. The west room of Structure 195-3SE remained partly covered with construction fill for some time, as indicated by a differential discoloration of the plaster on the room walls showing the level to which the room had been filled. Following abandonment, the western part (entry and west room) of Structure 195-3SE and the area west of it—extending to the front of Mound 195—was built up to form the base of the western half of Mound 195, whereas the eastern part of Structure 195-3SE was abandoned but remained free of construction fill for some time (Fig. 9.2).

Excavations revealed evidence of some of the post-abandonment activities on the floors of Structure 195-3SE. Explorations uncovered deposits of trash and some areas where fires had been built on the floors. Some time following abandonment, the roof of the southeast corner room burned. The charred roof poles and thatching were left on the room floor where they had fallen until they were covered by construction fill used to raise the eastern half of Mound 195. Excavations recovered remnants of the charred thatching and roof poles (see Fig. 6.5c).

A sample of carbonized thatching yielded an anomalous uncalibrated radiocarbon date of 1055±95 CE that should be corrected (Rabin 1970:14–15).[1] A second sample of wood charcoal from the charred roof poles rendered an acceptable calibrated radiocarbon date of 830 CE. Wolfman (1973:199, 232) also obtained an archaeomagnetic date of 725 CE from the floor, which was oxidized by the heat of the fire when the room burned but this date seems much too early.[2]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(abandoned)
Tomb
Basin
Work area
Kiln
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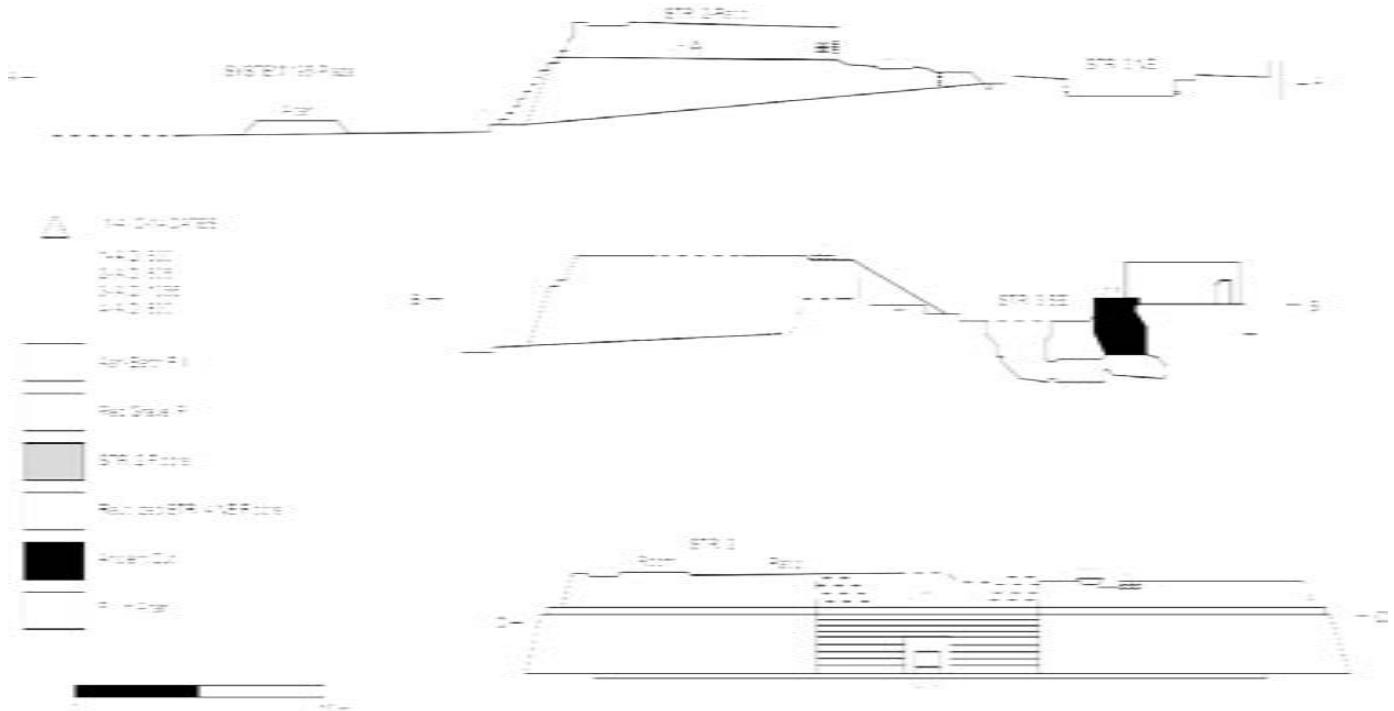


9.2. ***Plan and profiles of Structure 195–2 showing its relationship to Structure 195–3***

STRUCTURE 195-3NE

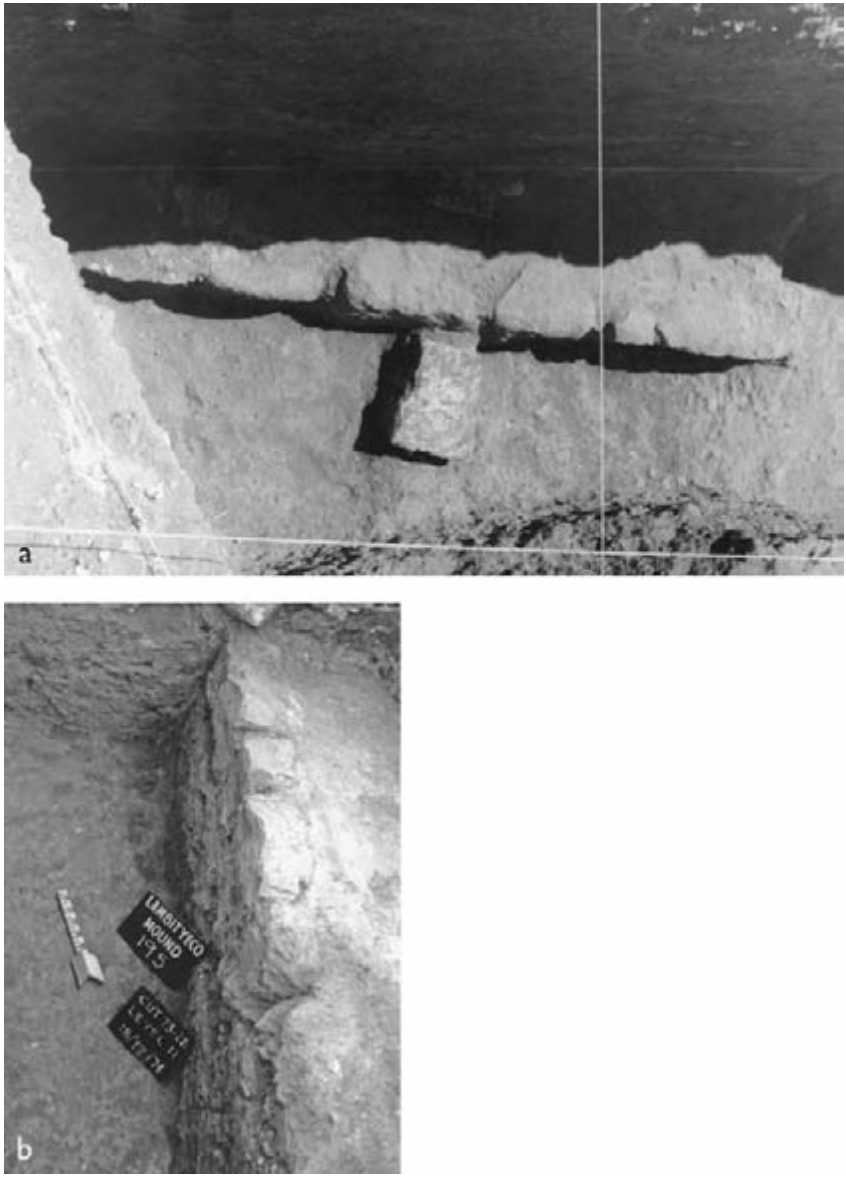
Structure 195-3NE remained occupied following abandonment of Structure 195-3SE (Fig. 9.2). The new occupants of Structure 195-3NE, almost certainly unrelated to the former noble family that previously had occupied the household, were probably responsible for depositing and burning trash on the floors of Structure 195-3SE. They also set the fire, apparently purposefully, that burned the roof of the southeast corner room.

In order to remain in Structure 195-3NE after the abandonment of Structure 195-3SE and following initiation of construction of the western half of Mound 195, it was necessary for the new occupants to create an unencumbered entry. After the final remodeling of Structure 195-3, the only access to Structure 195-3NE from the outside was via the west entry to Structure 195-3SE (see Fig. 6.1). Because this entrance was blocked by construction of the western half of Mound 195, a new entry was needed.

The new occupants of Structure 195-3NE opened a doorway through the wall in the southwest corner of the west entrance hall. Outside this doorway they built a narrow (70 cm wide) raised walkway that ran northward along the west side of the house and cornered to turn east outside the wall of the northwest corner room. That the walkway was somewhat makeshift is apparent from its alignment, which does not neatly parallel the west wall of the house but angles toward the east.

The walkway was delineated by a single row of stones at its western edge, forming its curb (Fig. 9.3). The ancient excavation made to place this curb cut through the western edge of the floors of the earlier Structure 195-4NE west and northwest rooms. The remaining sections of these floors, east of the curb, were reused as the "flooring" of the walkway. The ancient excavation made to place the curb also resulted in destroying the cranium of Burial 68-19, which had originally been placed beneath the floor of the northwest corner room of Structure 195-4NE (see Fig. 5.15c).

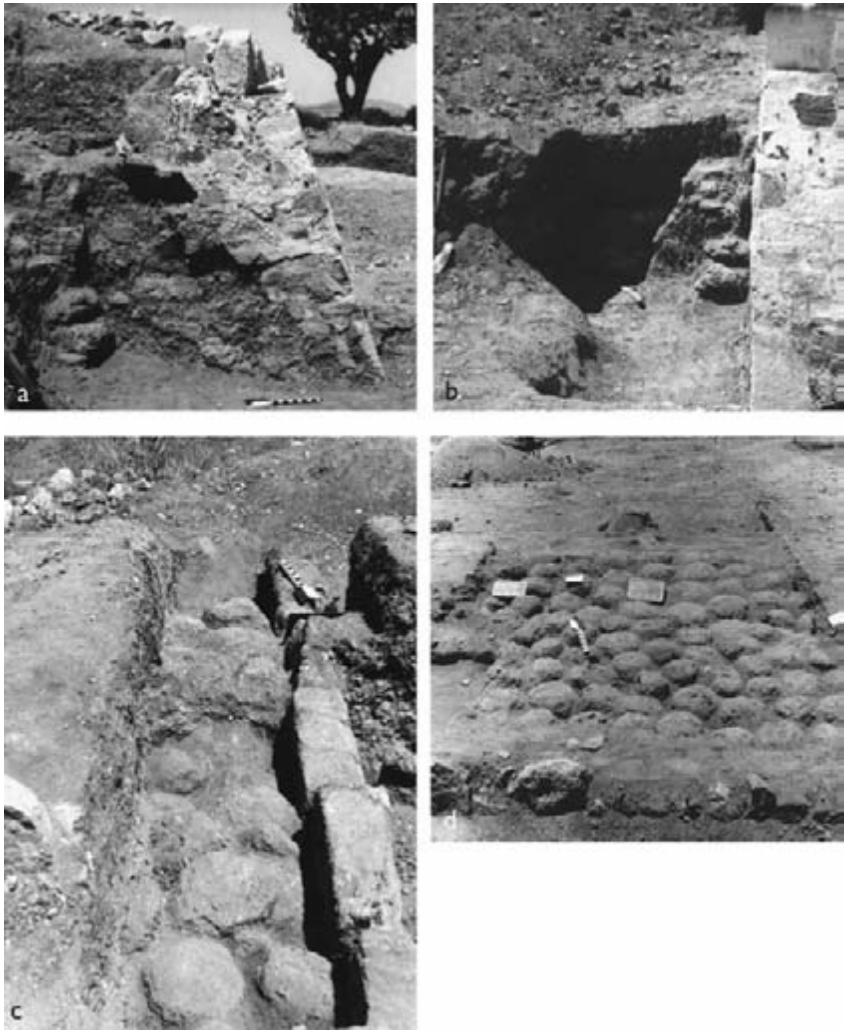
Construction of the doorway communicating with the walkway provided an unencumbered entry to Structure 195-3NE while the western half of Mound 195 was being built. The location of the walkway helps explain why the north wall of Mound 195 was purposefully terminated where it was. Because the walkway leads straight to the end of the north wall, it is evident that the wall was terminated so that it would not inhibit passage to and from Structure 195-3NE while the western half of Mound 195 was being built up (Figs. 9.4a and b). Also, the adobe retaining walls used to contain the fill in the northwest section of Mound 195 were purposefully terminated about 1.6 m directly west of the walkway, which prevented filling operations from obstructing passage to and from Structure 195-3NE along the walkway.



9.3. ***The walkway along the west side of Structure 195-3NE***

CONSTRUCTION OF THE WESTERN HALF OF MOUND 195

While Structure 195-3NE remained occupied, filling operations were in progress to build the western half of Mound 195. The filling operations



9.4. Purposeful termination of the north wall of Mound 195 and fill of hemispherical adobes in Mounds 195 and 190

were carried out in two stages. First, the entire western half of Mound 195 was elevated between 2.5 m and 3.5 m with construction fill—the northern sector being raised to a level of 2.5 m and the southern sector to 3.5 m. Most of the material used as fill in these lower levels is ash mixed with earth and was probably obtained from refuse deposits around salt production areas (Fig. 9.2).

The second stage of filling operations involved the selection of an area 11 m by 16 m in the northwest sector of Mound 195. This area was to be the locus of the construction of Structure 195-2. The eastern limits of the area were marked off by the construction of a sturdy adobe retaining wall. West of this wall a fill of hemispherical adobes was placed, providing a solid containment for the area being filled (Fig. 9.4c). A similar fill of hemispherical adobes underlies Structure 190-1, the last house built atop Mound 190, indicating that it was built around the same time (Fig. 9.4d). A 1.4 m layer of fill was then placed, elevating Mound 195 to a level of nearly 4 m in this area. Most of the material used as fill in this area was a reddish-brown gravelly soil that occurs as a natural geological formation underlying the topsoil at Lambityeco.

It is apparent that this reddish-brown gravel came from excavations along the western front of Mound 195—excavations undertaken in conjunction with the construction of a large plaza (System 195) attached to the west side of Mound 195. Because the natural terrain slopes downward from north to south in the area where the plaza was laid out, it was necessary to level the area prior to construction. This was done not by adding fill to the south but by excavation in the north to bring this section down to the desired level. The earth removed from this excavation was a reddish-brown gravel.

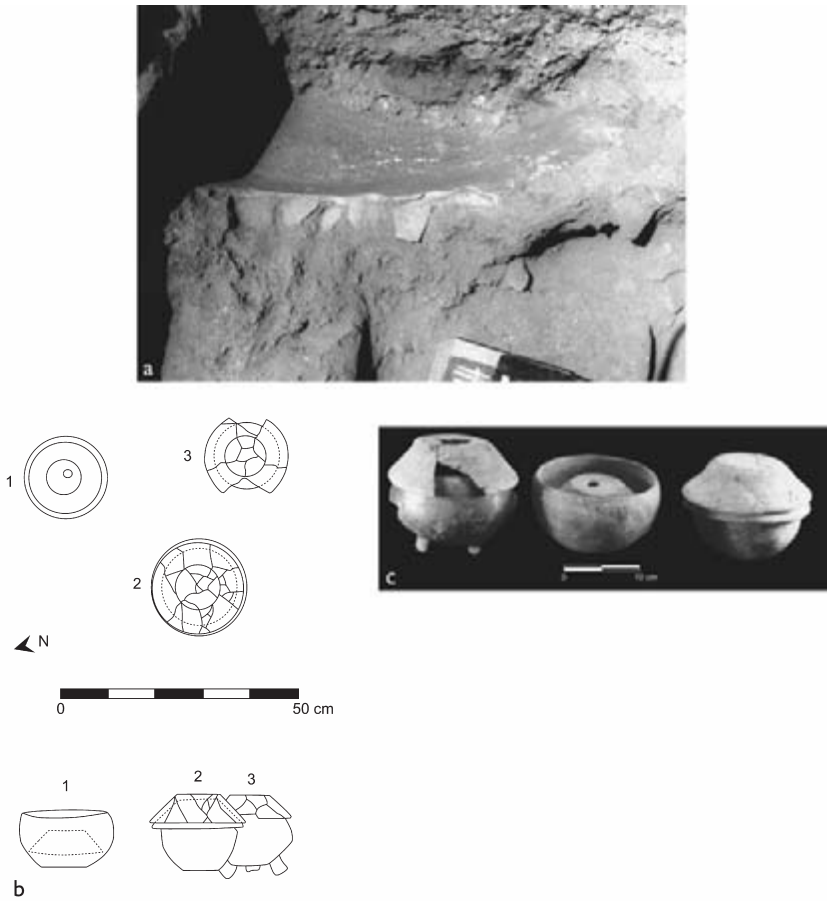
The fill within the western half of Mound 195 was faced on its north, south, and west sides by large taludes made of faced stone. Its north wall was about 19 m long and 2.5 m high (Fig. 9.5a). As noted above, it was purposefully terminated in the east to allow access to Structure 195-3NE. The south wall of Mound 195 was also about 19 m long and 2.5 m high (Fig. 9.5b). The west wall, or front, of Mound 195 was about 33 m long and nearly 3 m high (Fig. 9.5c). It cornered with the north and south walls and had a 1.37 m wide raised walkway along its base, which fronted on the large plaza of System 195. At the center of the west wall was a 9 m wide stairway, consisting of nine steps, which led from the plaza below to the top of Mound 195.

The fill in the northwest sector atop which Structure 195-2 was to be constructed left a platform elevated above the level of the surrounding fill in the southwestern half of Mound 195. Directly east of this elevated area in front of Structure 195-3NE the fill remained exposed for some time, as indicated by the presence of a weathered surface identified in excavations in this area. The fill in the southern sector of the western half of Mound 195 was about 40 to 50 cm below the level of the elevated northwest sector. Excavation in this southwestern sector revealed a cluster of features interpreted as a work area related to the construction of Structure 195-2 and later Structure 195-1.

9.5. ***North, south, and west walls of Mound 195***

These features include a plaster-lined basin, a kiln, and a collection of rim sherds placed on edge and arranged in a series of concentric circles (Fig. 9.2). The basin and kiln were only partly uncovered because the Structure 195-1 west room with its panel of step frets partially covered them. The kiln, made of adobes, was circular in form and measured about 1 m in diameter. It probably functioned to produce lime for plaster. The plaster basin was also circular and measured about 1.1 m in diameter (Fig. 9.6a). It probably served as a deposit for water used to mix plaster. The circular area of rim sherds measured about 80 cm in diameter although only its southwestern section still retained rim sherds in situ. The rim sherds were probably selected and arranged by masons' helpers and used by the masons in the construction of Structure 195-2 and, later, Structure 195-1. This work area atop the southwestern sector of Mound 195, then, was probably established preparatory to the construction of Structure 195-2 and probably remained in use until the later Structure 195-1 was nearly complete.[3]

Two radiocarbon samples were obtained from within the fill beneath the level of Structure 195-2. Neither sample was sealed by Structure 195-2 construction (Fig. 9.2). One sample consisted of wood charcoal gathered within the fill. This sample yielded a calibrated radiocarbon date of 805 CE. The other sample, also wood charcoal, was gathered in direct association with an "offering" that had been placed in the fill (Paddock, Mogor,



9.6. ***Plaster basin in the work area and vessels from the "centerline offering"***

and Lind 1968:23). It rendered a calibrated radiocarbon date of 830 CE. These dates indicate that the fill was probably placed sometime between ca. 800 and 830 CE and that Structure 195-2 was built shortly thereafter.

The "offering" with which the calibrated radiocarbon date of 830 CE was associated occurred in construction fill near the east-west centerline of Mound 195. It includes seven vessels arranged in three groups (Fig. 9.6c; Table 9.1). The first group (#1 in Fig. 9.6b) was composed of a large upright hemispherical bowl with a small G-35 bowl inverted and placed inside it. The G-35 bowl had a small hole drilled through its base. The area immediately surrounding these two vessels was replete with charcoal, suggesting that a small ritual fire was made in association with the "offering" (Paddock, Mogor, and Lind 1968:23). The calibrated radiocarbon date of

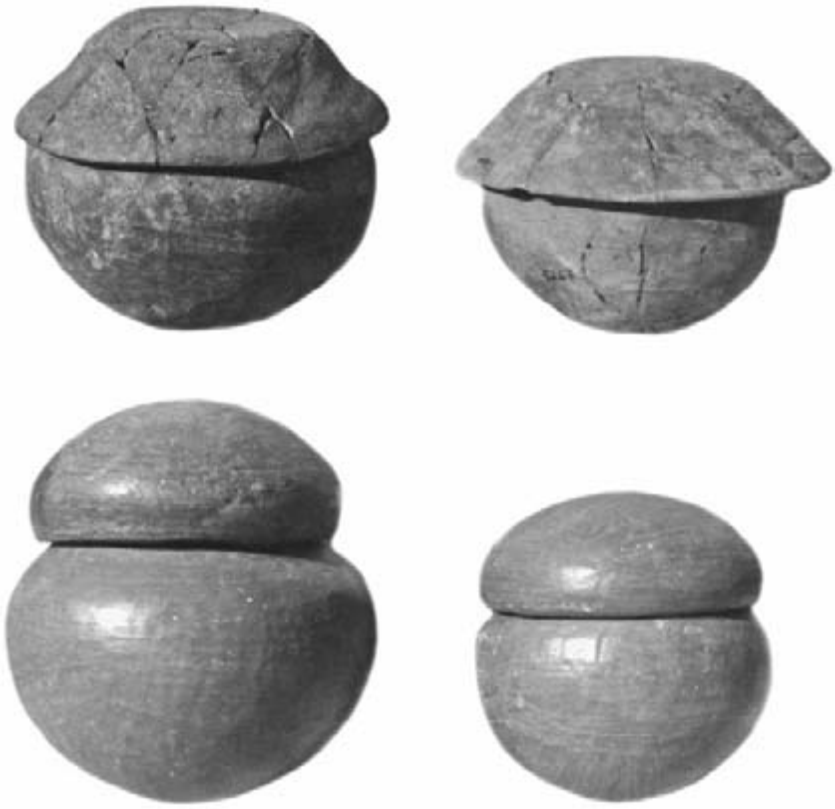
TABLE 9.1. Objects from the "centerline offering"

Field No.	*Description*[1]
5263	Hemispherical bowl. Dark gray. Dia. 18 cm, ht. 10.5 cm. Complete and intact. Contained #22,715 G-35 bowl within it covering two small fragments of bone from a large mammal (deer?). Also contained charcoal in interior above base of G-35 bowl. Charcoal yielded a calibrated radiocarbon date of 830 CE. See #1 in Figure 9.6b.
22,715	Small G-35 bowl. Gray. Dia. 16 cm, ht. 4 cm. Base design: None. Complete and intact. Inverted inside #5263 covering bone fragments (deer?). Manifests a circular hole 2 cm in diameter drilled through its base. See #1 in Figure 9.6b.
5267	Hemispherical bowl. Gray. Dia. 15 cm, ht. 9.5 cm. Broken but complete. Contains traces of a lime-like residue, perhaps from some liquid. Covered by two bowls. See #2 in Figure 9.6b.
5266	Small G-35 bowl. Gray. Dia. 20 cm, ht. 6 cm. Base design: None. Broken but complete. Inverted directly on top of #5267. See #2 in Figure 9.6b.
5265	Small K-14 bowl. Dark brown. Dia. 20 cm, ht. 5 cm. Base design: A. Broken but complete. Inverted on top of #5266. See #2 in Figure 9.6b.
5271	Tripod bowl. Burnished black. Dia. 16 cm, ht. 17cm. Broken and incomplete. Covered by #5270. See #3 in Fig. 9.6b.
5270	Small G-35 bowl. Dark gray. Dia. 19 cm, ht. 5 cm. Base design: None. Inverted directly on top of #5271. See #3 in Figure 9.6b.

Note:
1. For base designs see Figure 7.14.

830 CE came from charcoal gathered from within the large hemispherical bowl and above the base of the G-35 bowl inverted within it. The second group of vessels (#2 in Fig. 9.6b) included a small upright hemispherical bowl with two small inverted bowls, one a K-14 and the other a G-35, covering it. The third group (#3 in Fig. 9.6b) consisted of an upright burnished black tripod bowl with a small inverted G-35 bowl covering it. Caso, Bernal, and Acosta (1967:406, 411, fig. 341b) illustrate similar Xoo phase burnished black tripod bowls from Monte Albán.

Although referred to as the "centerline offering," which implies a ritual or dedicatory cache placed within Mound 195, an alternate interpretation is possible. The "offering" may correspond to the ritual interment of umbilical cords from babies born to the Structure 195-2 household. Parsons (1936:76), writing of Mitla seventy years ago, noted that Mitleños place the umbilical cord from a newly born baby in a small jar covered by a bowl and bury it under the house floor. In 1980, Lind found upon inquiry that the practice still occurred in Mitla and Tlacolula, where the bowls are covered and buried beneath the patio of the house.[4] He requested that



9.7. Ancient and modern vessels for umbilical cords

Alejandro Aguilar, a Tlacolula Zapotec, purchase the jars and bowls used in 1980 from the Tlacolula market and was struck by their similarity to the Lambityeco examples of more than a millennium ago (Fig. 9.7). The "offering" was in fill 1 m below, but not sealed by, the Structure 195-2 patio. It is entirely possible that the "offering" was placed beneath the patio floor, but because the patio floor was not preserved in its southern section this is uncertain.

STRUCTURE 195-2

The Structure 195-2 house was built to provide temporary quarters for the new noble household so that they could abandon Structure 195-3NE, thereby permitting filling operations to begin in the eastern half of Mound 195, which would lead to the completion of Mound 195 and the Structure

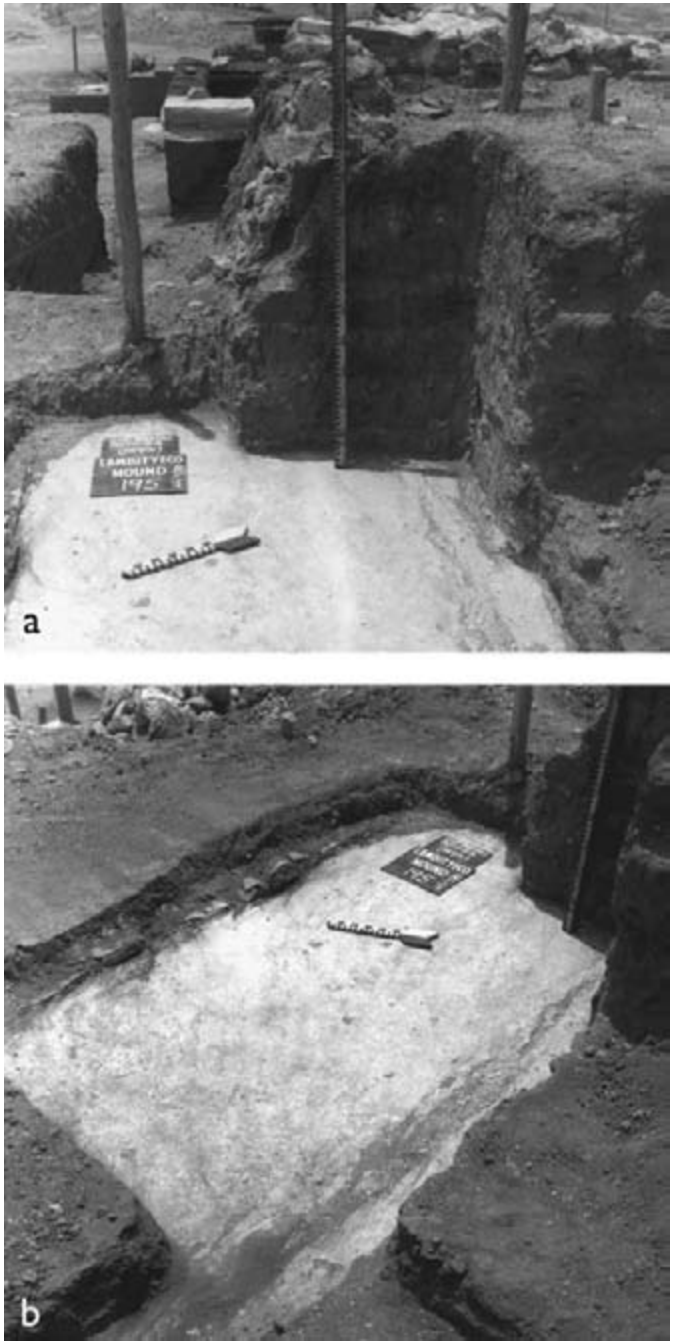
195-1 residence they were ultimately to occupy. The Structure 195-2 house occupied only the northern part of the western half of Mound 195 (Fig. 9.2). The southern part was left free so that workmen could continue their filling operations and initiate the construction of Structure 195-1 unencumbered.

Remnants of white plaster floors corresponding to a patio with a room north of it and a walkway along the north side of the room constitute the preserved portions of the Structure 195-2 house. There was no evidence for a room on the south side of the patio, although it might have been demolished, and there was no space for an additional room on the west side. It is possible that two additional rooms existed, one on the east side and the other at the northeast corner of the patio. However, it was not possible to excavate this area because of later construction that covered it (Fig. 9.8a). Therefore, the preserved remains of the Structure 195-2 house consisted of at least a single room raised above a patio on its south side and with a narrow walkway on its north side.

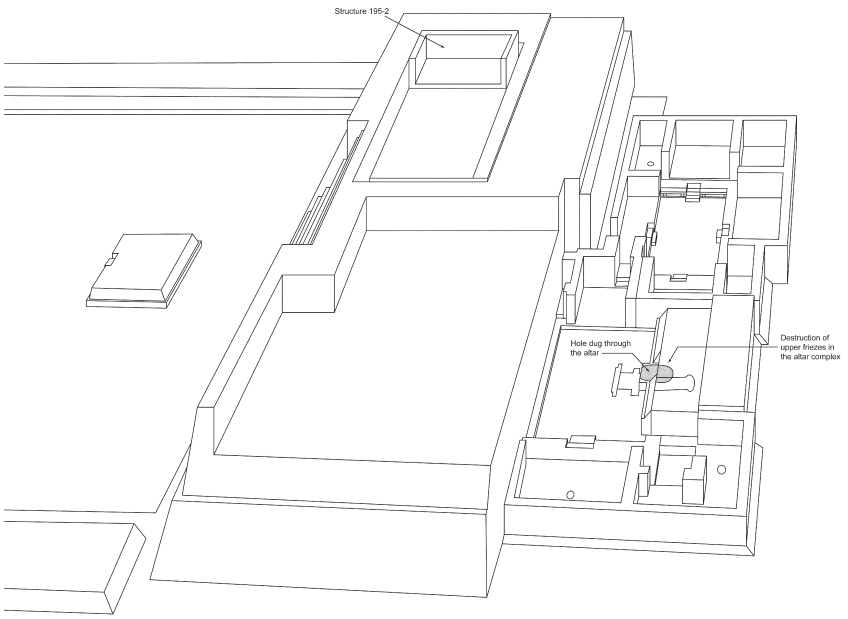
Most of the northern edge of the patio and sections of its eastern and western edges were preserved intact. From these remains it was possible to determine that the patio was rectangular, measuring 7 m east-west and at least 8.4 m north-south, although its southern terminus was not preserved. Much of the 14 cm high curb along its northern edge was preserved intact. Instead of being made of stone, the curb was made of rim sherds placed horizontally one on top of another with their regular rim edges forming the facing of the curb (Fig. 9.8b).

Only fragmentary sections of the room and the walkway north of it were preserved. The room, located 14 cm above the level of the patio, probably ran the length of the north side of the patio, making it 7 m long, east-west; it was probably 3 m wide, north-south. The walkway north of the room was 13 cm below the level of the room floor. It probably extended the length of the room, making it 7 m long, east-west, and it may have measured 1.1 m wide. It also seems likely that the walkway descended a step and turned south to run along the western edge of the room and patio to communicate with the stairway of Mound 195 (Fig. 9.9).

Following the abandonment of Structure 195-3NE and the subsequent occupation of Structure 195-2, the new noble household's temporary quarters atop Mound 195, construction continued to complete Structure 195-1, which was to be their permanent residence. The abandonment of Structure 195-3 permitted filling operations to begin in the eastern half of Mound 195 so that this half of the mound could be completed and the Structure 195-1 residence built atop it. Adobe retaining walls were constructed along the north side of Structure 195-3NE and along the east side of Mound 195



9.8. ***The Structure 195–2 patio floor***



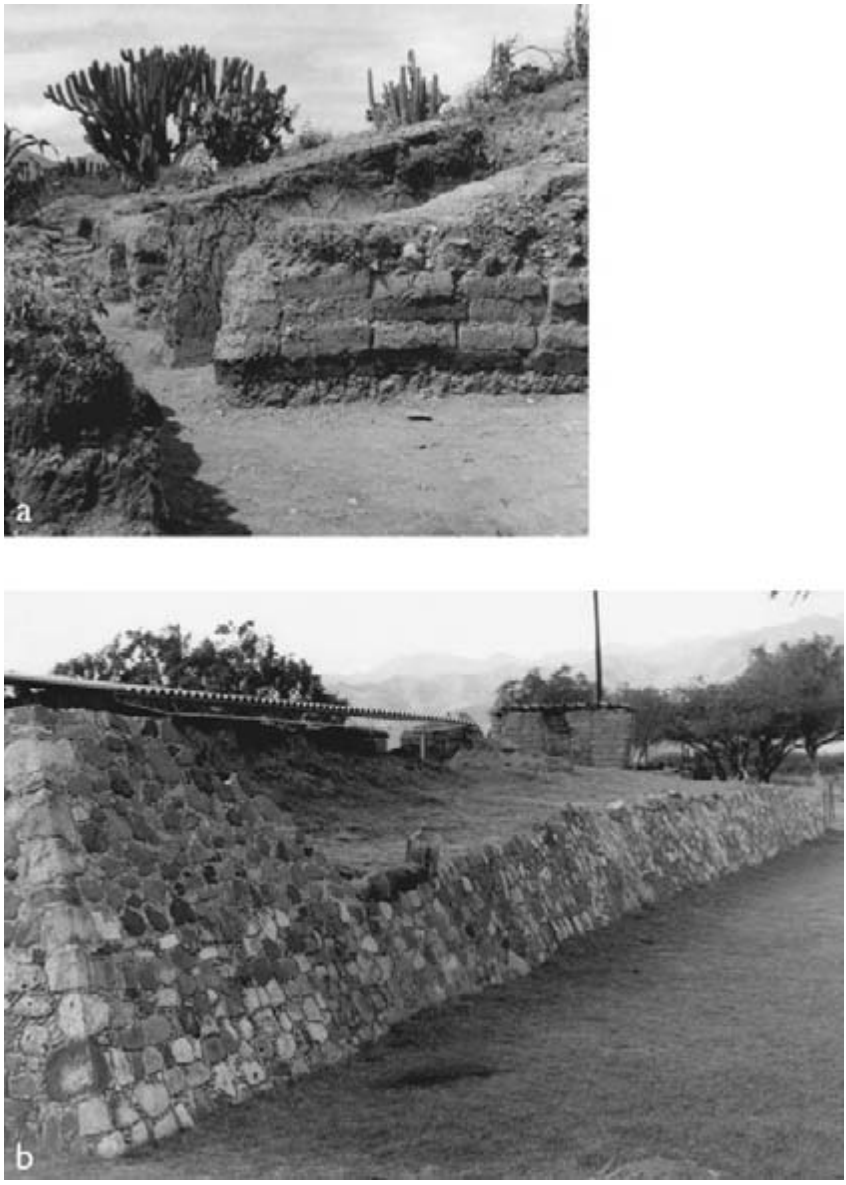
9.9. Isometric reconstruction of Structure 195–2

Sub so that these areas could be filled (Fig. 9.10a). A stone talud was erected along the east side to complete the construction of the walls around Mound 195 (Fig. 9.10b).

Some of the material composing the fill was a reddish-brown gravel that was most likely obtained from excavations to level the plaza. A calibrated radiocarbon date of 825 CE was obtained on wood charcoal gathered from the fill in the southeast corner of the mound. The charcoal was relatively high up in the construction fill and occurred in the "newly" constructed area outside the limits of the earlier east wall of Mound 195 Sub but within the limits of the "newly" constructed east wall of Mound 195. Therefore, the charcoal was placed in the mound when filling operations were nearing completion. The Structure 195-1 residence was probably built shortly after its placement, that is, around 830 CE.

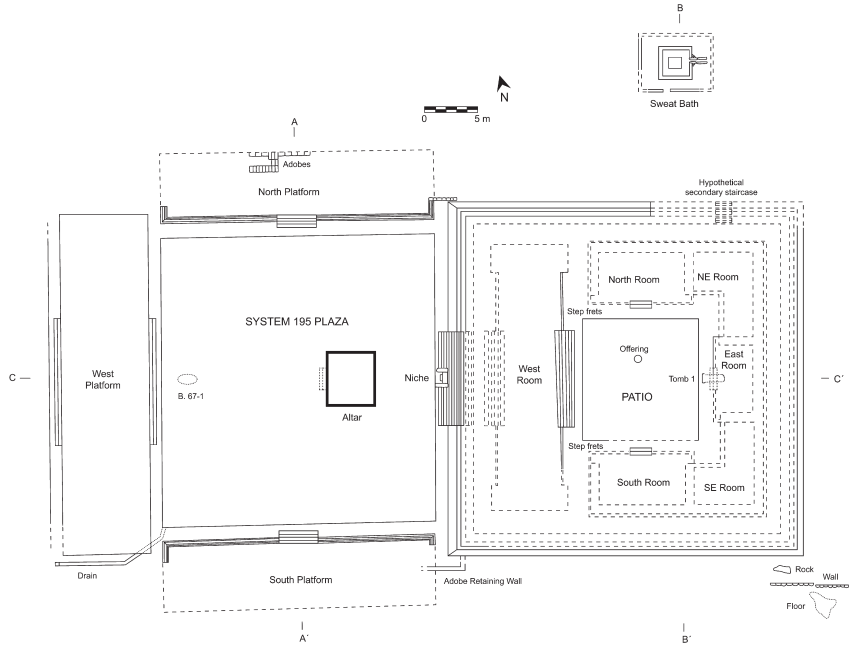
STRUCTURE 195-1

Structure 195-1, the final structure occupied by the noble household, was a large governmental building (PPA) that included the private residential quarters built atop Mound 195 and System 195—the large plaza with its surrounding platforms attached to the west side of Mound 195 (Figs. 9.11



9.10. ***Adobe retaining walls and the east wall of Mound 195***

and 9.12). System 195 was the public part of the building. The private residential quarters of the noble household, located 6 m above the plaza floor of System 195 atop the two-tiered pyramidal platform of Mound 195, were clearly set apart from the public area of the building.

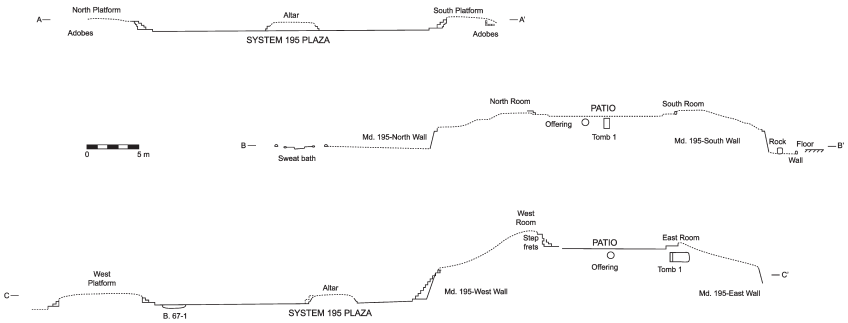


9.11. ***Plan of Structure 195-1***

THE STRUCTURE 195-1 RESIDENCE

The Structure 195-1 residence was built atop Mound 195 in two stages. First, a large patio was laid out near the center of Mound 195, east of the Structure 195-2 residence, and rooms were built on the north, east, and south sides of the patio. These rooms served as the "new" residential quarters for the occupants of Structure 195-2. Once they were completed, Structure 195-2 was abandoned and the second stage of construction began. The second stage involved the demolition of Structure 195-2 and the construction of a large raised room or hall along the west side of the Structure 195-1 patio.

Although sections of its plaster floor were broken up, the Structure 195-1 patio was virtually intact and its limits were well-defined in excavations (Fig. 9.13a). The large patio was nearly square, measuring 11.36 m, north-south, and 10.7 m, east-west. At over 121 m^2 it was much larger than any of the patios of the earlier structures within Mound 195, and most closely parallels in size those of the House of Tomb 105 and the East Palace at Monte Albán (Fig. 9.14). The raised walkways encircling the patio were less well-preserved but sections of them remained intact, permitting deter-



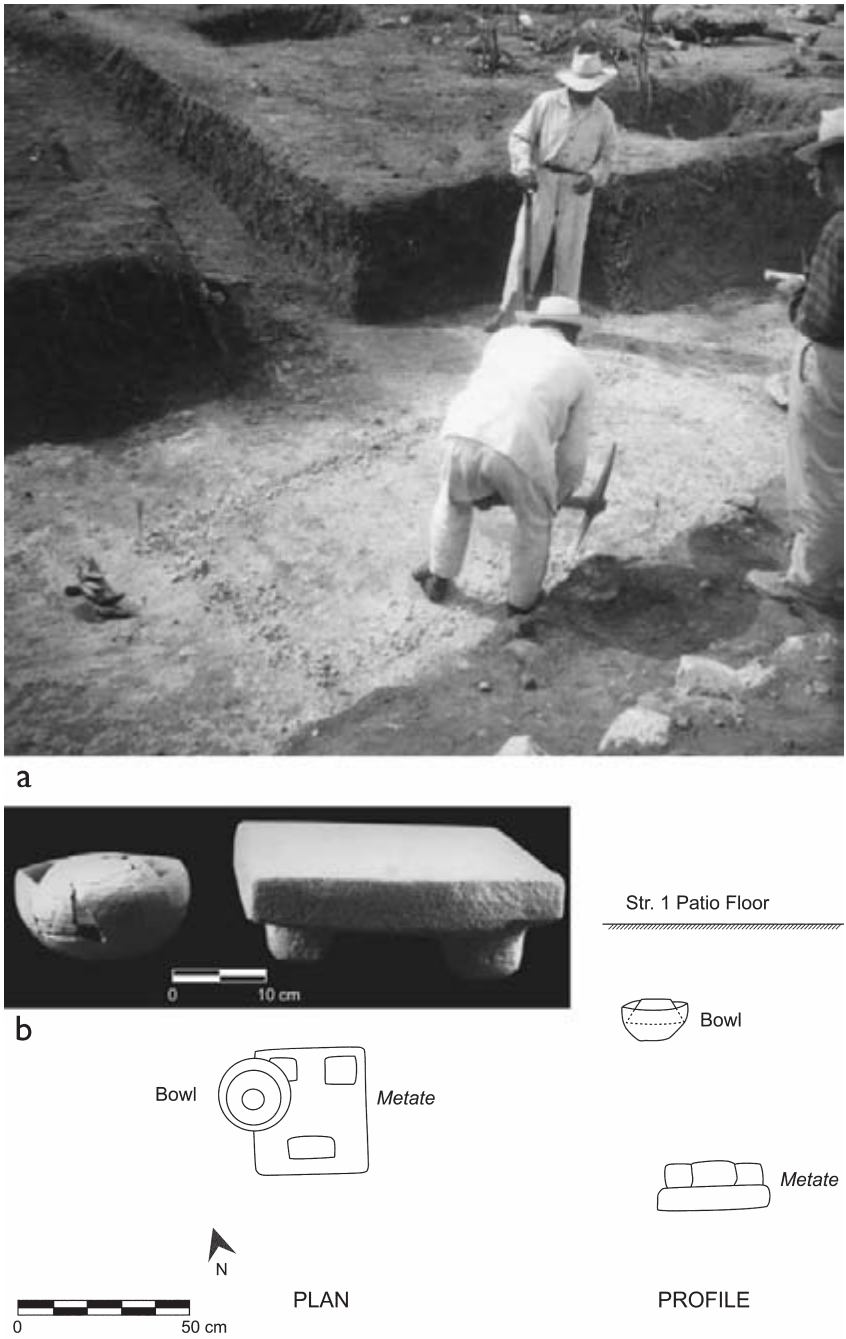
9.12. ***Profiles of Structure 195-1***

mination of their dimensions. All were raised about 20 cm above the level of the patio floor.

During the 1961 excavations, a pit was excavated through the patio floor in front of the center of the stairway of the Structure 195-1 west room or hall and another was dug in the center of the patio to search for possible offerings. None was found. From 1969 to 1970, when excavations were undertaken to remove the Structure 195-1 patio so that the houses of Mound 195 Sub could be explored more fully, at least two separate offerings were found.

One offering consisted of a turkey placed in construction fill beneath the patio floor. Because the virtually undisturbed and articulated skeleton was sealed beneath the intact floor, the turkey must have been sacrificed in a ritual associated with the construction of the Structure 195-1 residence. Parsons (1936:27) notes that "in Lachiguirri, a Zapotec town on the route to the Isthmus, before moving into a new house a chicken is buried in the middle of the floor, with a candle under each wing, that no sickness or evil befall the family." Perhaps this turkey was sacrificed at Lambityeco and placed beneath the patio floor for a similar reason.[5]

The second offering includes three objects. One is a large, flat tripod-supported metate that was placed upside down in the fill 80 cm below the level of the patio floor. The other two objects include an upright hemispherical bowl with a G-35 bowl inverted inside it, which was placed 48 cm above the metate and 32 cm below the patio floor (Fig. 9.13b; Table 9.2). The location of these two separate groups suggests that they constituted a single offering. Despite a vertical separation of 48 cm, the objects were situated horizontally in the same location. Because their horizontal locus was not in the center of the patio nor in front of any stairways, it seems a remarkable coincidence for them to have been placed accidentally one above another. In fact, their location is somewhat enigmatic. At 3.5 m



9.13. ***The Structure 195-1 patio and "patio offering"***

TABLE 9.2. Objects from the Structure 195-1 "patio offering"

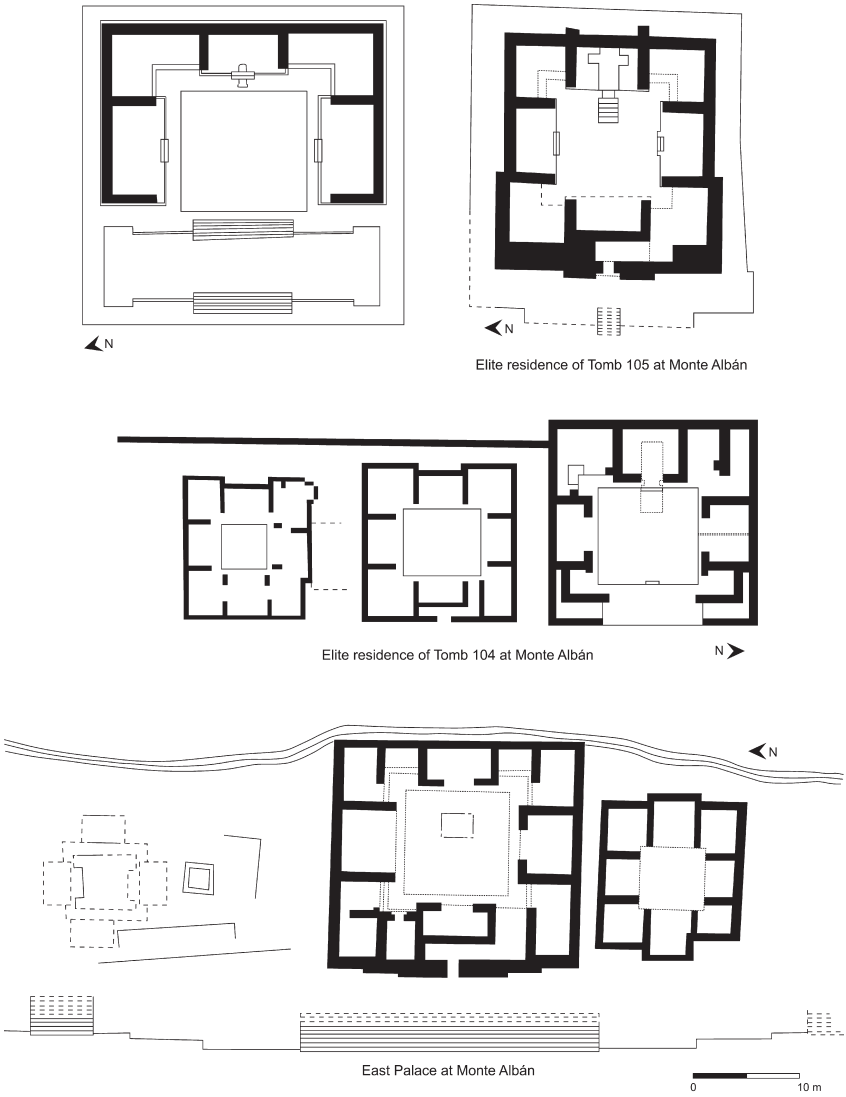
Field No.	*Description*
21,727	Tripod metate. L = 36 cm, W = 31.5 cm, Th = 6 cm. Supports: 8 cm long. Small supports 8 cm × 8 cm. Large support 12 cm × 8 cm. Surface smooth from use.
21,713	Hemispherical bowl. Gray. Dia. 20.5 cm, ht. 11 cm. Broken but complete. Interior coated with lime (not plaster). Exterior base is burnt and oxidized orange. Contained #21,712 within it.
21,712	Small G-35 bowl. Gray (exterior manifests coat of lime). Dia. 19 cm, ht. 6 cm. Base design: None. Complete and intact. Inverted inside #21,713.

south of the northern edge of the patio and 4.7 m east of the western edge, the objects are near (but not on) the north-south centerline but far removed from the east-west centerline. Perhaps the offering was intended to be situated out in the patio more or less in front of the center of the north room. The offering was placed in a hole cut into the construction fill, but whether it had been cut through the patio floor is uncertain.

Although the offering may have been placed in a dedicatory ritual consecrating the Structure 195-1 residence, its skewed location makes this unlikely. Instead, the "offering" may correspond to the ritual interment of an umbilical cord from a baby born to the household, like those mentioned relative to Structure 195-2. If the hemispherical bowl covered by the G-35 bowl was an "umbilical cord offering," then the metate associated with it may indicate that it corresponded to a female baby.

Unlike the patio and walkways encircling it, the rooms around the north, east, and south sides of the patio were eroded away. Although the room floors were certainly raised above the walkways that fronted them, none of these floors was preserved to verify this. However, some segments of the foundations of the room walls were located in excavations. From these intact remains, it was possible to define the arrangement of rooms on the north, east, and south sides and at the northeast and southeast corners around the patio.

Sections of the south and west walls of the north room were preserved (Fig. 9.15a). In both intact segments, two rows of stones occurred one on top of the other. The upper row was inset 20 cm behind the lower row. This suggests that the room was raised considerably above the level of the walkway and must have been reached by a stairway. Confirmation of this comes from a rectangular break in the plaster floor of the walkway that fronted the room. This again makes the Structure 195-1 house very similar to the East Palace and House of Tomb 105 at Monte Albán, which have their rooms raised above their patios and accessed by stairways (Fig. 9.14).



9.14. ***The Structure 195-1 elite residence and Monte Albán elite houses***

The west wall of the north room was situated about 45 cm in from (east of) the western edge of the patio. Assuming that the room was centered along the north side of the patio, it would have measured about 9.8 m long from exterior room wall in the west to exterior room wall in the east. Its width, north-south, was indeterminate, although it was probably at least 3 m wide. The walkway that fronted the north room was 1.3 m wide, north-south.

9.15. ***Structure 195–1 rooms***

The northwest corner of the wall of the east room, including a 3 m long section of its western face, was also preserved (Fig. 9.15b). Again, assuming that the room was centered along the east side of the patio, it would have measured 8.2 m long from exterior room wall in the north to exterior room wall in the south. Its width, east-west, was indeterminate, although it was probably at least 3 m wide. The walkway that fronted the east room was 1.51 m wide, east-west. The east room was built above Tomb 1 and served as the ancestral shrine.

Only a single stone along the north wall of the south room was preserved. This stone, however, demonstrated that the walkway that fronted

the south room was 1.1 m wide, north-south. Based on the north room, it appears that the south room was centered on the patio and measured 9.8 m long, east-west. This, of course, is based on the assumption that the west wall of the south room, like that of the north room, was situated 45 cm east of the western edge of the patio. Furthermore, it is based on the assumption that the north and south rooms were centered on the patio and that, therefore, their east walls were also situated 45 cm in (west of) the eastern edge of the patio. Confirmation of this assumption comes from a preserved segment of the north wall of the southeast corner room—a room adjacent to the east side of the south room. This preserved segment had its western terminus situated 45 cm in from (west of) the eastern edge of the patio—a point where the east wall of the south room must have been situated before its destruction.

The north wall of the southeast corner room was preserved for more than a l m stretch, indicating that it was a step above the walkway. The room was inset 40 cm behind (south of) the front wall of the south room, leaving a sunken area at the level of the walkway in front of it. The corner room above the sunken area was probably L-shaped with south and east wings that may have measured 2 m by 3 m each. Like the southeast corner room, the northeast corner room probably had its front walls inset 40 cm behind the walls of the rooms that flanked it. Although no segments of its walls were preserved, the plaster floor of the walkway extends into the inset sunken area in front of where the walls would have been, demonstrating that the northeast corner room also had a sunken area at the level of the walkway in front of it. The northwest corner room was probably a step above the sunken area in front of it and was most likely L-shaped with wings in the north and east that may have measured about 2 m by 3 m each. Very similar inset L-shaped corner rooms above a sunken area occur in the East Palace and the Houses of Tombs 104 and 105 at Monte Albán (compare Figs. 9.11 and 9.14).

When the residential rooms around the north, northeast, south, and southeast sides of the patio and the room on the east side of the patio were finished, the noble household who had been occupying Structure 195-2 was able to abandon it and occupy their new Structure 195-1 residence. Once Structure 195-2 was abandoned, it was buried beneath a platform that formed the base for a large hall built along the west side of the Structure 195-1 patio. The platform was made of a solid fill of gray-black adobes placed over the Structure 195-2 patio and rose to a height of at least 1.5 m above the level of the Structure 195-1 patio floor (Fig. 9.8a). Any floor that might have occurred in the west room atop the platform had long since been destroyed by erosion. Therefore, its original height was indeterminate.

The length and width of the platform and west room or hall atop it are difficult to determine because the walls along its north, south, and west sides have been eroded away. Only on its east side, where it fronted on the Structure 195-1 patio, were the walls and a stairway of the platform preserved (Fig. 9.15c). The stairway was located in the center of the platform and consisted of three steps that descended 1.3 m from the top of the platform to the walkway that fronted it. The stairway was preserved its full 9 m width and was centered along the west side of the patio. The walkway was 75 cm wide in front of the stairway and between 1.8 m and 2 m wide in front of the northern and southern extensions of the walls on either side of the stairway.

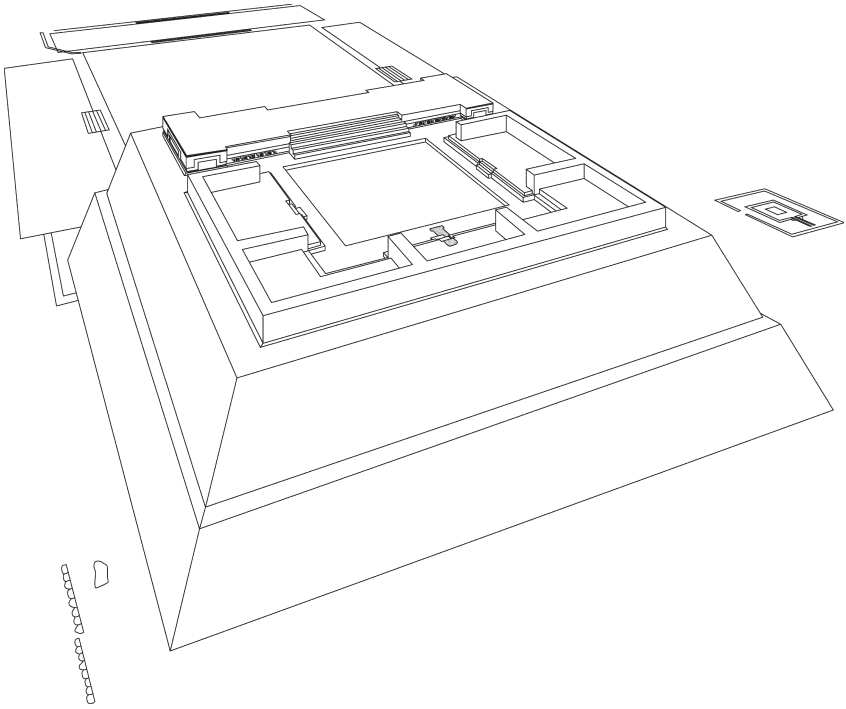
The walls flanking the stairway were preserved to a height of 1 m above the level of the west walkway, but their original height, like that of the platform, was indeterminate because the tops of the walls were eroded (Fig. 9.16). Each wall had a panel 35 cm high set within it. The wall north of the stairway extended northward for 5.45 m before terminating in a jut to the east, marking the end of the panel within it. The wall was eroded away north of the jut. However, if the panel was framed by a double cornice at its northern terminus, it seems likely that this wall was about 6 m long. The wall on the south side of the stairway extended 4 m before ending, having been eroded away. However, it too was probably 6 m long. This indicates that the west hall atop the platform was probably 21 m long in its north-south dimensions.

The panels in the walls on either side of the stairway were decorated with step frets made of stone and rim sherds covered with plaster (Figs. 9.16 and 9.17). The step frets are in the form of *xicalcoliuhquis*, a design consisting of step frets terminating in rectilinear hooks and glossed in *Codex Magliabechiano* as *jícara tuerta* or "twisted gourd" (Boone 1983, 2:5v, 6r). The late Howard Leigh (personal communication to Lind, 1980) interpreted this type of design as a symbol of clouds and rain.

TOMB 1

Tomb 1 was built into Structure 195-1 from its inception. It was located beneath the east walkway and east room or ancestral shrine. The offering in front of the tomb door was sealed beneath the intact construction of the patio, whose floor was neither cut nor manifested any evidence of having been repaired or resurfaced (Fig. 9.18a). Likewise, the walkway in front of the east room had its plaster floor intact above the door and front part of the tomb (Fig. 9.18b). However, the floor of the east room had been destroyed by erosion so that there is no evidence that it sealed the back part.

9.16. ***Structure 195–1 west room or hall with step frets***



9.17. ***Isometric view of the Structure 195–1 elite residence***

9.18. ***Tomb 1***

Tomb 1 consisted of a single chamber oriented along an east-west axis with its door in the west. It was 1.95 m long, east-west, 62 cm wide, north-south, and measured 90 cm high from its dirt floor to its flat stone roof. The north and south walls were made of stone, but the east (back) "wall" consisted of the coarse, compact reddish-brown gravel of the construction fill into which the tomb had been cut. The tomb walls all lacked niches. All but one of the flat roof stones had been removed or had collapsed into the tomb following the abandonment of Structure 195-1. The single intact stone was the westernmost or first roof stone and also served as a lintel above the door (Fig. 9.18c). Two superimposed rows of small flat stones were placed on top of this "lintel" to form a rudimentary façade. The doorway was 75 cm high and 45 cm wide. It was framed by stone door

jambs and had a stone threshold at its base. A large well-cut rectangular stone slab formed the door (Fig. 9.18d).

SKELETAL REMAINS

Evidently, most of the remains buried in the tomb were removed when Structure 195-1 was abandoned, much as the bones from Tomb 4 had been removed when the house was abandoned. It appears that the roof was removed and the bones taken out. Only a handful of human bones were located along the north wall (Fig. 9.19). Most of these bones were too fragmentary to permit identification. Among them were a fragment of an adult human mandible and possibly a fragment of a metacarpal (Victoria Bach, personal communication to Lind, 1970); however, Urcid (1983:59–60) reports that although presumably human, the handful of bones are too eroded and amorphous to permit identification. Because the tomb was sealed by Structure 195-1 construction, it appears that at least one of the individuals who headed the Structure 195-2 household died and was buried in the tomb before having his or her bones removed following the abandonment of Structure 195-1.

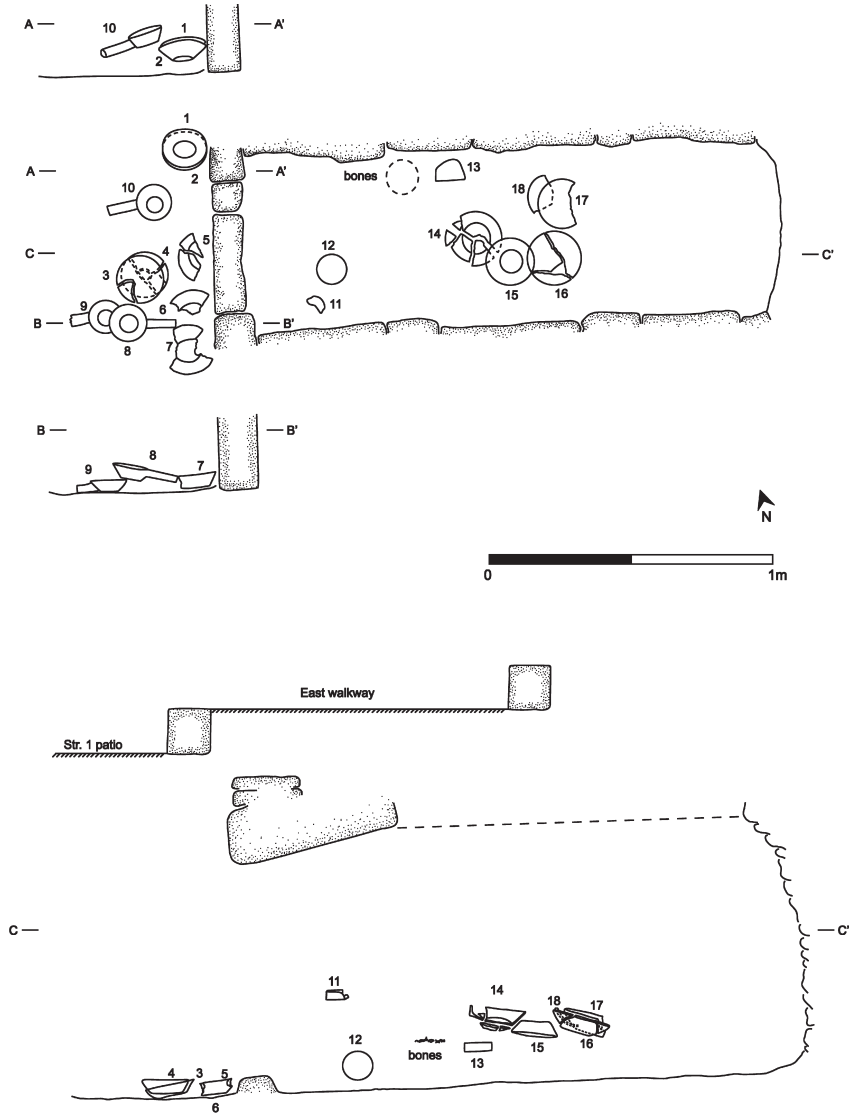
OFFERINGS

The Tomb 1 offering includes eighteen objects located in two separate spatial contexts. One group of eleven objects was found in front of the door and formed the door offering. The second group of seven objects was within the tomb and formed the main offering (Fig. 9.19; Table 9.3).

Door Offering

The door offering includes seven G-35 bowls and three ladle censers (Fig. 9.20a). All the G-35 bowls were in a more or less upright position and two groups of them included vessels placed one inside another. The group of two in front of the north door jamb (#1 and #2 in Fig. 9.19 and Table 9.3) were both complete and intact. The upper one (#1) showed evidence of burning on its interior and contained unidentified carbonized remains. The G-35 bowl (#2) beneath it showed light traces of a lime-like coating, suggesting that it had held some liquid.

The remaining five G-35 bowls were all broken and incomplete (Fig. 9.20b). One group of two was located in front of the center of the door and included one G-35 bowl (#3) inside another (#4). Another G-35 bowl



9.19. ***Plan and profiles of Tomb 1 contents***

(#7), found in front of the south door jamb, manifested light traces of lime, as if it had once held some liquid. It also contained ash within it, although there was no evidence of anything having been burned inside it; that is, its interior was not burnt. None of the other G-35 bowls manifested macroscopic traces of contents.

TABLE 9.3. Objects from the Tomb 1 offering

No. in Fig. 9.19	*Field No.*	*Description*[1]
1	1618	Door offering. Small G-35 bowl. Gray. Dia. 16.1 cm, ht. 3.5 cm. Base design: None. Complete and intact. Burnt interior. Carbonized content. Inside #1617.
2	1617	Door offering. Small G-35 bowl. Light gray. Dia. 18 cm, ht. 4.5 cm. Base design: B. Complete and intact. Lime coating on interior. Contained #1618 inside.
3	1601	Door offering. Small G-35 bowl. Gray. Dia. 19 cm, ht. 4.5 cm. Base design: A. Broken and incomplete. Inside #1602.
4	1602	Door offering. Small G-35 bowl. Light gray. Dia. 17.4 cm, ht. 4.5cm. Base design: B. Broken and incomplete. Contained #1601 inside.
5	1616	Door offering. Small G-35 cajete. Gray. Dia. 19 cm, ht. 4 cm. Base design: ? Broken, only half complete.
6	1606	Door offering. Small G-3 bowl. Dark gray. Dia. 18 cm, ht. 4.5 cm. Base design: ? Broken, only one-quarter complete.
7	1611	Door offering. Small G-35 bowl. Gray. Dia. 19.2 cm, ht. 5 cm. Base design: None. Broken and incomplete. Light lime coating on interior. Contained ash.
8	1610	Door offering. Ladle censer. Pan: dia. 14.5 cm, ht. 4.5 cm. Handle: L 11 cm, dia. 3.5 cm. Complete and intact. Contained carbon.
9	1609	Door offering. Ladle censer. Pan: dia. 12.5 cm, ht. 4.5 cm. Handle: L ?, dia. 3.5 cm. Broken and incomplete.
10	1600	Door offering. Ladle censer. Pan: dia. 12 cm, ht. 4 cm. Handle: L 10 cm, dia. 3.5 cm. Complete and intact. Contained carbon.
—	1607	Door offering. Olla. Fragments of a large gray olla (may not be part of offering).
11	1592	Tomb chamber. Olla or cántaro. Gray. Dia. 10 cm. Broken and incomplete. Different from #1607 in being a thin gray vessel.
12	1593	Tomb chamber. Large stone sphere. Dia. 13 cm. Shaped from a hard fine-grain rock.
13	1612	Tomb chamber. Fragment of white plaster with a red painted design on it. May have come from tomb wall.
14	1594	Tomb chamber. Small G-35 bowl. Light gray. Dia. 18.7 cm, ht. 5 cm. Base design: None. Broken but complete. No contents.
15	1595	Tomb chamber. Small G-35 bowl. Gray. Dia. 17.8 cm, ht. 4.5 cm. Base design: B. Broken but complete. No contents.
16	1596	Tomb chamber. Small G-35 bowl. Gray. Dia. 19.5 cm, ht. 5 cm. Base design: None. Broken but complete. Interior burnt. No contents.
17	1597	Tomb chamber. Small G-35 bowl. Dark gray. Dia. 17.8 cm, ht. 4 cm. Base design: A. Broken but complete. Interior burnt. No contents.
18	1598	Tomb chamber. Small G-35 bowl. Gray. Dia. 19 cm, ht. 4.5 cm. Base design: None. Broken and incomplete. No contents.

Note:
1. For bowl base designs see Figure 7.14

9.20. ***The Tomb 1 door offering and interior offering***

Two of the three ladle censers in the door offering were complete and intact (#8 and #10 in Fig. 9.19 and Table 9.3). Both contained carbonized material within them (see #10 in situ in Fig. 9.20a). They were located in front of the north (#10) and south (#8) door jambs, respectively. The third ladle censer (#9) was broken and incomplete (Fig. 9.20c). It was placed in front of the south door jamb. Fragments of a large gray olla were also found in the fill in front of the door. Such fragments are common in fill and therefore it is uncertain whether this vessel was intended as an offering.

Main Offering

The offering within the tomb chamber included five G-35 bowls and a large spherical stone. All five G-35 bowls were located near the center of the tomb (Fig. 9.20d). Four of the five were in more or less upright positions, but one was inverted (#15 in Fig. 9.19). All were broken but all, except one (#18), were complete. Two (#16 and #17) had burnt interiors, suggesting that something was burned within them. However, neither had any macroscopic contents (Fig. 9.20e).

Apart from the G-35 bowls, a large spherical stone was found in the tomb chamber (Fig. 9.20f). The stone was purposefully shaped into a sphere with a diameter of 13 cm. A similar spherical stone was found as an offering in Tomb 8 at Lambityeco and in the fill leading to the entrance of Tomb 5 at Cerro de la Campana, Suchilquitongo. These stone spheres are probably representations of rubber balls for ballgames.

In addition to the spherical stone, the neck of a thin gray narrow-mouth *cántaro* ("spherical canteen") and a fragment of plaster were found in the tomb chamber. Cántaros are used like canteens as containers from which water can be directly consumed. A corncob is used as a "cork" to plug the mouth of the cántaro by present-day Zapotecs. However, the cántaro was only represented by a few sherds and sherds from cántaros are common in fill; therefore, it is uncertain whether this vessel was intended as an offering. Finally, the plaster fragment had an indeterminate design painted on it. It may have been plaster that had decorated the tomb wall, although this is uncertain.

PATTERNS IN THE TOMB 1 OFFERING

Unlike Tombs 3 and 6, Tomb 1 had no lintel offering. In fact, no urns or effigy vessels were present. It is possible that any urns or effigy vessels might have been removed at the time the skeletal remains were retrieved from the tomb.

The Tomb 1 door offering presents much the same pattern as the Tomb 6 and Tomb 3 door offerings. The ubiquitous G-35 bowls were arranged in front and on either side of the door. Perhaps they represented offerings of food. Also present in the door offering were ladle censers, which reflect ritual incense burning, perhaps when opening or closing the tomb door.

The Tomb 1 main offering follows a pattern similar to the offering in the main chamber of Tomb 6. The body was accompanied by an offering of G-35 bowls and little more. However, the Tomb 1 main offering also included the stone sphere. It may have been intended as an offering for a

male noble household head who participated in the ritual ballgame. Unlike Tomb 6, there was no evidence that birds or dogs were sacrificed to accompany the interment. Furthermore, no personal adornments, such as pendants or beads, were found in Tomb 1.

The Tomb 1 offering presents several interpretive problems. As noted above, the door offering was sealed beneath the intact floors of the Structure 195-1 patio and east walkway. However, it contains broken and incomplete objects as well as complete and intact objects. This suggests that the tomb was opened on at least two different occasions before the Structure 195-1 patio, east walkway, and east room floors were laid.

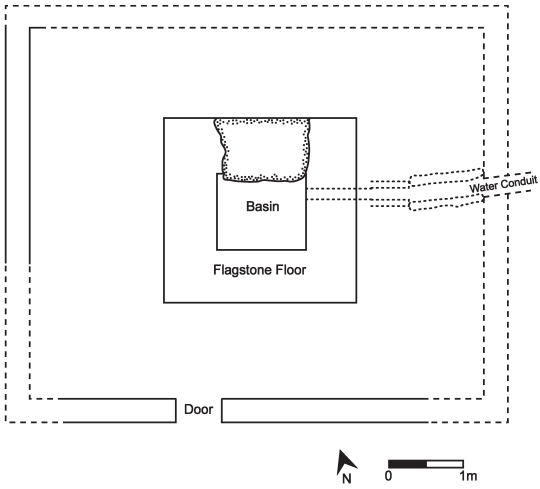
It is obvious that Tomb 1 was built into Structure 195-1 before the patio floor, east walkway, and east room were completed. The first opening may have been to consecrate the tomb. The second opening may have been to place a burial, probably the Structure 195-2 male household head (given the stone representation of a ball). However, this burial would have been placed before the patio, east walkway, and probably east room floor were finished. A third opening of the tomb appears to have taken place by digging through the east room floor and removing the roof to retrieve the skeletal remains of the individual, or perhaps individuals, buried there. This third opening would have corresponded to the abandonment of Structure 195-1. Yet, this probable third opening of the tomb cannot be verified. The floor of the east room had been completely eroded away and therefore it was not possible to demonstrate that the floor had been dug through to access the roof.

SWEATBATH

The third or final phase of construction of the sweatbath 10.3 m north of the north wall of Mound 195 was probably carried out in association with the construction of Structure 195-1 (Fig. 9.21). This phase of construction expanded the size of the sweatbath to 5.55 m north-south and 6.75 m east-west. Evidence for a small doorway, 60 cm wide, occurs in the south wall. It is possible that Mound 195 had a narrow stairway in its north wall, similar to the secondary stairway on the west side of Platform 1 from San José Mogote (Fernández Dávila 1997), that provided easy direct access from the Structure 195-1 residence to the sweatbath and the large residential plot below (Fig. 9.11).

STRUCTURE 195-1: SYSTEM 195

System 195 includes the large plaza with its surrounding platforms attached to the west side of Mound 195 to form Structure 195-1 (Fig. 9.11). Access

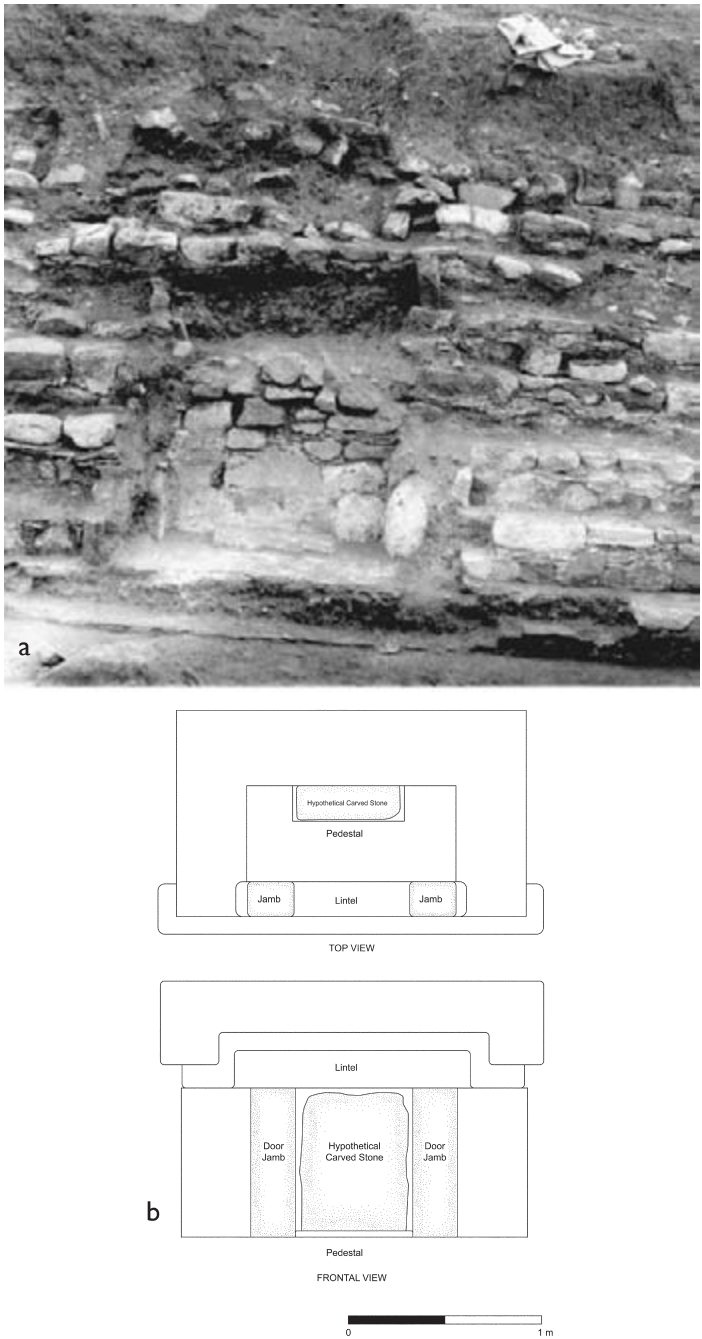


9.21. ***Third phase of construction of the sweatbath north of Mound 195***

to the plaza from the Structure 195-1 residence above was provided by a 9 m wide stairway that descended the west side of Mound 195. The stairway had a niche centrally located at its base (Fig. 9.22a). Its interior measured 1.1 m wide, 70 cm deep, and 80 cm high. In the center at the base of the back wall of the niche was a flat stone forming a pedestal that measured 60 cm long, 19 cm wide, and 5 cm high. The pedestal may have supported a carved stone slab, as depicted in a reconstruction of the niche (Fig. 9.22b). Caso (1932:9–10) reports that these niches at Monte Albán were once small roofed chambers.

As noted above, the natural terrain sloped from north to south in the area where the plaza was built. Therefore, it was necessary to dig into the natural soil to level the area prior to constructing the plaza. Some of the material from this excavation was used as construction fill to raise Mound 195. Additional fill used to construct the platforms along the west and south sides of the plaza was probably also obtained from the leveling operations in the areas adjacent to these platforms. Photos were taken of the plaza before excavations (Fig. 9.23a).

The large plaza of System 195 and the raised walkways encircling it were uncovered virtually intact in excavations (Fig. 9.11). The plaza was nearly square, measuring 27 m north-south and 25.7 m east-west and covering an area of almost 694 m^2. Its entire surface was covered by a white plaster floor laid on top of a cobblestone base. The plaza's surface sloped slightly toward the south. Its northern surface was 26 cm higher than its southern surface. The slope of the open plaza served to divert rainwater to a stone-lined drain in the southwest corner. The drain passed beneath a



9.22. ***Niche in the main stairway of Mound 195 and hypothetical reconstruction***

9.23. ***System 195 before excavation and the plaza drain***

walkway at the juncture of the south and west platforms and emptied outside the southern limits of the west platform (Fig. 9.23b).

The walkways encircling the plaza were also surfaced with white plaster and all measured 1.37 m wide, except for the west one, which was only 1.17 m wide. Unlike the other walkways, the north one sloped from north to south, probably for drainage. Its back (north) part was 18 cm above the level of the plaza floor, whereas its front (south) curb was only 10 cm high. At a height of 36 cm, the south walkway was much higher than the others, probably because it trapped rainwater and diverted it to the drain. The east walkway was raised 18 cm above the level of the plaza floor, whereas the west one was 25 cm high.

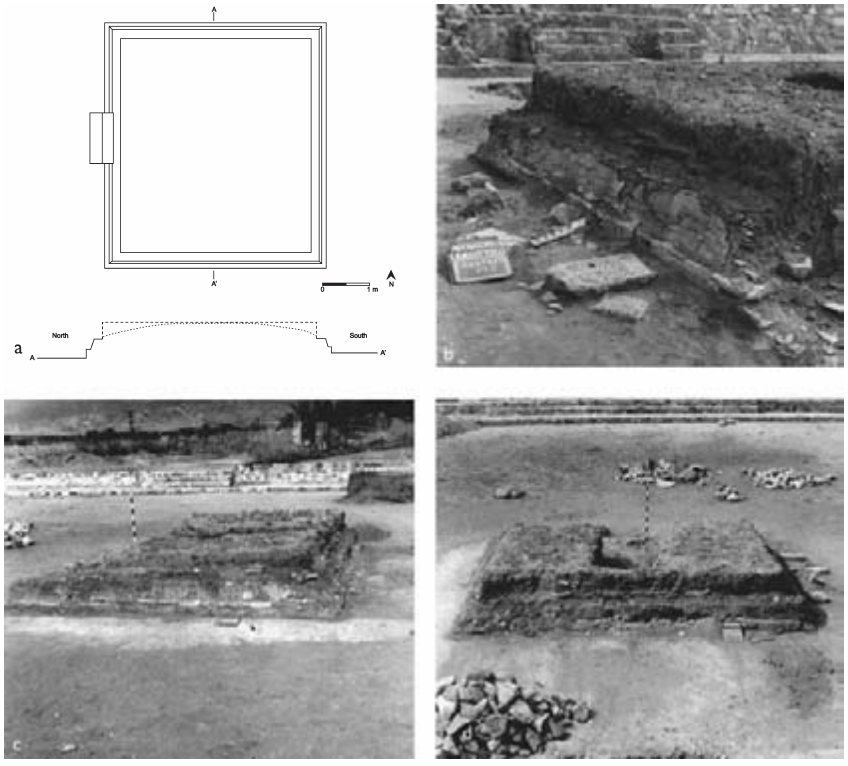
The plaza of System 195 with its encircling walkways is virtually identical in size to the plaza of System IV at Monte Albán (see Fig. 2.4). Like the plaza of this Monte Albán building, the plaza of System 195 has within it a small, nearly square raised platform. At Monte Albán, Caso (1935) called these small raised platforms *adoratorios* or altars.

ALTAR

Unlike virtually all the Monte Albán examples, which are located near the centers of their respective plazas, the altar at Lambityeco is located in the eastern half of the plaza of System 195 (Fig. 9.11). It is, however, centered in front (west) of the stairway of Mound 195 at a distance of 5.47 m from the east walkway of the plaza.

The altar measures 5.18 m north-south and 4.68 m east-west, making it most comparable in size to the altars of Systems M and IV at Monte Albán but much smaller than the altar of the Patio Hundido in the North Platform of Monte Albán (Urcid 2001:342, table 5.5). Any floor or other structure atop it had evidently long since been eroded away, making it impossible to determine its original height. The walls around it were preserved in sections to a height of 46 cm above the plaza floor, although the fill within it rose to a maximum height of 74 cm (Fig. 9.24a).

The taludes, made almost entirely of rim sherds covered by white plaster, rested on outset vertical moldings at the base. The north (Fig. 9.24b) and south (Fig. 9.24c) walls were the best preserved, retaining sections of their white plaster covering. The east wall, facing the stairway of Mound 195, was less well-preserved (Fig. 9.24d). The west wall, except for its foundation, was virtually obliterated. It is quite likely that a centrally placed stairway to reach the top of the altar was built on this side, evincing another difference with several of the altars at Monte Albán, like System M and the Patio Hundido, which have a stairway on each side of the altars.

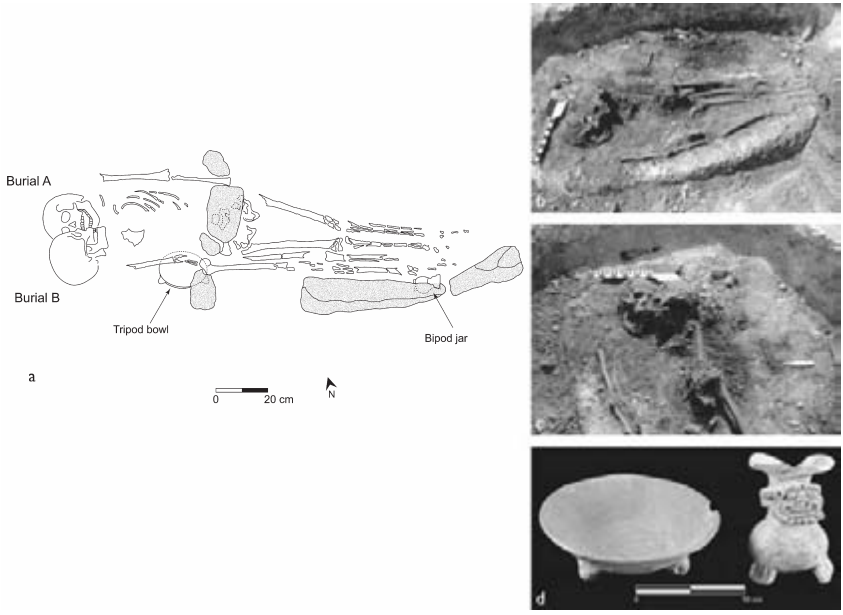


9.24. ***Plan, profile, and views of the altar in System 195***

A large section of the plaza floor between the altar and the stairway of Mound 195 had been patched. Excavations beneath this patched area both in 1961 and in 1968 failed to reveal evidence of any offerings or burials that might have occasioned the repairs to the plaza floor. Therefore, it appears that the repairs were required because of heavy foot traffic in this area at the base of the broad stairway. On the opposite (west) side of the plaza, another equally large section of the plaza floor in front of the broad stairway of the west platform of System 195 had also been repaired. Again, the reason for the repairs is almost certainly heavy foot traffic. However, sealed beneath the patched floor was an unusual double primary burial—Burial 67-1.

BURIAL 67-1

This burial was located directly in front of the center of the broad stairway of the west platform, 1.45 m east of the plaza's west walkway curb (Fig.



9.25. ***Burial 67-1 and accompanying offering***

9.11). It included two primary interments placed in a shallow grave scarcely large enough to hold both bodies. The grave measured 90 cm wide, north-south, and 1.8 m long, east-west, and was some 50 cm beneath the level of the plaza floor. The southern edge of the grave closely paralleled the plaza's east-west centerline.

The skeletons were labeled 67-1A and 67-1B (Fig. 9.25a). Both were extended primaries with their heads to the west and feet to the east. Burial A, an adult female forty to fifty-five years old, had been placed first, resting on her back, and occupied the more northerly part of the grave (Fig. 9.25b). Burial B, an adult male also forty to fifty-five years old, had then been placed next to her. He rested on his left side, facing her, along the southern edge of the grave (Fig. 9.25c).

An offering, consisting of two objects, was located along the back (south) side of Burial B, the male (Fig. 9.25d). One object is a small G-35 bowl with tripod supports (Field No. 5875) and appears to have been wedged on its side with its mouth against his back. The bowl is gray, but oxidized brown on part of one side, and was very well-burnished on the interior and exterior, including its exterior base. No pattern burnished design occurs on its interior base. The supports, 2 cm long and 2.7cm wide, are rounded and hollow and each has a hole in it. The bowl has a rim

diameter of 18 cm and a height (including supports) of 6 cm. It is complete and intact, except for a small chip from its rim, and had no macroscopic evidence of contents.

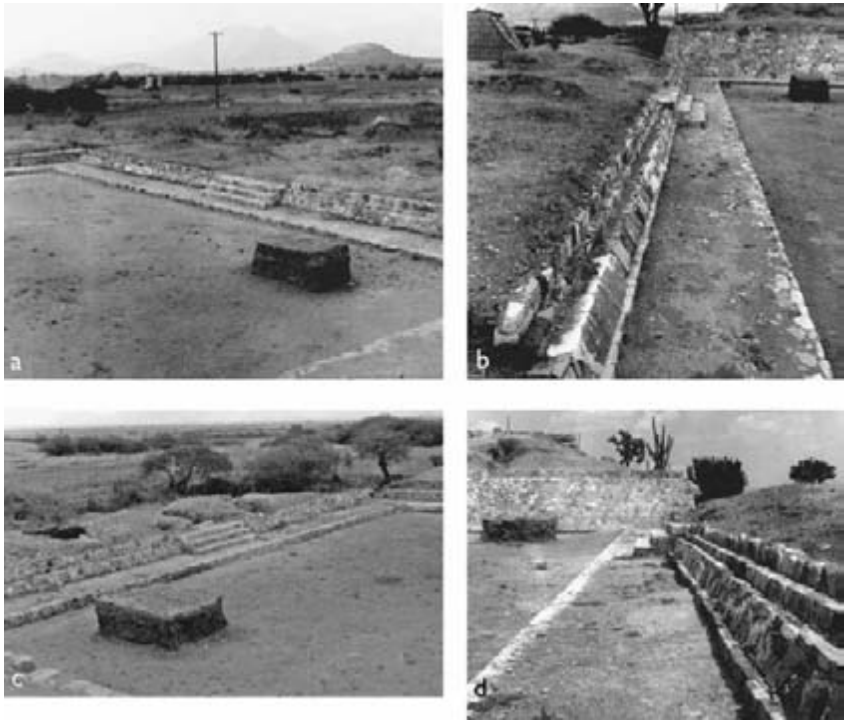
The other object is a small bipod effigy vase (Field No. 5876) that was placed in an upright position near the calves of his legs. It is also gray and very well-burnished on its exterior. The bipod supports are in the form of slabs 2 cm long and 2.5 cm wide with their fronts decorated by four incised, parallel vertical lines, perhaps simulating toes. The neck is decorated with an attached plaque molded in the form of a Glyph C. The plaque is 4 cm wide and 6 cm long (one end is broken). No effigy of Cociyo was attached to the neck. The vase has a rim diameter of 8.5 cm, an orifice diameter of 3.2 cm, and a height of 11.5 cm. The vessel is intact but has sections of its rim above the plaque broken. This is the only offering of a bipod effigy vase in a burial at Lambityeco, making Burial 67-1 special. Both objects were located on the plaza's east-west centerline.

Two separate alignments of stones were found in the grave. One, consisting of two large stones oriented east-west, lined the southern edge of the grave, paralleling the backs of the legs of the male burial. The second alignment consisted of a series of smaller stones oriented north-south that was laid across the pelvic region of Burial A (Fig. 9.25a).

As noted above, the patch in the plaza floor above Burial 67-1 was far too large to have been made to repair any cut made through the floor to place the burials and, in fact, the patch appears to have nothing to do with the burials. It does present a problem, however. Because of the patch, it is uncertain whether Burial 67-1 was cut through the original plaza floor or if it had been placed beneath the plaza before the original floor was laid. Had the burials been dug through the original intact plaster floor of the plaza, one would expect to find fragments of plaster mixed with the earth used to fill the grave. However, the excavators of Burial 67-1 reported no plaster fragments in the earth filling the grave nor were any plaster fragments readily observable in photographs of the excavation. Therefore, it seems likely that the burials were placed before the plaza was surfaced with plaster.

PLATFORMS

The platforms around the plaza duplicate on a large scale the rooms around the patio of the Structure 195-1 residence atop Mound 195. The north and south platforms, like the north and south rooms, are low, whereas the west platform, like the large raised west room, is much larger and higher (Fig. 9.11). No structures or floors were preserved atop the



9.26. ***The north and south platforms of System 195***

platforms and therefore it was not possible to determine how high they originally stood above the level of the plaza floor or if they supported structures atop them.

The south wall of the north platform, which fronted on the plaza, was preserved its entire length of 25.7 m east-west (Fig. 9.26a). It cornered at the east and west ends of the platform and terminated abruptly. However, in excavating the House of Tomb 4, adobes were located marking the northern limits of the north platform, making it 6 m wide and indicating that the platform covered more than 154 m^2 (see Fig. 8.17a). The platform's taludes rested on an outset vertical molding and were topped by double inset vertical moldings (Fig. 9.26b). The walls were preserved to a height of 1 m above the plaza floor, which in this northern area in front of the platform had been dug down 1 m deep into tepetate to level the area for the plaza floor. The top of the north platform was therefore level with the natural terrain. However, the adobes placed over the patio of the House of Tomb 4 indicate that the platform was, or was intended, to be raised to a

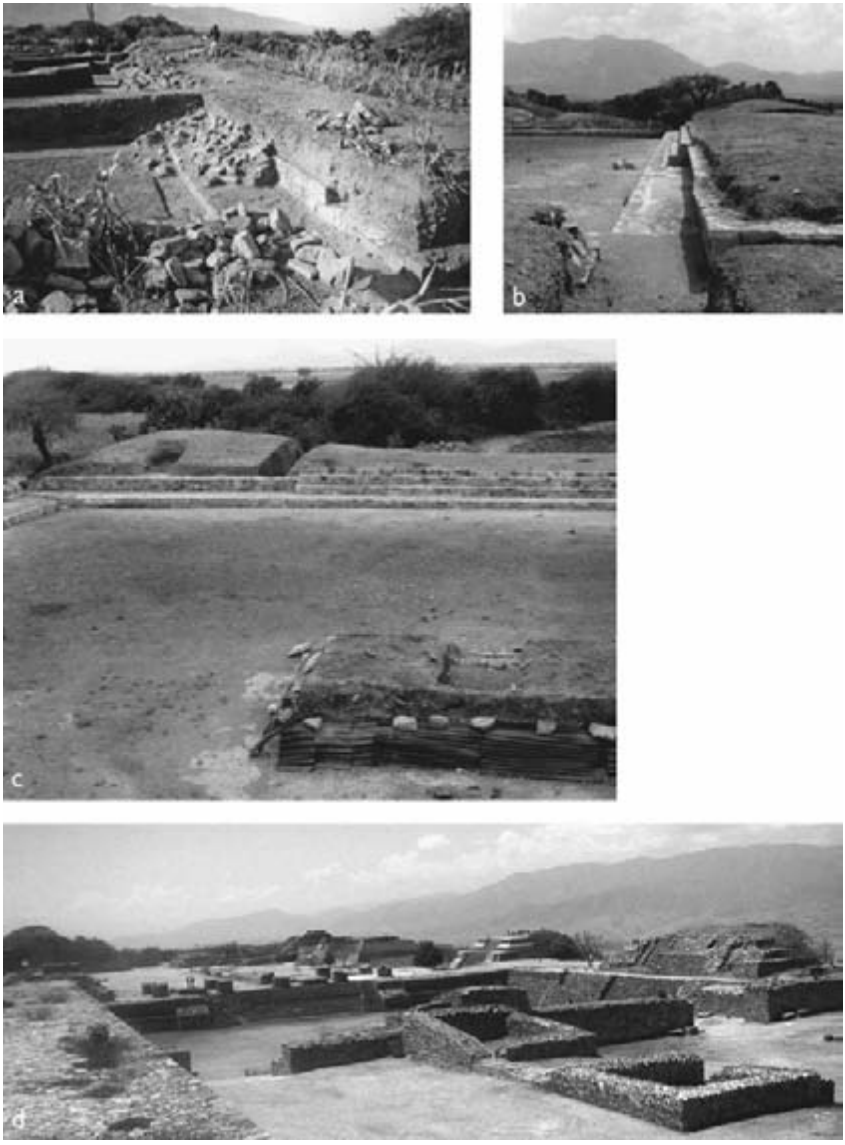
level higher than that of the natural terrain. The north platform had a 3.65 m wide stairway with three steps at its center.

The south platform was a mirror image of the north platform. The north wall of the south platform, which fronted on the plaza, was preserved its entire length of 25.5 m east-west (Fig. 9.26c). It cornered at the east and west ends of the platform and terminated abruptly. The taludes of the south platform rested on outset vertical moldings and were topped by double inset vertical moldings (Fig. 9.26d). The walls were preserved to a height of about 1 m above the level of the plaza floor, although because of erosion their original heights are unknown. The south platform had a 3.6 m wide stairway at its center, also with three steps. Unlike the north platform, the south one had been built entirely of construction fill. However, because a later dirt road ran along its south side, any south wall of the platform would have been destroyed. The platform was probably 6 m wide, like the north platform, and would have covered an area of about 153 m^2.

The west platform was the largest and its walls were preserved all the way around it, except at the southwest corner where it was destroyed by a later dirt road. The platform measured 32 m long, north-south, and 8.2 m wide, east-west, and covered more than 262 m^2. It had vertical stone walls around it instead of taludes like the north and south platforms (Fig. 9.27a). The walls were preserved to a height of 1 m above the plaza floor. Large stairways were located in the center of the platform on both its east and west sides. The east stairway was 11.9 m long and had two steps. The west stairway was 12 m long and also had two steps. Walkways ran along both the east and west sides of the platform. The east walkway was 1.17 m wide and ran the full length of the east side of the platform (Fig. 9.27b). The west walkway was 1.15 m wide. It ran for 26.9 m along the west side of the platform but was not preserved in its northern and southern extremes.

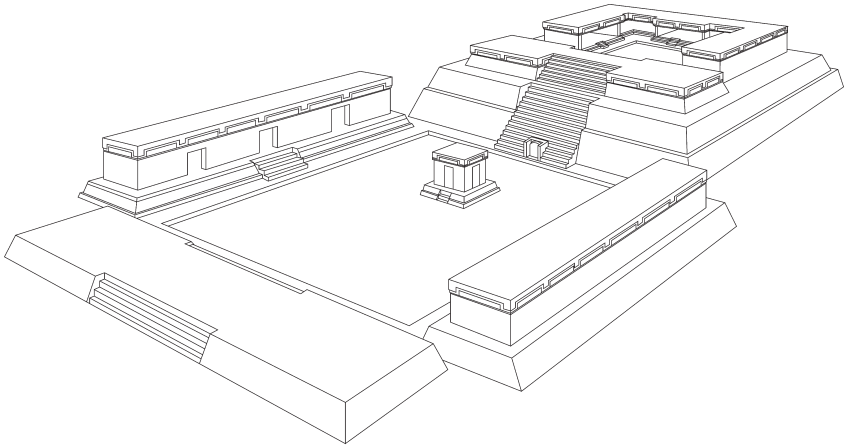
THE STRUCTURE 195-1 CIVIC RESIDENTIAL COMPLEX (PPA)

Structure 195-1 with its plaza and altar surrounded by platforms and with its large residence built atop Mound 195 was clearly a civic residential complex or PPA (Fig. 9.28). The large plaza attached to the western side of Mound 195 with its altar and surrounding platforms was the civic part of the building. Although the function of the platforms is uncertain, there are obvious differences between the west platform and the north and south platforms. The very large 12 m wide stairways on the east and west sides of the west platform were designed for the movement of large numbers of people into and out of the plaza. Whether the west platform had, or was



9.27. ***The west platform of Lambityeco System 195 and of the Patio Hundido at Monte Albán (photo d courtesy of Paola Vera)***

intended to have, any structure or structures built on top of it is unknown. However, if it did, they must have been planned so as not to inhibit traffic flow into and out of the plaza by way of the two large stairways.

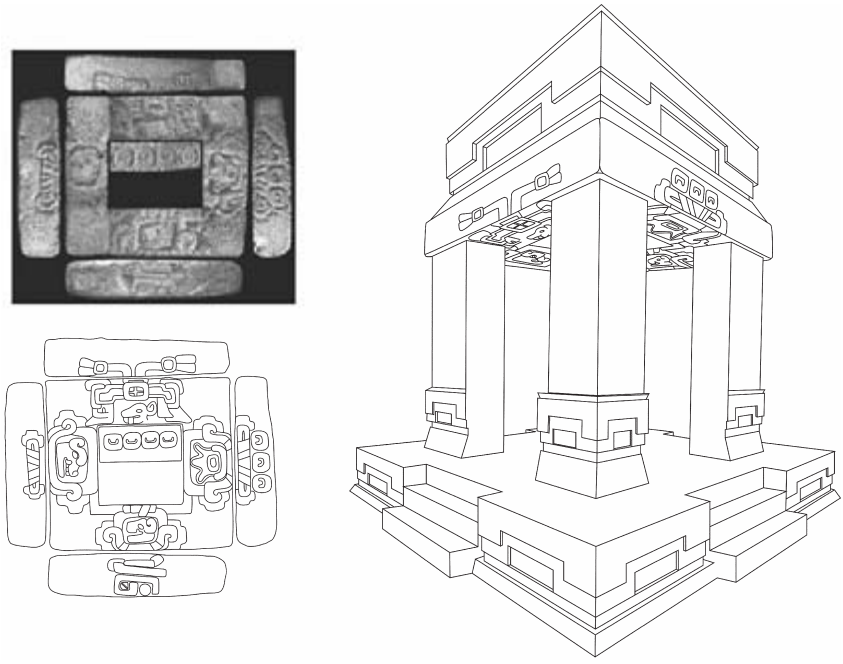


9.28. ***Isometric view of the probable intended configuration of Structure 195–1***

The north and south platforms were neither as long nor as wide as the west platform, had only narrow stairways, and could only be entered from within the plaza. Whether they had, or were intended to have, structures built upon them is uncertain. However, the narrow stairways suggest the possibility that they were probably intended to be walled and roofed enclosures, perhaps to be used as meeting halls for administrative purposes, warehouses, or even barracks for soldiers. Access to and from the north and south platforms was extremely limited in comparison to the west platform.

The function of the altar in the plaza of System 195 needs further discussion. Although Caso (1935) called these small raised platforms in the centers of plazas at Monte Albán adoratorios, implying some ceremonial or ritual function, he never explained what functions they might have served. Here we have slightly different interpretations. Lind suggests that the "altar" might have served as a podium or stage for public ceremonials, such as the investiture of a coqui or other political officials. Likewise, it might also have served as a stage for cyclical religious or public rituals the coqui was expected to perform. As many as twenty public officials could have fit comfortably atop the podium, and the plaza and surrounding walkways would have comfortably accommodated more than 800 persons.

Urcid proposes that these features are platforms that supported quadripartite ancestor memorials and that these were used as stages to perform rituals to validate political power (Fig. 9.29). Such interpretation is based on now out-of-context sets of carved monuments, like the hypothesized primary setting of the blocks that eventually were placed as orthostats in the corners of the South Platform at Monte Albán (Urcid 2001:chapter



9.29. ***Hypothetical reconstruction of a quadripartite ancestor memorial with a carved monolith of unknown provenience***

5) or on single squared stones carved on multiple surfaces, like a peculiar monolith of unknown provenience now stored in the cloister at Cuilapan (Urcid 1995).

Also, within the plaza, Burial 67-1 resembles another double burial in the South Group at Mitla belonging to the Pitao phase (Caso and Rubín de la Borbolla 1936:13–15). This interment was found sealed 1.3 m beneath the plaza floor and directly in front of the stairway of the west platform along the east-west centerline of System K. It was accompanied by a lavish offering of three effigy vessels, twenty-nine ceramic vessels, three fragments of small shell plaques (probably from personal adornments), and fragments of the head of a Late Formative jade figurine in Olmec style. The location of these special burials along the centerline of the structures and their interment before the plaza floors were laid out suggests that the buried individuals were sacrificed and placed as dedicatory offerings to consecrate the edifices (Urcid 2005:30–31, fig. 3.4).[6] Although the effigy vase associated with Lambityeco Burial 67-1 relates to Cociyo, the significance of the tripod bowl—a ceramic form common in the domestic

realm—may have involved a metaphor of sacrifice as food for the rain and earth deities.

The large elite house with its spacious rooms and its great western hall built atop Mound 195 was the probable residence of the noble household who ruled Lambityeco. The north and south rooms were probably living quarters, one of which was occupied by the married couple who headed the household. The other may have been for a married son, a secondary wife and her children, or visiting dignitaries. At 9.8 m long, the living quarters of this residence were nearly twice as large as the largest living quarters of the houses of Mound 195 Sub.

The northeast and southeast corner rooms, associated respectively with the north and south living quarters, may have been kitchens, storerooms, sleeping quarters, or used for other activities. These corner rooms are similar to the large southeast corner room of Structure 195-3SE with its tiny patio that has an L-shaped room along the south and east sides. The only difference is that the sunken areas in front of the Structure 195-1 northeast and southeast corner rooms do not have raised walkways enclosing them to form a tiny patio with a drain (compare Figs. 6.1 and 9.11). The presence of corner rooms with tiny patios, like Structure 195-3SE at Lambityeco and the House of Tomb 103 at Monte Albán, and L-shaped corner rooms with sunken areas in front of them, like Structure 195-1 at Lambityeco and the East Palace and the Houses of Tombs 104 and 105 at Monte Albán (Fig. 9.14), may represent an architectural change within the Xoo phase with the former being earlier and the latter later as the sequence of houses at Lambityeco clearly demonstrates. Urcid, however, is of the opinion that the difference is functional and may have nothing to do with temporality. To him, their configuration suggests distinct practices. He points out that Caso (1938:74, 82) considered the House of Tomb 103 with three of its corner rooms forming tiny patios and the House of Tomb 104 with its inset corner rooms to be contemporaneous.

The west room or hall was certainly the largest and most elaborate room of the residential complex. Like the raised south room of Structure 195-3SE, only significantly larger, it was decorated with xicalcoliuhquis, which may have symbolized clouds or rain. Although its function is uncertain, perhaps it was intended to be like the platform on the south side of the Patio Hundido in the North Platform at Monte Albán, which was accessed by a monumental stairway and served as a large entrance hall with a roof supported by columns (Fig. 9.27d).

The east room built above Tomb 1 functioned as the ancestral shrine where offerings were placed and rituals performed honoring the household ancestors. Tomb 1 was very simple and small when compared to the larger

and much more elaborate Tomb 6 associated with the houses of Mound 195 Sub. However, the occupation of Structure 195-1 was probably of relatively short duration and the planning and construction of a more elaborate tomb may not yet have been undertaken.

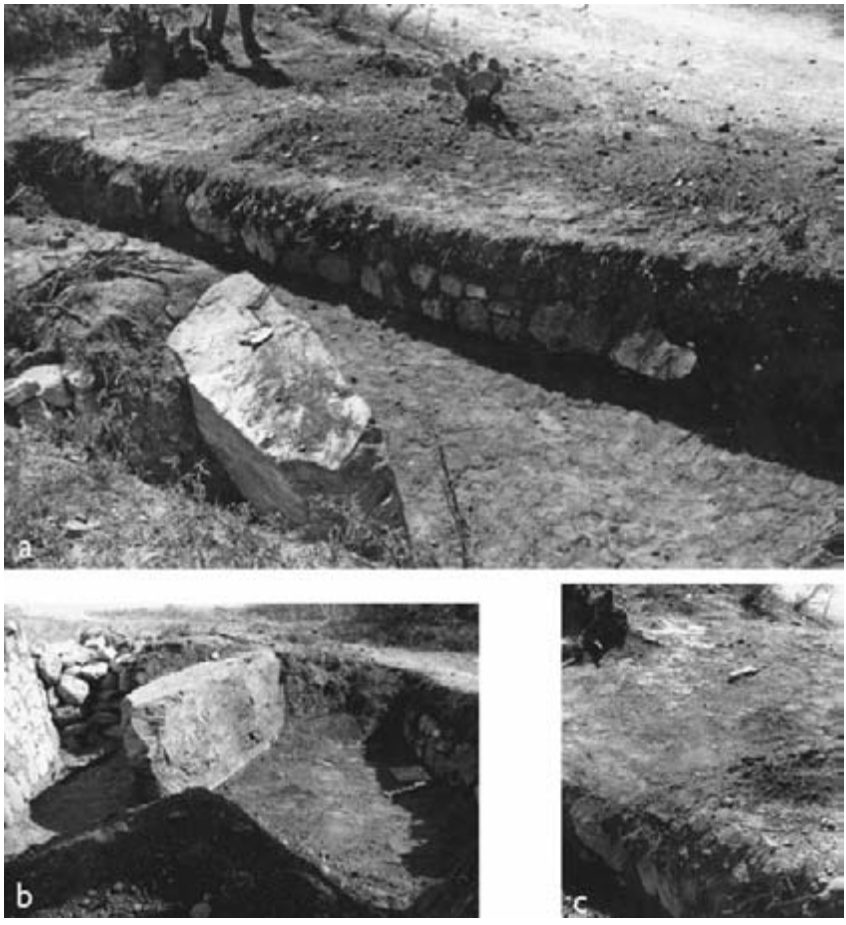
There is no evidence in the Structure 195-1 residence of an altar complex with friezes depicting the ancestors of the noble household who occupied it. In this respect, Urcid's contention that the altar in the plaza was an ancestral memorial gains support because it was located, like the altar complex of Structure 195-3SE, in the most public part of the Structure 195-1 civic residential complex (PPA). Likewise, it is possible that a carved stone slab depicting the Structure 195-1 household ancestors was placed upon the pedestal in the niche at the base of the main stairway to Mound 195, again a very public setting.

THE ABANDONMENT OF STRUCTURE 195-1

How long the Structure 195-1 civic residential complex (PPA) was occupied before being abandoned is difficult to determine. The Structure 195-1 residence was completed and occupied. However, the platforms surrounding the plaza of System 195 were never completed. Both the north and south platforms had their walls facing the plaza corner and then terminate abruptly, unfinished. Furthermore, a mound of construction fill was left on the south end of the west platform intending to raise it to a higher level, but filling operations were never completed to raise the platform (Fig. 9.27c). Excavations determined that this mound was construction fill and not a structure. Finally, a layer of construction fill was left in the center of the south platform to raise it to a higher level but filling operations were never completed (Fig. 9.26c). Excavations also determined that this layer was construction fill and not remnants of a structure built atop the south platform.

Evidence of other unfinished features was found at the southwest and southeast corners of Mound 195. At the southwest corner, where Mound 195 met the south platform, an adobe retaining wall was built preparatory to building a stone wall to seal off entrance to the plaza at this point. The stone wall, however, was never built. Along the northwest corner, where Mound 195 met the north platform, a stone wall had been completed to seal off access to the plaza at this point (Fig. 9.11).

At the southeast corner of Mound 195, a large rectangular limestone block, which measured 1.76 m long, 57 cm wide, and 60 cm high, rested about 1 m south of and at the same level as the base of the south wall of Mound 195 (Fig. 9.30b). No building stone occurs around Lambityeco so



9.30. ***Unfinished features at the southeast corner of Mound 195***

this large limestone block must have been quarried in the mountains and brought to Lambityeco to provide the raw material necessary to build the walls of Mound 195. It is evident where stone masons had knocked off slabs to produce stones to build the walls. However, the large limestone block, which was not fully used, was left at the southeast corner (Fig. 9.11).

Finally, a low stone wall nearly 7.5 m long and 30 cm high was built 2.7 m south of and parallel to the south wall of Mound 195 (Fig. 9.30a). The wall ran a little more than 4 m beyond the east end of Mound 195 and seemingly did not corner at either end. However, remnants of a white plaster floor occurred just 30 cm south of the wall and extended 2.75 m farther south. The floor was at the same level as the top of the wall (Figs. 9.30a and

c). This suggests that a raised paved walkway or road, 3 m or more wide, was in the process of being built along the south side of Mound 195 (Fig. 9.11). This elevated paved walkway or road was never completed.

It is apparent that the Structure 195-1 civic residential complex (PPA) was a work in progress at the time of its abandonment. Although the Structure 195-1 residence atop Mound 195 was completed and occupied, the platforms surrounding the plaza of System 195 were still undergoing construction that was never finished before abandonment. Assuming that the Structure 195-1 residence was occupied around 830 CE, then the entire Structure 195-1 civic residential complex was abandoned sometime thereafter, perhaps around 850 CE.

POST-ABANDONMENT ACTIVITIES

Subsequent to its abandonment, the Structure 195-1 civic residential complex fell into ruin. When Paddock (personal communication, 1967) excavated the top of Mound 195 in 1961, he found a considerable amount of ash covering the rubble from the collapsed and eroded adobe walls of the Structure 195-1 residence. As Peterson (personal communication, 1979) observed, this ash was from salt-boiling activities that took place on top of the ruins of Mound 195. Although no radiocarbon dates were obtained in association with this salt-boiling activity, Wolfman (1973:200–201, 232) processed three archaeomagnetic dates associated with salt-boiling activities atop the ruins of Mound 190, located 10 m south of Mound 195 and, like Mound 195, abandoned around 850 CE (Lind 2008). The archaeomagnetic dates from Mound 190 were 1035, 1050, and 1065 CE, which suggests that the salt-boiling activities took place nearly 200 years after the abandonment of Mound 190. Silho or X Fine Orange pottery was found in association with the dates, which is consistent with the chronological placement of this pottery type in Mesoamerica, that is, between 900and 1100 CE (Lind 1991–1992:182–183).

Additional evidence of post-abandonment activities was found along the north walkway and in the plaza of System 195. An area of yellow ash was found on the north walkway with a nearby hearth cut through the plaster floor of the walkway. Peterson (personal communication, 1979) explained the presence of this yellow ash. The salt obtained from salt boilers generally has a yellowish tint, representing bitterns within the salt. To remove the bitterns, salt producers place a cloth over a layer of gray ash and then spread the yellowish salt over the cloth. They then sprinkle fresh water over the salt, which removes the bitterns and transfers them to the ash beneath the cloth, turning the ash yellow. The hearth and yellow ash, then,

probably relate to the activities of salt producers along the north walkway of the plaza following the abandonment of System 195. A short distance away from the hearth and yellow ash a Silho or X Fine Orange hemispherical bowl was found in a hole cut through the plaza floor. In addition, a Silho or X Fine Orange olla was found nearby in the plaza (Lind 2008:176, fig. 5.4). Therefore, it appears that these salt-producing activities took place between 900 and 1100 CE, or up to 200 years after the abandonment of the Structure 195-1 civic residential complex.

NOTES

1. The sample that yielded the anomalous date of 1055±95 CE is carbonized tropical grass, probably thatching from the roof. Rabin (1970:14) cites studies by Bender (1968) that demonstrate that carbon samples of tropical grasses consistently yield dates that are about 300 years too recent. If 300 years are subtracted from the 1055 CE date, the result is 755 CE, which is precisely the uncalibrated radiocarbon date for the sample of wood charcoal from this same roof. Calibrated, the date is 830 CE.

2. Wolfman (personal communication to Lind, 1970) had practically no radiocarbon dates in the 700 CE range to serve as a guide to help calibrate his archaeomagnetic dates. The series of uncalibrated radiocarbon dates from Lambityeco Mound 195 ranging from 700 to 755 CE was used by Wolfman as a guide to help calibrate his archaeomagnetic dates. Since obtaining the calibrated radiocarbon dates, we now know that the uncalibrated radiocarbon dates from Mound 195 are about 100 years too early.

3. Although the kiln and circular area of sherds were located and drawn three-dimensionally (see Fig. 9.2), no photos of these features could be located in the excavation archives.

4. A Mitla Zapotec, Rutilio Martínez, informed Lind in 1980 that his son and daughter had their umbilical cords buried in similar pots beneath the courtyard of his house. He said that the umbilical cord had to be kept free from dirt and was wrapped in a cloth and then placed in the jar, which was covered with the bowl. If the cord got dirty, the child would become blind. Darío Quero, another Mitla Zapotec, also pointed out that Zapotecs use their umbilical cord burial to mark their village of origin. He said someone might say, "I live in Tlacolula but my umbilical cord is in Mitla" (*Vivo en Tlacolula pero mi ombligo está en Mitla*)—indicating that he was born in Mitla.

5. The turkey skeleton beneath the patio was described in field notes. However, no precise location, three-dimensional drawing, or photo was found in the excavation archives. Therefore, its precise location beneath the patio floor is unknown.

6. The condition and treatment of the skeletal remains of Burial 67-1 upon retrieval, applying to the fragile bones still covered with soil a hard adhesive (Elmer's glue diluted in water), precluded ascertaining if the remains exhibit evidence of

traumatic death as would be expected from the treatment of sacrificial victims. The remains from Mitla have never been analyzed to determine the presence or absence of such evidence.

chapter ten

Political Evolution during the Xoo Phase and the Collapse of Monte Albán

The sequence of elite structures in Mound 195 and a comparison of their remains with the ethnohistoric model of Zapotec political organization at the time of the Conquest provide insights into the nature and evolution of the political system at Lambityeco. A sequential integration approach to these elite structures can identify ongoing changes in the material remains that reflect changes in the political system at Lambityeco that led up to its collapse toward the middle of the ninth century CE. Likewise, the sequence of structures provides material evidence of changing relationships between Lambityeco and Monte Albán. These changes will be examined within the context of hegemonic and territorial states together with factors that may have led to the collapse of the regional political systems.

POLITICAL ORGANIZATION AT LAMBITYECO

Colonial documents state that Zapotec city-states (queche) were ruled by royal married couples (coqui and xonaxi) who were in a direct line of descent from an apical ancestor who founded their royal lineage. The portrait heads on the façade of Tomb 6 and the friezes of the altar complex of Mound 195 Sub depict married couples like the coqui and xonaxi shown in the *Genealogy of Macuilxóchitl* and other colonial Zapotec pictorial genealogies (Whitecotton 1990). In addition, the males are depicted with short pointed

beards like coqui portrayed in some of the colonial Zapotec pictorial genealogies, such as the *Lienzo de Guevea* (Paddock 1983b:18). Furthermore, the Lambityeco friezes, like the colonial Zapotec pictorial genealogies, extend the genealogy back to an apical or founding ancestor (Oudijk 2008:107). All these factors indicate that the married couples who occupied the houses of Mound 195 Sub from ca. 700 to 800 CE were coqui and xonaxi who ruled Lambityeco. Finally, the construction of Structure 195-1, a large civic residential complex (PPA), over the older elite structures demonstrates that Mound 195 was the seat of political power at Lambityeco and the locus of the residences of its coqui and xonaxi up until the end of the Xoo phase.

POLITICAL EVOLUTION AT LAMBITYECO

The elite houses of Mound 195 Sub were occupied over a period of 100 years by four successive generations of coqui-xonaxi couples who were direct descendants of a single royal lineage ancestor.[1] The four separate couples plus the apical or founding ancestor depicted in the friezes of the altar complex represent the genealogy of the royal married couple who occupied Structure 195-3 from ca. 775 to 800 CE and whose portrait heads decorate the façade of Tomb 6, Lord 1 Lachi and Lady 10 Naa. Their genealogy extends back five generations to the founding ancestor of their royal lineage, Lord 2 Chilla, who may have lived from ca. 650 to 675 CE. If our reading of the genealogy is correct, the immediate descendants of Lord 2 Chilla may have included Lord 4 Lachi and Lady 10 Loo, who probably lived between ca. 675 and 700 CE. None of these individuals appears to have occupied any of the elite houses of Mound 195 Sub.

The remaining three couples in the friezes, however, must have occupied the three oldest houses within Mound 195 Sub, although because of the destruction of portions of the upper friezes, some of their names are unknown. Again, if our reading of the genealogy is correct, Lord 5 Peche and Lady 4 ? occupied Structure 195-6 between ca. 700 and 725 CE and were most likely buried in Tomb 5. Lord 8 Laala and Lady 3 Xoo occupied Structure 195-5 between ca. 725– and 750 CE and Lord ? and Lady 5 Naa occupied Structure 195-4 between ca. 750 and 775 CE. These latter two couples were buried in Tomb 6, where their skeletal remains are represented by four of the six minimum individuals buried there.

STRUCTURE 195-6

The oldest house within Mound 195, Structure 195-6, was probably built and occupied by Lord 5 Peche and Lady 4 ? between ca. 700 and 725 CE.

It was a substantial house that had a patio and room floors paved with white plaster. Its patio covered an area four times as large as most commoners' houses, including a more or less coeval commoner's house recently excavated at Lambityeco east of Mound 195 (Markens, personal communication, 2007). Also, unlike most tombs of commoners, consisting of holes excavated into sterile soil and dirt floors, Tomb 5, in which the Structure 195-6 coqui and xonaxi were most likely buried, was a masonry structure with a white plaster floor. Insofar as access to resources can be determined from the material remains of houses and tombs, the coqui and xonaxi who occupied Structure 195-6 had access to ample resources within the context of their community. A large area of ash and salt boilers directly south of Structure 195-6 in the basal deposits underlying Mound 190 indicates that they may have been involved in salt production and that this area formed part of their residential plot.

STRUCTURE 195-5

The next elite house, Structure 195-5, was probably built and occupied by Lord 8 Laala and Lady 3 Xoo between ca. 725 and 750 CE. He most likely was the eldest son of the Structure 195-6 coqui and xonaxi. Two important architectural features distinguish Structure 195-5 from Structure 195-6 and make it more elaborate. First, it was built atop a low platform whose front (west side) consisted of a talud covered by a layer of plaster. Second, a new household tomb (Tomb 6) was built beneath the eastern part of the patio in an area where it would not disturb Tomb 5. Tomb 6 was a very elaborate tomb that had a large façade with twin panels painted red and framed by double cornices. The construction of the elite house atop the platform and the erection of Tomb 6 suggest that the coqui and xonaxi who occupied Structure 195-5 had the ample resources necessary to acquire these symbols of power to reinforce their status as rulers of Lambityeco.

In addition, at this time a second elite house, Structure 190-5, was built in Mound 190 only 10 m south of Structure 195-5. This house was built over the former salt-boiling area within the residential plot of the Structure 195-6 coqui and xonaxi. The house was probably occupied by a second son of the Structure 195-6 coqui and xonaxi who was most likely a younger brother of the Structure 195-5 coqui. He evidently started a cadet or junior branch of the royal lineage (see Oudijk 2002:77), initiating the sequence of four superimposed houses within Mound 190 occupied by noble married couples who were buried in Tomb 2. Archaeological evidence from Mound 190 and Tomb 2 suggests that these nobles may have served as priests, which corresponds with statements in colonial documents

that second sons of coqui often became religious specialists (Lind and Urcid 1983, 1990).

Finally, between ca. 725 and 750 CE, the House of Tomb 3 was built within the large residential plot slightly north and about 45 m west of Structure 195-5. The house was occupied by a family of commoners who were probably contracted by Lord 8 Laala and Lady 3 Xoo to reside there and serve as fulltime retainers. The House of Tomb 3 was probably situated near the western entrance to the large residential compound and served as a point from which access to it could be controlled.

STRUCTURE 195-4

The probable eldest son and heir of the Structure 195-5 coqui and xonaxi, whose name we do not know, and his wife, Lady 5 Naa, occupied Structure 195-4 between ca. 750 and 775 CE. They built their house on top of the Structure 195-5 house but expanded it greatly. First, they raised the platform atop which the house was built and extended it eastward. Second, they doubled the size of the original house by adding, along its north side, a second patio with rooms around it. Third, they expanded Tomb 6 from a single-chamber to a double-chamber tomb and may have built an altar along the back wall of the east room. In addition, they probably had the first, and oldest, sweatbath built about 10 m north of Structure 195-4 within their large residential compound. Finally, they may have had the House of Tomb 3 refurbished for the second generation of commoner retainers, as evidenced by the resurfacing of its patio. Their construction activities made Structure 195-4 larger than many of the elite houses at Monte Albán. Insofar as access to resources can be determined from the material remains of houses, Structure 195-4, covering an area more than twice as large as Structures 195-5 and 195-6, represents material evidence that the coqui and xonaxi who occupied it had access to considerable resources.

STRUCTURE 195-3

The final structure atop Mound 195 Sub, Structure 195-3, was built and occupied between ca. 775 and 800 CE by Lord 1 Lachi and Lady 10 Naa. Although they reduced the residence in size from its Structure 195-4 form, they made it much more elaborate and much less accessible from the outside. Furthermore, they appear to have separated the residential quarters from the more public civic sector of the building.

The civic sector (Structure 195-3SE) of the building underwent considerable renovation. First, the platform was raised and the front (west side)

or façade of the building was decorated with a plaster-covered stone facing. Second, the rooms were elevated along the south side of the patio and the large south room in which the coqui and xonaxi conducted governmental business had the walls flanking the stairway ascending to it decorated with "lightning in the sky" step frets (a metaphor for Cociyo) contained in panels framed by double cornices. Third, a 2 m high altar complex was constructed that occupied the entire east side of the patio and depicted their royal ancestors going back five generations; this altar complex is similar to one in the elite House of Tombs 139, 140, and 141 on Terrace 21 at Monte Albán. Finally, plaster portrait heads of Lord 1 Lachi and Lady 10 Naa were attached to the façade of Tomb 6; nothing as elaborate or ostentatious as these portrait heads has ever been found on any tomb at Monte Albán or elsewhere in the Valley of Oaxaca.

With regard to accessibility, a series of modifications not seen in the earlier elite structures of Mound 195 Sub were done. In Structure 195-4, the blind L-shaped northwest corridor had provided relatively open access from outside the residence to either Structure 195-4SE or Structure 195-4NE. In Structure 195-3, this corridor was sealed and the blind L-shaped southwest corridor was opened, which diverted access to the extreme southern side of the civic sector (Structure 195-3SE) and away from the residential (Structure 195-3NE) quarters. The corridor was only wide enough for people to enter the building single file and ended in a small vestibule in front of a small corner room that may have been occupied by a servant or guard who controlled direct access to the building. Likewise, anyone arriving in front of the southwest corner room had the altar complex in full view in front of them, a statement by the coqui and xonaxi of their royal lineage's long history as rulers of Lambityeco.

Significant changes also took place in the residential quarters (Structure 195-3NE), which were virtually sealed off from the outside, making them the most inaccessible part of the building. The rooms were raised 1 m above the patio floor so that all four had to be reached by stairways from the patio below. The walls on either side of the stairways were decorated with panels framed by single cornices. In addition, the sweatbath to the north of the residential quarters was expanded in size. Likewise, Lord 1 Lachi and Lady 10 Naa probably refurbished the House of Tomb 3 for the third generation of commoner retainers, as evidenced by the resurfacing of its patio floor. They also added a second house nearby, the House of Tomb 4, which represented an additional group of commoner retainers either newly contracted or resulting from an outgrowth of the Tomb 3 household.

Despite all the changes in the Structure 195-3 civic residential building, the patio floors of the earlier Structure 195-4 were not replaced.

Instead, the Structure 195-4SE patio floor was retained in Structure 195-3SE. Additionally, the northern half of the Structure 195-4NE patio floor was reutilized and a new southern section simply tacked on in Structure 195-3NE. Nevertheless, it is evident that Lord 1 Lachi and Lady 10 Naa had access to a considerable amount of resources and invested them to enhance their status by acquiring material symbols of power, most of which were displayed in the public part (Structure 195-3SE) of the civic residential structure.

Although the earlier coqui and xonaxi were evidently able to conduct their governmental business within their ample residences, Lord 1 Lachi and Lady 10 Naa constructed what may be properly termed a civic residential building. The southern half of the building (Structure 195-3SE) was the more elaborate public part where the coqui and xonaxi conducted their governmental business, dispensed justice, and probably feasted noble retainers; and, if Urcid's interpretation of the unusual southeast corner room is accepted, the coqui probably performed rituals petitioning rain here. The northern half of the building (Structure 195-3NE) was seemingly the private residential quarters of the coqui and xonaxi and their family.

This innovation, at Lambityeco, of separating the more elaborate civic sector from the more mundane residential quarters also served to separate the role of the coqui and xonaxi as household heads from their role as rulers of Lambityeco. This appears to reflect a shift from the previous authoritarian but more paternalistic rulers to more autocratic rulers. By separating the civic from the residential part, their status was enhanced by providing them with a public space, a symbol of power, from which to rule Lambityeco.

THE END OF A ROYAL LINEAGE

Following the deaths of Lord 1 Lachi and Lady 10 Naa, a dramatic change in political organization took place at Lambityeco. Evidence of this change is manifested in the material remains of all the structures within the residential compound—Mound 195, Mound 190, and the Houses of Tombs 3 and 4. Numerous lines of evidence reflected in these archaeological remains point to the ruler and political elite of Monte Albán as the agents of this radical change that took place in ca. 800 CE. They brought about an end to the local royal lineage that had ruled Lambityeco from ca. 700 to 800 CE and appointed new governors in their stead.

A series of events reflected in the material remains of Structure 195-3 relate to changes leading up to the demise of the local royal lineage and the installation of new rulers at Lambityeco. Following the death of Lord 1 Lachi, his son and heir or his wife, Lady 10 Naa, retrieved his bones

from Tomb 6 in ca. 800 CE. She, or her son, may have continued to rule Lambityeco until her death in ca. 810 CE. Divested of her former power, Lady 10 Naa, accompanied by a small offering typical for commoners, was unceremoniously buried in Tomb 6 by way of a hole dug in the center of the flat-top altar and through the roof of the main chamber. The desecrated altar was never repaired, leaving the hole as a gaping chasm. Also, in an act of disrespect and desecration, the friezes at the top of the altar complex were broken and tossed, some pieces ending up in the hole dug through the altar. Following her death, the public part (Structure 195-3SE) of the civic residential building was abandoned, marking the end of the local royal lineage and signifying the end of the place from which they had ruled.

These acts of irreverence of the former rulers and destruction of their symbols of status and power were probably carried out by agents of the ruler and political elite of Monte Albán and/or the new governors they appointed to rule Lambityeco. They also appear to have expelled the heirs of Lord 1 Lachi and Lady 10 Naa from the residential compound. The new coqui and xonaxi took over the former residential quarters (Structure 195-3NE) of Lord 1 Lachi and Lady 10 Naa and had the door between it and the former civic sector (Structure 195-3SE) sealed, leaving the civic sector abandoned. A new door was opened through the west wall of the entrance hall to provide access to the Structure 195-3NE residence from the outside. In addition, just outside the residence, either an earlier doorway was reopened or a hole was knocked through the north wall of the abandoned civic sector (Structure 195-3SE) so that the new rulers could dump and burn their garbage on its floors.

At the same time that the local royal lineage was being deposed and expelled from the residential compound, archaeological evidence from Mound 190 and the Houses of Tombs 3 and 4 indicates that their residents were experiencing a similar fate. The relatives of Lord 1 Lachi and Lady 10 Naa, the noble household just south of Mound 195, were likewise expelled from the residential compound. Their residence (Structure 190-2) was buried beneath construction fill, eliminating all traces of their presence. A new house (Structure 190-1) was built over the fill, which in both Structures 195-2 and 190-1 included a section of unusual hemispherical adobes, suggesting that they were undergoing construction at nearly the same time. Structure 190-1 was occupied by a new noble household probably sent by the ruler of Monte Albán to assist the new coqui and xonaxi in governing Lambityeco. Finally, the commoners who were retainers of Lord 1 Lachi and Lady 10 Naa and who occupied the Houses of Tombs 3 and 4 were driven out from the residential compound. Their houses were demolished to build the north platform of System 195.

These varying lines of archaeological evidence from Lambityeco indicate that around 810 CE everyone who had occupied residences within the residential compound were expelled and had new structures built over the remains of their residences. By ca. 830 CE, Mound 195 Sub and the elite structures within it were buried under construction fill used to raise the eastern half of Mound 195, eliminating all material traces of the royal lineage that had ruled Lambityeco for the previous century.[2]

STRUCTURE 195-1

The radical change in political organization at Lambityeco is reflected in the construction of Structure 195-1. It was a huge civic residential complex (PPA) that was built to Monte Albán standards. It has the same layout and basal measurements as System IV (TPA) on the Main Plaza at Monte Albán and was most likely designed by Monte Albán architects. With the exception of the west hall, the Structure 195-1 residence built atop Mound 195 is very similar in its layout and dimensions to the East Palace on the Main Plaza at Monte Albán and the Houses of Tombs 104 and 105 with their inset L-shaped corner rooms and was also most likely designed by Monte Albán architects.

The material remains of Structure 195-1 clearly point to the ruler and political elite of Monte Albán as the agents of this dramatic change in political organization at Lambityeco. The ruler of Monte Albán had the power to remove the local ruling lineage at Lambityeco and everyone associated with them who resided within the large residential compound. Likewise, the ruler of Monte Albán had access to the substantial resources necessary to build a monumental structure the size of Structure 195-1 and the power to appoint new coqui and xonaxi to be governors of Lambityeco.

Despite its enormous size, Structure 195-1 had a very small tomb within its residential sector. The small size of Tomb 1 suggests that, although the Structure 195-1 civic residential complex (PPA) was constructed to impress and convey the power of the state, the new Structure 195-1 coqui and xonaxi, despite having considerable power over the residents of Lambityeco, did not wield much personal power within the context of the larger state headed by the ruler of Monte Albán. Likewise, the slab-lined grave for the noble buried under the east room of Structure 190-1 in Mound 190 suggests that the noble household who occupied it manifested even less personal power within the state.

The new rulers instituted a number of politically managed economic changes at Lambityeco. Lambityeco's major industry, salt production, underwent a clear change around 810 CE. Salt workers were grouped in a

government workshop near the salt deposits. New salt-production techniques were introduced to increase production. Mixing tubs were implemented to enhance brine salinity. Ovens were used to maximize salt distillation at a lower cost for fuel than the previous bonfires. Standardized smaller-size salt boilers were also introduced to reduce distillation time. All of these factors increased productivity.

The use of standardized salt boilers implies that the potters who made them were also organized into government-controlled pottery workshops at this time. It is likely that Monte Albán–style kilns (Winter and Payne 1976) were introduced to maximize pottery production at a lower cost for fuel than the previously used bonfire kilns (Swezey 1975). The production of G-35 bowls, the standard food-serving vessel in the Xoo phase, was increased by virtually eliminating the pattern-burnished designs and thereby reducing the production step index. Likewise, textile producers may have been organized into government workshops. However, unlike salt production, archaeological evidence for these latter changes is lacking and they must remain hypothetical.

The imposed rulers appear to have established a new marketplace at Lambityeco, although this is uncertain because archaeological evidence of marketplaces is notoriously difficult to verify. This possible marketplace was situated between two monumental Monte Albán–style complexes. Along the northeast side of the marketplace was the large residential compound containing the civic residential complex, or PPA, of the new ruler. Along the south side of the marketplace was a temple complex, or TPA, Mound 155. These two monumental constructions dominated the marketplace and would have facilitated the ability of the new rulers to control and tax any market exchanges.

Interestingly, Structure 195-1 was a work in progress. It was never finished before it was abandoned around 850 CE. The north and south platforms along the plaza never had walls completed around them. Furthermore, the south and west platforms had piles of construction fill on them, indicating that they were to be raised to higher levels. A large limestone block from which stones were being removed to build walls was left at the southeast corner of Mound 195. A raised and paved walkway or road along the south side of Mound 195 was never finished before Structure 195-1 was abandoned. It appears that workmen simply stopped working, leaving construction in progress. The abandonment of Structure 195-1 coincides with the collapse of the political system and the virtual total abandonment of Lambityeco.

MONTE ALBÁN AND LAMBITYECO

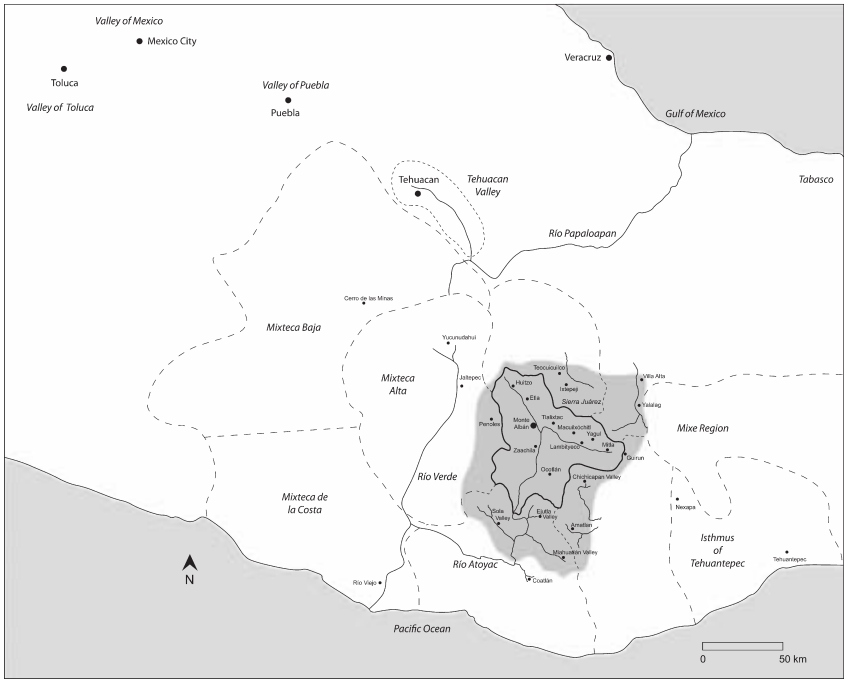
Questions brought up in Chapters 1 and 2 regarding the political relationship between Monte Albán and Lambityeco during the Xoo phase may now be answered. It is evident from the sequence of elite structures within Mound 195 that Lambityeco was a semiautonomous city-state with its own local royal lineage of coqui and xonaxi from ca. 700 to 800 CE. The rulers of Monte Albán almost certainly required these local rulers to pay tribute and, perhaps, provide labor services and soldiers for military campaigns but probably allowed them a good deal of autonomy in governing the Lambityeco city-state. A similar situation most likely obtained among other semiautonomous city-states throughout the Valley of Oaxaca at this time. Therefore, it is probable that the rulers of Monte Albán headed a hegemonic state in the Valley of Oaxaca from ca. 700 to 800 CE.

Around 810 CE, however, the political elite of Monte Albán devised a new strategy for governing Lambityeco. They deposed the local ruling lineage and installed new rulers in a large civic residential complex. They also instituted some politically managed economic changes primarily involving salt production, Lambityeco's major industry, which became a government-controlled operation. These political changes transformed Lambityeco from a semiautonomous city-state to a province under the direct control of Monte Albán from this time until the regional collapse of the political system around 850 CE.

If these changes were happening at Lambityeco, then it seems very likely that they were being instituted at former semiautonomous city-states throughout the Valley of Oaxaca at this time. By converting former semiautonomous city-states into provinces overseen by governors and by politically managing the most important resources of these former city-states, the ruler and political elite of Monte Albán transformed their former hegemonic state into a territorial state.

MONTE ALBÁN'S WORLD SYSTEM DURING THE XOO PHASE

Both Lambityeco and Monte Albán reached their highest peak during the Xoo phase. The establishment and prosperity of Lambityeco at this time was directly related to political stability in the Valley of Oaxaca generated by the rulers of Monte Albán. Lambityeco was located on the valley floor with no nearby defensible positions and could not exist in this setting without support and protection from the capital. Therefore, it seems evident that Monte Albán's rulers had established hegemony over the city-states in the Valley of Oaxaca by the beginning of the Xoo phase.



10.1. ***Possible limits of the Monte Albán Xoo phase state (gray area) and regions beyond the Valley of Oaxaca (thick black line)***

Such hegemonic control was not limited to the Valley of Oaxaca but also extended to adjacent areas (Fig. 10.1). Insofar as ceramic assemblages reflect political hegemony, the Sola, Ejutla, and Miahuatlán valleys to the south manifest a Xoo phase ceramic assemblage virtually identical to that of the Valley of Oaxaca, as demonstrated by excavations and surveys there (Brockington 1973; Markham 1981; Feinman and Nicholas 1990; Balkansky 2002).[3] In addition, for the Sola Valley, Balkansky reports the presence of Xoo phase carved stones and, although he does not recognize them as such, TPAs and/or PPAs, which he describes as a "three to four structure group (with a larger east structure) arranged around an enclosed plaza" (Balkansky 2002:66). Balkansky (2002:60) cites an estimated population of more than 7,000 persons for the Sola Valley at this time, whereas Feinman and Nicholas (1996:93) cite a coeval population of about 3,000 persons for the Ejutla Valley.

The mountainous Peñoles region to the west of the valley also has a Xoo phase occupation in two-thirds of the area closest to the Valley of Oaxaca (Kowalewski, personal communication, 2008) with a larger population in

contrast to earlier phases (Kowalewski 2003). In his survey in the mountains north of the Etla arm of the valley, Drennan (1989:378) reports a considerable increase in population in this area, including sites with a Xoo phase ceramic assemblage and sizeable mound groups in contrast to very low population levels in earlier phases.

The Sierra Juárez in the mountains north of the valley also manifests the presence of a Xoo phase ceramic assemblage and a TPA at San Pedro Nexicho (Winter, personal communication, 2008). The Guirún area east of the Tlacolula arm of the valley had a substantial Xoo phase occupation including, like the Ejutla Valley, more than 3,000 persons (Feinman and Nicholas 1996:93). To the south of the Tlacolula arm and east of the Zimatlán arm of the valley, the Chichicapan Valley has a substantial Xoo phase occupation (Winter, personal communication 2008). It seems likely that the small valleys in the mountainous region surrounding the Valley of Oaxaca were occupied by Zapotecs under the political hegemony of the rulers of Monte Albán during the Xoo phase.

On the other hand, there is little evidence that Monte Albán's ruling elite exerted control beyond these areas. The Cañada region to the northeast lacks evidence of a Xoo phase ceramic assemblage. To the southeast and southwest, the Mixe area and Isthmus of Tehuantepec, which together formed a separate cultural region during the Late Classic, show no evidence of Xoo phase occupation (Winter, personal communication, 2008).

Xoo phase ceramics, but not the entire ceramic assemblage, have been found to the northwest of the Valley of Oaxaca in the nearby Nochixtlán Valley, the largest and richest agricultural valley in the Mixteca Alta. Xoo phase ceramics are reported from surveys around Jaltepec, a large Classic site in the extreme southern part of the Nochixtlán Valley (Byland and Pohl 1994), and also occur in excavations along the slopes of Yucuñudahui, a major Classic site in the extreme northern part of the valley (Lind 1979). However, no dates are associated with these ceramics and their context is insufficient to assess the significance of their presence, although it may reflect intensive trade between the Valley of Oaxaca and the Nochixtlán Valley.[4]

Along the Pacific Coast in the region known as the Mixteca de la Costa, the Classic period is much better known. However, there is no evidence for a Xoo phase ceramic assemblage or any indication that the rulers of Monte Albán ever exerted politically hegemony over this region (Joyce 2003). On the other hand, the rulers of Río Viejo and other Late Classic centers along the Pacific Coast erected carved stone monuments inscribed with their calendar names using Zapotec hieroglyphics (Urcid 1993; Urcid and Joyce 2001). This suggests that they were emulating symbols of power

used by the rulers and political elite of Monte Albán. Therefore, although the region was not under their control, there was probably intensive trade between this region and Monte Albán via Sola, Miahuatlán and Ejutla (Feinman and Nicholas 1990, 1993).

Farther north in the Mixteca Baja, extensive excavations at Cerro de las Minas, a major Late Classic Ñuiñe phase site, have not revealed any evidence of Xoo phase ceramics (Winter 1996, 2007a). At this time, however, members of the political elite at Cerro de las Minas and other sites in the Mixteca Baja were buried in tombs with local-style urns or ceramic effigies. Furthermore, the Mixteca Baja rulers also employed carved stones naming themselves and depicting their conquests using Ñuiñe hieroglyphics that were originally derived from Zapotec writing during the Nisa phase (Gaxiola 1984:77; Urcid 1998:10–11; Rivera 2000, 2002). The employment of distinctive urns and carved stones by Late Classic Ñuiñe rulers reflects their own local emulation of symbols of power used by the rulers and political elite of Monte Albán and probably indicates economic interaction between the Mixteca Baja and Valley of Oaxaca.

Yet, farther north in the valleys of Toluca and Puebla, evidence of Xoo phase ceramics have been discovered (Smith and Lind 2005). However, no dates are associated with these ceramics and they do not constitute a complete Xoo phase ceramic assemblage. Nevertheless, they appear to reflect mortuary contexts, indicating the possibility of Late Classic enclaves of Zapotec long-distance traders who lived and died in these valleys. Finally, the presence of Balancán Fine Orange in the Valley of Oaxaca indicates a relationship with Tabasco and Campeche on the Gulf Coast, although the examples from the valley are mostly imitations and may or may not include some imports.

Between 650 and 850 CE, apart from the Valley of Oaxaca and adjacent areas, Monte Albán's world system probably included the Mixteca de la Costa, Mixteca Alta, Mixteca Baja, and the valleys of Puebla and Toluca. However, to date there is no archaeological evidence that the rulers of Monte Albán exerted direct political control over any of these regions. Instead, it appears more likely that long-distance traders from Monte Albán were actively engaged in economic exchanges with these regions. These interactions were made possible by the earlier collapse of Teotihuacan in the Valley of Mexico whose rulers had probably exerted hegemony over these areas and Monte Albán until ca. 550 CE (Winter 1998, 2001).

In sum, the hegemony established by Monte Albán's rulers during the Xoo phase seems to have been limited to the Valley of Oaxaca and areas immediately adjacent to it. Although Monte Albán manifests some of the characteristics that Smith and Montiel (2001) cite for empires, such

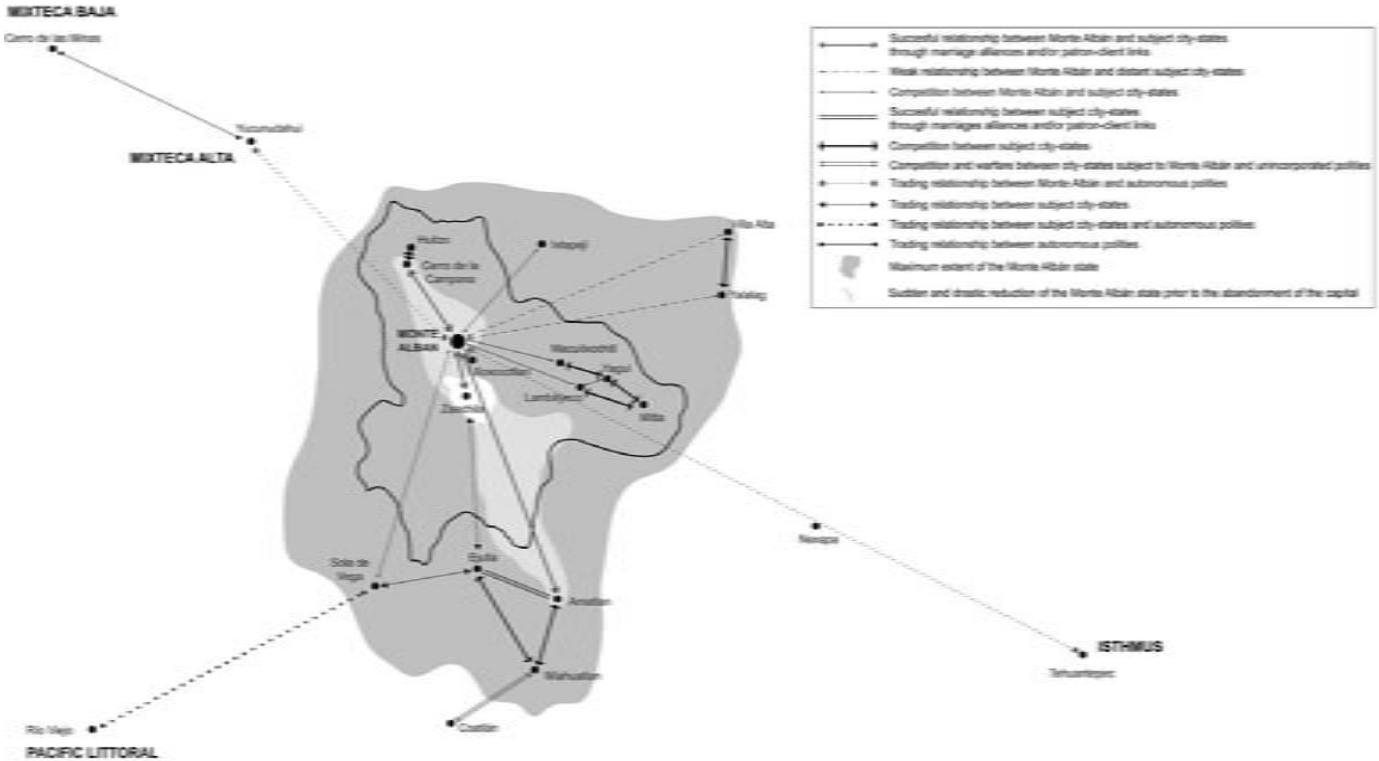
as a major urban center with hieroglyphic inscriptions that record conquests and evidence for regions beyond the empire emulating its symbols of power, most of the other characteristics are lacking. It does not appear, therefore, that Monte Albán can be categorized as an empire during the Xoo phase.

THE COLLAPSE OF MONTE ALBÁN

The abandonment of Lambityeco was caused by political instability. This instability was a result of the inability of the rulers of Monte Albán to maintain control over the communities within the state. Therefore, the question of why Lambityeco was abandoned is directly related to the question of how the rulers of Monte Albán lost political control of the communities within the Valley of Oaxaca at the end of the Xoo phase. This latter question, in turn, relates to the question of why certain elite practices of Classic period Zapotec civilization fell into disuse and why Monte Albán ceased to exist as the capital of a state after having served as the most important city in the Valley of Oaxaca for more than a millennium.

Explaining the political collapse of Monte Albán requires a concerted problem-oriented research plan that is still far away from being realized, not only because of the scale of the phenomenon but also because the sequential integration approach has not been employed in the few relevant cases where there has been a fair amount of archaeological explorations at particular sites. Thus, the model to be outlined below should be construed as hypothetical and aimed at formulating questions for future research. We begin by emphasizing that the political collapse of Monte Albán should be understood in terms of a sociocultural process within particular historical and ecological contexts (Cowgill 1988) and that due attention needs to be paid to local antecedents, environmental factors, and anthropogenic impacts on certain ecosystems.

In controlling their hegemonic state, the Monte Albán ruling elite must have deployed at various times different strategies toward their subject city-states, including marriage alliances, competitive generosity, patron-client relationships, and direct control backed up by military force. Figure 10.2 plots some of the participants and the type of relationships that may have characterized the Monte Albán state ca. 800 CE. Among these must have been successful or weak relationships that were contingent on the specific strategies of incorporation and the geographical distance between the capital and subject city-states. Other relationships would have involved political and economic competition not only between Monte Albán and subject city-states but also between neighboring incorporated city-states.



10.2. ***Hypothetical model of the political collapse of the Xoo phase Monte Albán state (ca. 850 CE)***

In addition, both the capital and subject city-states would have had competitive relationships with autonomous polities on the fringes of the state's boundaries and with more distant polities.

That the political elite of Monte Albán were seemingly able to maintain successful relationships with some incorporated city-states may be illustrated by Cerro de la Campana, Suchilquitongo (Méndez 1988). Although little is known of the context of Tomb 5—the most ostentatious tomb yet known in all of southwestern Mesoamerica—the palace associated with it was not covered by a PPA or a TPA (Urcid 2005), nor is there any evidence for an abrupt secession of the local ruling lineage. There is a TPA adjacent to the palace, suggesting that the relation between Monte Albán and Cerro de la Campana was different from the relation between the capital and the Lambityeco rulers.

The case of Lambityeco serves to illustrate the competitive relationship between the capital and subject city-states. The changes implemented by the rulers of Monte Albán on Lambityeco appear to have been, to a large extent, a response to the growing economic power and independence of the local elite in governing their city-state. Between ca. 700 and 800 CE, the royal couples of Lambityeco evidently increased their access to resources that they invested in symbols of status and power even rivaling or surpassing some of those from Monte Albán. One of those sources of wealth appears to have been based on their role as mediators between salt producers and consumers, perhaps by controlling its distribution to neighboring city-states and to Monte Albán. During the same time, Monte Albán was growing too (almost doubling its Pitao phase population) and certainly required increased resources to support its population and its political elite. By co-opting salt production at Lambityeco and its distribution to other city-states within their sphere of control, the political elite of Monte Albán would have augmented much needed revenue to support themselves and the population of their capital city, curtailing at the same time the increased ability of the local ruling elite from amassing further economic and political power.

Similar examples of a competitive relationship between the political elite of Monte Albán and other subject city-states within the Tlacolula arm of the valley may have involved Macuilxóchitl. The community had what appears to be a TPA at the top of Cerro Danush, with a palace in the next lower terrace (Faulseit 2008). Such a strategic location dominates the local landscape. There is also a probable PPA that was cut through by the Pan-American Highway (Markens, Winter, and Martínez 2008:202). Although we do not know what these examples of state architecture mean in terms of the local political dynamics or when within the Xoo phase they were built,

the presence of these two monumental structures may reflect the vested interest of the Monte Albán ruling elite to keep that city-state within its tight control.

Still another example of a takeover by the political elite of Monte Albán may have involved the community of Xoxocotlán, despite the close proximity of the latter to the capital. Tomb B in Mound 5 at Xoxocotlán, a tomb built and used continuously throughout the Xoo phase, appears to have been associated with a double-patio elite residence that was eventually covered by a TPA or a PPA (Urcid and Sellen 2008).

It is possible that the growth in power of several regional ruling elites and the need to increase access to resources by the capital led the ruling elite from Monte Albán to a widespread enforcement to ensure overall tighter control. Such a strategy involved not only nearby communities (like Xoxocotlán) but even entire distant regions (like the Sola Valley). By converting former autonomous city-states into provinces ruled by governors and by politically managing the most important resources of these former city-states, the ruling elite of Monte Albán transformed their former hegemonic state into a territorial state in the latter part of the Xoo phase.

Although there is no evidence that Monte Albán was ever conquered (Winter 2003:116) or that a major polity in any region surrounding the valleys ever posed a significant military threat to the capital, our model does consider the possibility of warfare at the fringes of the state, particularly between loosely incorporated subject states and between these and autonomous neighboring polities. Figure 10.2 plots a competitive relationship involving organized violence between Miahuatlán and Coatlán, in the southern mountains, based on what we know of the relationship between these communities during the early Colonial period (Paso y Troncoso 1905; Jansen 1984; Thiemer-Sachse 1990). The warring between these communities at that time appears to have been triggered, among other things, by local territorial disputes that probably had long historical antecedents. From the perspective of the capital, these low-scale armed encounters would have tapped resources that the political elite of Monte Albán were forced to divert in order to protect their distant provinces.

Such protection would have been crucial in order to guarantee direct and indirect access to more distant resources that was made possible by trading relations with autonomous polities. We assume that the progressive increase in access to resources evidenced among the Lambityeco elite between ca. 700 and 800 CE reflects a similar success on the part of the rulers, political elite, and long-distance merchants from Monte Albán in generating more resources during this time. Figure 10.2 plots three probable trading routes linking (1) Río Viejo, in the Pacific littoral, with Sola de

Vega; (2) the Mixteca Baja with the Valley of Oaxaca via the Mixteca Alta; and possibly (3) Tehuantepec, in the Isthmus, with Monte Albán, although there is little evidence for the latter. Each trading relation would have been different, depending on the presence or absence of intermediaries.

It should be stressed that the model illustrated in Figure 10.2 includes but a small fraction of the constituents that made up the Monte Albán state, but by outlining the multiplicity of interests and relationships among participants it becomes clear the potential variety of sociocultural factors that could have unfolded simultaneously, leading to the collapse of the regional political system. In addition, there is no reason to eliminate from the model the possibility of strife within the political elite of Monte Albán. All of the stone monuments from the capital that were carved during the first half of the ninth century CE occur in the North Platform and have been found fallen and, in most cases, broken and incomplete. Although it is impossible to determine if the condition of these monuments reflects iconoclastic acts by competing elite factions or is simply the result of decay and more recent vandalism, it is unlikely that the ruling elite of Monte Albán had monolithic interests. Intrigues in royal courts, plots of assassination of leaders, and sudden takeovers by factions with different agendas figure prominently in the histories of ancient and modern states.

Could widespread or localized social unrest have played a role in the political collapse of Monte Albán? Given the need of the growing state to increase revenues in order to provide local and regional services, it seems possible that governors in some provinces and the ruler and political elite at Monte Albán increased the labor demands on commoners to produce more goods, limiting at the same time their access to certain manufactured goods. If such a measure became increasingly repressive, commoners could have rebelled or shifted their allegiance to other dissenting elites, who may have been pressed as well to supply more tribute.

However, if commoners had rebelled, we would expect to find archaeological evidence of the destruction and desecration of civic residential buildings and other elite markers of status and power, such as that found at Río Viejo on the Pacific Coast of Oaxaca (Joyce, Bustamante, and Levine 2001). There is no such evidence in any of the elite residences or public buildings at Lambityeco or Monte Albán (Winter 2003:106). If rebellions ensued in other parts within the state, the political elite of Monte Albán would have had to divert resources to maintain the elite interests of those provinces.

As commented before, the sociocultural processes outlined thus far need to be considered in terms of their ecological setting. From the Pitao to the end of the Xoo phase, the population at Monte Albán doubled,

reaching the highest peak in its entire history. Population in the Valley of Oaxaca and adjacent regions of the Monte Albán state also appears to have experienced considerable growth between 650 and 850 CE. Lambityeco, for example, was not even occupied or had a very tiny population during the Pitao phase, yet grew to have a population of nearly 3,000 persons and served as the capital of a city-state with more than 8,000 persons during the Xoo phase. The large increase in population of the valley would have required a corresponding increase in food production.

During this time, Monte Albán would have needed twice the amount of food resources ever in its history for its population to survive. Kowalewski (1982:203) has suggested that, at this time, the rulers and political elite at Monte Albán adopted a piedmont strategy to help feed the growing population. The rulers of Lambityeco also appear to have adopted a similar strategy as evidenced by the large nearby farming community of Santa Ana del Valle, spread across the piedmont zone to provide Lambityeco with corn.[5] It also seems probable that many of the other city-states in the valley adopted a piedmont strategy to provide food resources for their increasing populations.

At present, we have no means of evaluating the extent to which a piedmont strategy could have impacted specific ecological systems, nor do we have data on the chain of anthropogenic changes that such a strategy may have caused in the valley. In addition, although a piedmont strategy is risky because it is dependent on rainfall and adequate rains may not fall in the same area each year (Kowalewski 1982:155–156), this strategy evidently worked well during years of normal rainfall because resources could be shifted to affected areas and because these probably varied randomly from year to year within the valley. Nevertheless, a prolonged and widespread drought would have had a devastating effect on the large Xoo phase population in the Valley of Oaxaca (Winter 2008).

Although studies aimed at understanding ancient climatic regimes to detect evidence of drought episodes have not been carried out in southwestern Mesoamerica,[6] environmental evidence from the Basin of Mexico (Caballero and Ortega Guerrero 1998; Metcalfe et al. 1989; O'Hara and Metcalfe 1997, cited in Markens, Winter, and Martínez 2008:209) and from southeastern Mesoamerica (Hodell, Curtis, and Brenner 1995; Robichaux 2002:341; Haug et al. 2003) indicates the onset of dry intervals coincident with the Late Classic. The data from the southern and northern Maya lowlands are allowing a better understanding of the timing, geographical extent, and possible causal relation between drought episodes and sociocultural developments. "Evidence for severe, extended drought conditions . . . now comes from at least three sources, each of which is based on a different line

of evidence," which date a series of severe droughts in southern Campeche and the Maya lowlands from ca. 750 to 950 CE (Robichaux 2002:341). It is possible that this series of severe droughts may have also affected the Valley of Oaxaca near the end of the Xoo phase. What is needed in order to evaluate this scenario is to obtain paleoclimatic data for the valley to elicit timing and periodicity of droughts caused by solar forcing (Hodell, Brenner, and Curtis 2001), the way they differentially affected diverse localities and ecosystems, and the extent to which such episodes bear a possible casual relationship with the political collapse of Lambityeco and Monte Albán.

What has become clear in the case of both the southern and northern Maya lowlands is that episodes of drought manifested different impacts in different places, coinciding with the collapse of polities in some areas and not in others and, in some cases, even may have permitted political transformations toward increased wealth and power (Yaeger and Hodell 2008). The case of Chichen Itzá is worth considering because the timing of its growth appears to coincide with a major drought episode affecting the eastern part of the peninsula of Yucatán during the ninth century CE. It has been hypothesized that such a drought would not have affected Chichen Itzá as it did other settlements in that sector of the peninsula because its political economy was not much dependent on agricultural production but on the mercantile control by its political elite of the trading and distribution of manufactured goods, including salt, along the circumpeninsular canoe networks (Yaeger and Hodell 2008:220–221).

The effects of a drought in the valley would have had implications that, together with the political turmoil, would have exacerbated the conditions, leading to the political collapse of Lambityeco and Monte Albán. We have argued that during the early part of the Xoo phase, ca. 650–800 CE, the Zapotec economy in the valley appears to have operated on market principles as evidenced in salt production at Lambityeco, which was a household enterprise. A prolonged drought around 800 CE would have increased the cost of corn and other foodstuffs. To compensate for these increased costs in basic foodstuffs, producers of other basic household necessities—salt, ceramics, textiles, obsidian, manos and metates, molcajetes, lime—would have had to increase the costs of their products. This inflationary spiral, in turn, would have left many households of commoners, especially borderline producers and farmers whose crops failed to yield adequate harvests, without access to sufficient resources to obtain their basic necessities.

In response to such an economic crisis, unfolding in tandem with the increased threat of the growing power of local elites, the ruler and political elite at Monte Albán may have brought about the same radical change in political organization at Lambityeco to other parts of the valley. By

deposing the local ruling elites, installing their own governors, and imposing government control of the economy, they would have controlled the production and distribution of basic resources, ensuring that most households in the valley's provinces under their control had access to basic resources, perhaps even providing them through rationing. Likewise, the government workshops would have provided employment at the least cost to the state. In this manner, scant resources could be stretched to cover most households.

Structure 195-1 at Lambityeco provides some additional evidence concerning the changes implemented by the ruling elite at Monte Albán early in the ninth century CE. Because it was built with the same basal dimensions as System IV on the Main Plaza of Monte Albán, its monumental size seems too grand for Lambityeco, which only had a population of 3,000 persons and was one-tenth the size of Monte Albán. It seems likely that this structure was erected as a public works project that employed architects, masons, masons' helpers, and unskilled laborers who could not be placed in government workshops. It is also likely that the temple precinct system (TPA) with similar dimensions and its 12 m high temple in Mound 155 was an additional public works project. These public works projects probably reflect the political apprehension of having a large jobless and underfed population of idle commoners.

An interruption in the construction of Structure 195-1 sometime around 825 CE is evident in the archaeological remains. The west room in Structure 195-3SE, which was partially covered with construction fill, had its walls above the level of the fill exposed to the elements for some time. Likewise, the construction fill directly west of Structure 195-3NE, which had been deposited at the same time, manifested a weathered surface, indicating that it too had been exposed for some time. This suggests that resources were not available to continue construction, probably because they were being channeled to respond to crises in other provinces. Archaeological evidence from Structure 195-1 and Structure 190-1 at Lambityeco indicates that the sweeping economic changes instituted by the ruler and political elite at Monte Albán lasted for, perhaps, less than two generations before the regional political system collapsed.

Imposing a governor at Lambityeco would have factionalized the community, since non-ruling elites most likely had a stake in what the deposed lineage had previously provided them. The remaining disenfranchised elites from Lambityeco could have regrouped and allied themselves with the ruling elites of other subject city-states that were already balkanizing from Monte Albán. Perhaps the imposed governor at Lambityeco further lost the ability to maintain the local population if the elites from Yagul

(hypothetically also balkanizing from Monte Albán) offered better opportunities to the Lambityeco commoners, including jobs tending their fields and lesser tribute quotas. Perhaps many Lambityeco commoners did revolt after all, not violently but simply by mass migrating within a short span to Yagul and other adjacent communities. It is even possible that the imposed ruler at Lambityeco eventually maneuvered against the paramount lord of Monte Albán in an attempt to gain autonomy.

Upon the political collapse of Monte Albán there was a dramatic decrease in the population of the city, with a 98 percent drop in population, and most of the households seemingly migrated elsewhere. There is no evidence of a sudden exodus at Monte Albán because the inhabitants took the time to pack up their household belongings before leaving (Winter 2003:114–116). Although a few households of salt producers may have remained at Lambityeco, it appears that most of the community was abandoned. It is even possible that any salt production was carried out by a few households who lived elsewhere and visited the site. Like Monte Albán, the Lambityeco inhabitants seem to have migrated slowly. The coqui and xonaxi who occupied Structure 195-1 were able to retrieve the bones of their ancestor from Tomb 1 before departing the site. The same applies to the nobles who occupied Structure 190-1, who were also able to retrieve the bones of their ancestor from the slab-lined grave (Burial 68-3) built under the household ancestral shrine.

The data from Lambityeco indicate that the political collapse of Monte Albán occurred while trying to regiment the government and the economy of at least some subject city-states. From the perspective of Lambityeco, the collapse ensued within a short span as the Monte Albán state was in the process of consolidation and, perhaps, expansion, rather than as a result of a slow process of contraction. However, we do not know the timing of the collapse of Monte Albán in terms of radiocarbon dates from the city. It is quite possible that the process was not the same in terms of its dynamics and pace with other city-states. In Figure 10.2, we also model a sudden and drastic contraction of the state prior to the eventual abandonment of the capital, assuming that its political elite briefly continued to maintain strongholds in a few provinces. Eventually, however, the political elite of Monte Albán seemingly moved their capital to Zaachila, which in time became one of several competing city-states in the valley.[7] However, Zaachila's Postclassic dynasty can only be traced back to ca. 1260 CE, when the city-state apparently succeeded in incorporating the Chila phase city-states of the valley into a large confederation; Zaachila also legitimated Late Postclassic valley rulers in a manner similar to Tilantongo in the Mixteca Alta (Oudijk 2008:106–107).

The political collapse of the Monte Albán state led to disjunctions in a number of cultural traits of Classic period Zapotec civilization. Certain elite practices and symbols of power lost prestige and fell into disuse soon after the abandonment of Monte Albán. Yet, other traits persisted (Winter 1989a:129) or were eventually reconfigured and deployed by succeeding elites, including new forms of writing, continued knowledge of the calendar and related mantic practices, a long-rooted religious ideology based on human sacrifice as gift-giving to the divine, deities such as the ubiquitous Rain God, and stories of origins that resorted to the tropes of a mountain of sustenance and the creation of humans from corn.

There is no doubt that the political collapse of Monte Albán brought a major reconfiguration of populations throughout the territories of the former state. Yet, the inability to define the ceramic assemblage of the Liobaa phase by survey projects of the Valley of Oaxaca and adjacent areas prevents us from a better understanding of the settlement patterns during the Liobaa phase (Winter 1989a). For instance, Kowalewski and colleagues (1989:map 8) record only the Chila phase settlements (ca. 1250–1521 CE) in the Valley of Oaxaca. Most likely there was reduction in demographic profiles because of warfare, mass migrations, and famine generated by the political instability and its environmental backdrop, including a possible drought and consequences of human impact on the landscape. It is also possible that some people moved outside the confines of the valley, but until we have a better idea of settlement histories in regions adjacent to it we have no means of assessing this possibility either.

POST-ABANDONMENT ACTIVITIES

Following the collapse of Monte Albán, only a residual population of 600 persons out of a Xoo phase population of 30,000 persons remained during the Liobaa phase and the settlement ceased to function as an urban center (Winter 2003:114–115). There is no evidence for the construction of temples, the production of urns or other elite ceramics, writing, or elaborate tombs (Winter 2003:117). There is some evidence of reuse of Xoo phase tombs, possibly by Liobaa phase visitors who wished to retrieve the bones of their ancestors (Winter 2003:115). However, the Liobaa population did not construct tombs at Monte Albán and evidently buried their dead in flexed positions (Winter 2003:114), instead of extended positions, as the latter would have required more labor to excavate. Likewise, Liobaa populations visited Monte Albán to place offerings in the ruins of Xoo phase temples. These offerings consisted of miniature ceramic vessels, which would have required less material and labor to produce and transport (Winter 2003:115).

At Lambityeco, there is scanty surface evidence for Early Liobaa phase occupation, and the community seems to have been almost completely abandoned at the end of the Xoo phase. However, evidence for Late Liobaa activity and possible occupation do occur. On top of Mound 195, Paddock (personal communication, 1967) found a thick layer of ash from salt-production activities deposited over the collapsed and already disintegrated adobe walls of the Structure 195-1 residence. Likewise, a hearth was dug through the floor of the north walkway of the plaza of System 195 (Structure 195-1) and a layer of yellow ash from the cleansing of bitterns from the salt was found nearby. In addition, a Silho or X Fine Orange hemispherical bowl was found in a hole dug through the plaza floor and a Silho Fine Orange necked jar was found elsewhere in the plaza.

On top of Mound 190, a thick layer of ash from salt production was also found on top of a layer of dirt from the collapsed and disintegrated adobe walls of Structure 190-1. A Silho or X Fine Orange tripod bowl was also located in this zone of salt production. In addition, the burial (68-2) of a child, six to eight years old, in a flexed position with a Late Liobaa phase subhemispherical bowl on his head was recovered (Urcid 1983; Lind 2008:175–176). Three archaeomagnetic dates of 1035, 1050, and 1065 CE were obtained in association with this zone on top of Mound 190. These dates conform to the known dates for Silho Fine Orange and indicate that the salt-production activities on top of the ruins of the Xoo phase buildings in Mound 195 and Mound 190 took place 200 years after their abandonment.

Finally, in a small Xoo phase mound (Mound 92) with an associated tomb (Tomb 8), a Liobaa phase burial (72-2) of an adult male, thirty to forty years old, was discovered. The burial had been placed in a circular hole dug through the ruins of the house and, evidently, accidentally penetrated the tomb roof. The offering consisted of a single Late Liobaa phase tripod pyriform jar. Like the burial (68-2) of the child in Mound 190, the adult male was a flexed burial, which is very distinctive from the extended burials of the Xoo phase. Both burials suggest that Late Liobaa phase households, probably salt producers, were located nearby; however, no Liobaa phase houses have been discovered and excavated at Lambityeco.

CONCLUSIONS

Through a sequential integration approach to a series of elite structures occupied by the lords of Lambityeco, this study has presented an analysis of political evolution in the Valley of Oaxaca during the Xoo phase. Unlike a sequential segregation approach, which describes cultural evolution in

terms of changes from one sequentially segregated phase of 150 to 400 years' duration to the next, a sequential integration approach examines the continuous change within a single phase. By examining the changes at Lambityeco within the Xoo phase, it has been possible to reveal the nature of political evolution in the Valley of Oaxaca during this time period.

Lambityeco was established as a small, semiautonomous city-state in Tlacolula arm of the Valley of Oaxaca near the beginning of the Xoo phase. The location of Lambityeco on the valley floor indicates that the rulers of Monte Albán had established a hegemonic Zapotec state in the Valley of Oaxaca by the beginning of the Xoo phase that ensured the political stability necessary for Lambityeco's vulnerable setting.

Lambityeco was an important salt-producing center and its salt producers may have provided up to 90 percent of the salt consumed by Valley of Oaxaca populations. It was also probably an important textile- and pottery-producing center, in which potters made excellent copies of Balancán Fine Orange that were probably exported to Monte Albán and other communities in the Tlacolula and Zimatlán arms of the valley. Lambityeco was an important local market center for the communities within its city-state and its vendors provided all the basic necessities for the households within its jurisdiction. What was not produced at Lambityeco was obtained through exchanges with vendors in markets in neighboring city-states and through Monte Albán's merchants, who had access to long-distance trade networks.

The population of Monte Albán and the Zapotec state, including Lambityeco, evidently grew and prospered during the early part of the Xoo phase. This growth and prosperity was probably in large part because of the rulers, political elite, and long-distance merchants of Monte Albán who were actively engaged in trade toward the north, south, and west of the valley following the collapse of Teotihuacan. Also, in large measure, it was a result of the rulers of Monte Albán exerting hegemony over the city-states in the valley but allowing their local rulers considerable independence in governing them.

Shortly after 800 CE there was a dramatic change in political organization in the Valley of Oaxaca. The rulers of Monte Albán appear to have deposed the local rulers of major semiautonomous city-states in the valley and installed new governors in their place. They also instituted a politically managed economy, controlling the production and distribution of most resources. In this way they transformed their hegemonic state into a territorial state in the valley and adjacent areas.

It was hypothesized that this dramatic change in political organization was brought about by a complex interplay of internal and external socio-

cultural processes that could have been exacerbated by particular environmental factors and anthropogenic impacts on certain ecosystems. The rulers of Monte Albán and Lambityeco, and probably many other city-states in the valley, had relied on a risky piedmont strategy, dependent on rainfall agriculture, to support themselves and their large populations during the Xoo phase. A prolonged drought in a market economy would have caused corn prices and, consequently, other commodities to rise beyond the resources of most households of commoners. In response to this economic crisis, and given the eroded links among elites, the ruler and political elite of Monte Albán probably took control over the production of commodities that every household needed, such as salt from Lambityeco, and made it more efficient and productive. They also probably rationed these basic commodities to commoners who were employed in government workshops or on public works projects. This ensured that most households had access to basic resources.

Evidently, however, the interplay of multiple factors made it impossible for the Monte Albán state to maintain political control. The capital and many cities, including Lambityeco and Macuilxóchitl, the largest Xoo phase center in the Tlacolula arm of the valley (Markens, Winter, and Martínez 2008:208), were largely abandoned. Although we do not know how populations redistributed themselves, it is very likely that the Liobaa phase population of the valley was probably a fraction of the former Xoo phase population.

The collapse of Monte Albán, which had been the focal point of Classic period Zapotec civilization for 1,300 years, brought about major disjunction in elite practices. The Zapotec hieroglyphic system of writing, which supported the political system, lost prestige and fell into disuse. Images of deities such as Cociyo and Pitao Cozobi, which figured predominantly on the urns and bipod effigy vases in tombs of the elite, were not crafted any more. Large temples, the abodes of deities, and large governmental palaces, the abodes of rulers, ceased to be built. Former places of power were abandoned or nearly abandoned. The Xoo phase palaces and temples at Lambityeco fell into ruins, only to be used as platforms for salt boilers.

NOTES

1. In previous articles (Lind and Urcid 1983, 1990; Lind 2002), attempts were made to link these royal married couples to the sequence of elite houses in Mound 195 Sub, which they must have occupied. However, progress in the study of Zapotec hieroglyphics (Urcid 2001) and a thorough reanalysis of frieze fragments and inscriptions on the stone tablet from Tomb 6 have brought to light new

information leading to a corrected and more complete version of our interpretations, which will be presented here.

2. If Structure 195-3SE was abandoned in 810 CE and the new coqui and xonaxi occupied Structure 195-3NE until Structure 2 was built in 825 CE and if they occupied Structure 195-2 until Structure 195-1 was completed in 830 CE, as suggested by the calibrated radiocarbon dates, then some twenty years elapsed between the time they first occupied Structure 195-3NE until they occupied Structure 195-1. It appears that just before the completion of Structure 195-1 either the new coqui or xonaxi died and was buried in Tomb 1. Although it may seem unlikely that twenty years passed between the temporary occupations of Structure 195-3NE and Structure 195-2 until the final occupation of Structure 195-1, the calibrated radiocarbon dates are tightly clustered and follow the stratigraphy precisely. Furthermore, there is evidence that the construction of Mound 195 did not proceed without interruption. The approximate dating of the transition from Structure 195-3NE to Structure 195-2 to Structure 195-1 opens the possibility that our estimate of ca. 810 CE for the death of Lady 10 Naa may be too early.

3. The Valley of Oaxaca Survey Project incorrectly separated Monte Albán IIIB from IV and stated that during IIIB Monte Albán only controlled the Etla arm of the valley, with the Tlacolula and Zimatlán arms being virtually abandoned, and during IV, Monte Albán was abandoned (Blanton et al. 1981:97–98) and the Tlacolula and Zimatlán arms of the valley occupied. Markham (1981), Feinman and Nicholas (1990), and Balkansky (2002) were unable to distinguish IIIB from IV in the Miahuatlán, Ejutla, and Sola valleys. Therefore, they interpreted the IIIB-IV (our Xoo phase) occupation there in accordance with the interpretations of the Valley of Oaxaca Survey Project and concluded by default that the Sola, Ejutla, and Miahuatlán regions were not under the hegemony of Monte Albán, which either only controlled the Etla arm of the Valley (IIIB) or was abandoned (IV). Contrary to their Valley of Oaxaca Survey Project–influenced interpretations, we consider the Sola, Ejutla, and Miahuatlán regions to have been under the hegemony of the rulers of Monte Albán during the Xoo phase, as evidenced by the presence of Xoo phase ceramic assemblages there.

4. The Classic period in the Mixteca Alta is so poorly known archaeologically that no clear division even exists between Early and Late Classic phases. This makes it virtually impossible to assess the archaeological relationship between the Valley of Oaxaca and the Mixteca Alta during the Xoo phase. However, Spores (personal communication, 2008) is making progress in identifying the Early Classic in his recent excavations at Teposcolula.

5. Like the large farming community of Santa Ana del Valle, with a Xoo phase population of 3,600 little public architecture, and spread across the piedmont zone to provide Lambityeco with corn, the enormous farming community of Jalieza, with a Xoo phase population of 16,000 and little public architecture, was spread out across the piedmont zone probably to provide corn for Monte Albán. Several other piedmont communities to the west of Monte Albán were probably established for similar reasons.

6. Currently, Ray Mueller and Arthur Joyce are collecting and analyzing soil samples that may aid in identifying and dating any series of drought episodes in the Valley of Oaxaca (Joyce, personal communication, 2008).

7. The hypothesized move of the ruling elite of Monte Albán to Zaachila upon the collapse is based on evidence for a strong identification of the Zaachila elites with Monte Albán recorded in several Xoo phase carved monuments from Zaachila and its environs (Urcid 1999:230, 260, fig. 26).

appendix 1

Calibrated Radiocarbon Dates for the Late Classic and Postclassic Periods in the Valley of Oaxaca, Mexico

ROBERT MARKENS, MARCUS WINTER, AND CIRA MARTÍNEZ

One of many challenges archaeologists face in the Valley of Oaxaca is explaining the decline of Monte Albán at the end of the Classic period and defining the political, economic, and social changes that ensued. Monte Albán emerged soon after 500 BCE as one of Mesoamerica's earliest urban centers, and for more than a millennium this hilltop metropolis occupied a position of regional political dominance, integrating for a time dozens of smaller urban centers and hundreds of villages in the valley into a single political, economic, and social system known as a state. Then at approximately 800–900 CE the center was largely abandoned. Although this time of collapse and transformation has long commanded the attention of archaeologists, research on the matter has been frustrated by a problematic segment of what is otherwise a well-defined regional ceramic chronology. Several generations of researchers, beginning with Alfonso Caso, have grappled with the chronological problem at length, yet its resolution has been slow and fitful and remains to this day controversial.

Recently the authors of this appendix concluded a five-year salvage project in the Valley of Oaxaca known as the Proyecto Salvamento Carretera Oaxaca-Istmo, Tramo Oaxaca-Mitla 2002–2006, or by its initials as SACOI. Directed by Marcus Winter, SACOI personnel excavated portions of five public buildings and nearly thirty noble and commoner

residences at three key Prehispanic settlements spanning the Late Classic–Postclassic periods: Macuilxóchitl, Lambityeco, and the dispersed community of Xaagá, located in the hinterland of Mitla. In this appendix we present twelve radiocarbon dates resulting from these investigations. We believe that these new dates considered together with existing radiocarbon dates for the valley clarify the problematic segment of the regional ceramic chronology. The new and previously published dates are presented in two formats: first as uncalibrated dates (Table A1.3) and second as calibrated dates (Table A1.4). Mr. Christopher Patrick, Deputy Director of the Beta Analytic Radiocarbon Dating Laboratories of Miami, Florida, undertook the calibration of the Late Classic–Postclassic period dates from the valley that had been published decades ago (e.g., Drennan 1983).

It is fitting that this appendix accompany a monograph concerning Lambityeco, since that site's ceramic assemblage has occupied center stage in efforts aimed at clarifying the Classic–Early Postclassic segment of the regional ceramic chronology.

A BRIEF HISTORY OF THE PROBLEM OF DEFINING THE LATE CLASSIC–EARLY POSTCLASSIC PERIOD CERAMIC SEQUENCE

Although the difficulties with the Classic–Early Postclassic portion of the regional ceramic chronology are well-known to Oaxaca specialists, a review of recent general works on ancient Mesoamerica (cf. Coe and Koontz 2002; Evans 2004; Smith and Berdan 2003) suggests that researchers working in neighboring regions are unaware of the matter. For this group as well as for the general reader, we provide a brief background to the problem. Other treatments of the issue can be found in the following sources: Flannery and Marcus 1983; Kowalewski et al. 1989:251–254; Lind 1991–1992, 1994, 2008; Markens 2004:12–105; 2009; Martínez et al. 2000; Winter 1989a, 1990, 1997, 2006, 2007b.

Beginning in the 1930s, Caso and his collaborators formulated a ceramic chronology for the Valley of Oaxaca that partitions the history of settlement at Monte Albán into five major intervals. These are called *épocas* in Spanish, and although they are ceramic phases, they have been translated as *periods* in English. Each phase was named for the ancient Zapotec metropolis and was assigned a Roman numeral or numerals, and in some instances a letter as well. From earliest to most recent, the principal ceramic phases were Monte Albán I, Monte Albán II, Monte Albán IIIA, Monte Albán IIIB-IV, and Monte Albán V (Caso, Bernal, and Acosta 1967:17) (Table A1.1: see column marked Blanton et al. 1993). Caso and his colleagues also

recognized two transitional phases, Monte Albán Transition II-IIIA (Caso, Bernal, and Acosta 1967:279–308) and Monte Albán Transition IIIA-IIIB (Ibid. 363–378), although these last two have seldom been used by subsequent generations of archaeologists. These transitional phases were defined on the basis of a small number of contexts, each of which was considered the product of a single depositional event in which ceramic vessels diagnostic of two sequential phases were found together.

By the time they published their definitive ceramic study (Caso, Bernal, and Acosta 1967), Caso and his associates conceived Phase IIIB-IV at Monte Albán as a single, unusually long ceramic phase, although they found evidence suggesting that with excavation at other valley sites, it might be possible some day to divide this interval into two separate and consecutive phases: IIIB corresponding to the Late Classic period and IV to the Postclassic (Bernal 1965:804–808; Caso and Bernal 1952:372; Caso, Bernal, and Acosta 1967:84–86, 381–382). They believed that during Phase IIIB-IV, Monte Albán reached its apogee as a political and urban center and then subsequently declined, as made evident by the two kinds of contexts from which pottery from this interval was recovered. Ceramics found in association with the construction and use of buildings in Monte Albán's Main Plaza were considered indicative of a flourishing urban center and were classified as IIIB, whereas pottery caches found in the debris of ruined structures were thought to have been left there as offerings, as the center fell into decline or after it had been abandoned. These deposits were assigned to IV.

Caso, Bernal, and Acosta believed that an event (or process) as far-reaching as the decline of a great urban center would surely manifest itself in changes in ceramic style (Bernal 1965:804; Caso and Bernal 1965:889; Caso, Bernal, and Acosta 1967:381–385). Yet in spite of their efforts to separate the pottery from these two kinds of contexts into distinct, temporally consecutive assemblages, they were ultimately unable to define systematic differences.

With their monumental program of excavation all but complete at Monte Albán by the early 1950s, Caso's colleagues Ignacio Bernal and Jorge R. Acosta set out to clarify the Postclassic period segment of the regional ceramic sequence (Bernal and Gamio 1974:85; Paddock 1989:43). Toward this end they undertook excavations at a number of large sites located on the valley floor that presumably continued to be occupied after the collapse of Monte Albán. These included Cuilapan de Guerrero (Bernal 1958a), Etla (Bernal 1965:804), Macuilxóchitl (see Oliveros 1992:85), Mitla (Bernal 1963:223), Noriega (Bernal 1960), San Luis Beltrán (Bernal 1965:804), and Yagul (Bernal and Gamio 1974:9). Caso and his coauthors concluded that

they had no recourse but to present Phase IIIB-IV as a single inseparable interval in their definitive monograph on the ceramic sequence for Monte Albán and the Valley of Oaxaca, *La Cerámica de Monte Albán*, which they published in 1967.

Of all the attempts to divide Phase IIIB-IV into two separate and successive ceramic phases on the basis of detectable differences within the IIIB-IV phase pottery, the efforts of John Paddock (Paddock 1978, 1983a, 1983b; Paddock, Mogor, and Lind 1968) have had the greatest impact on the course of research in the Valley of Oaxaca. The ceramic assemblage that he characterized as Phase IV has been widely accepted and employed most importantly to identify Early Postclassic period settlements during the settlement survey of the valley (Blanton et al. 1982:103; Kowalewski et al. 1989:251–252). Other research dealing either wholly or in part with the Early Postclassic period as defined by Paddock addresses a variety of issues. These include culture history (Whitecotton 1990:7–9), diet (Flannery, Moser, and Maranca 1985:89–91; Flannery and Smith 1983) and its relationship to morbidity (Hodges 1989), and economic specialization (Feinman 1982; Finsten 1995; Peterson 1976).

During his excavations at Lambityeco from 1961 to 1974, Paddock came to believe that he had found the pottery assemblage that had eluded Bernal and Acosta for years (Paddock 1978:48–49). Considered as a whole, the material remains at Lambityeco were remarkably similar to those of Monte Albán during Phase IIIB-IV (see Paddock 1978:49, 56–57n4), yet subtly distinct. Paddock was convinced that here at last was a site with ceramics that fulfilled the expectations of Caso and his colleagues for the Postclassic period (Bernal 1965:804; Caso and Bernal 1952:372; Caso, Bernal, and Acosta 1967:381).

Paddock obtained an unusually consistent set of radiocarbon and archaeomagnetic dates (Drennan 1983:370; Lind 1991–1992:fig. 3; 2008b:fig. 2; Paddock, Mogor, and Lind 1968:23; Rabin 1970:14–15; Wolfman 1973, 1990:table 15.1) from organic remains and fired-clay features recovered or exposed during the excavation of two contiguous elite residences (Structures 190 and 195) that served as the focus of his investigations at the site. The most recent of several construction episodes within the two elite residences were dated to 640–755 CE. The center was apparently abandoned soon after that. No other absolute dates existed at that time from other Phase IIIB-IV components in the valley, so the radiocarbon and archaeomagnetic assays from Lambityeco were perfectly acceptable, even though they were unexpectedly several centuries earlier than what Caso, Bernal, and Acosta had predicted for the end of Phase IIIB and the beginning of Phase IV (Paddock 1978:49).

Since Paddock's explorations ended more than thirty years ago, radiocarbon dates from Late Classic period valley sites have begun to accumulate, casting doubt on Lambityeco's temporal placement in the Early Postclassic period. It should be a straightforward matter of deciding to which period Lambityeco's Phase IV ceramic assemblage corresponds, since Paddock's suite of highly consistent radiocarbon dates from Lambityeco falls in the Late Classic and not the Early Postclassic period. Nonetheless, the issue has been clouded by the practice common among Oaxaca specialists, considered both individually and collectively, of using a number of terms to refer to the divisions of the regional ceramic sequence; these include "period," "phase," "stage," and the Spanish "*época*." In some instances the terms are used in ways that are not conceptually equivalent, confounding criteria of ceramic chronology with those of cultural development. The terminological ambiguity that characterizes Paddock's writings in particular, as well as those of many Oaxaca specialists, has obscured the problems generated by research treating Lambityeco's Phase IV as an Early Postclassic period interval (see Markens 2004:12–105 for a detailed discussion).

Beginning in the late 1980s a small number of researchers began to question the temporal assignment of Lambityeco to the Early Postclassic period (Lind 1991–1992; Winter 1989a, 1990). The first radiocarbon sample recovered from Phase IIIB-IV Late Classic period contexts at Monte Albán in the 1970s proved to be contemporary with Phase IV materials from Lambityeco. This raised the possibility that Phase IIIB-IV at Monte Albán, and for that matter throughout the valley, might be a single comparatively short interval. If this was the case, it implies that the novel varieties of pottery and building techniques documented at Lambityeco were nothing more than the expression of local styles within the same valley-wide ceramic phase. This insight has served as inspiration to define an alternate and hopefully viable ceramic sequence for the Late Classic and Postclassic periods (Herrera 2000; Martínez et al. 2000; Markens 2004; Winter 1997, 2006, 2007b).

Some years ago Lind (1991–1992) proposed a series of phase *names* to replace the phase *numbers* that Caso, Bernal, and Acosta (1967) established for the Monte Albán ceramic sequence. Lind observed that what began as five phases numbered consecutively I, II, III, IV, and V (Caso 1938:32) had degraded through revision into a series of awkward compound and fraction-like designations; Monte Albán Transition II-IIIA, Monte Albán IIIA, and Monte Albán IIIB-IV are cases in point. As a remedy to this terminological muddle, Lind recommended that the phase numbers be replaced by names, noting that a ceramic sequence denoted in this way readily

lends itself to modification as research continues. When a new phase is defined, its name is simply inserted into the existing order at the appropriate place, whereas new numbers disrupt the sequence.

We have followed this lead in our work of the last several years and have defined the following ceramic phases. For the Late Classic period we define the Peche and Xoo phases (Martínez et al. 2000). The Peche phase corresponds to and builds on the Monte Albán Transition IIIA-IIIB phase originally formulated by Caso and his colleagues (1967:365–378). The Xoo phase (Martínez et al. 2000), which follows, corresponds to the Monte Albán IIIB-IV phase of Caso and colleagues (1967:381–444), but this too has been expanded by incorporating ceramic materials from other valley sites. For the Early Postclassic period we have defined the Liobaa phase (Herrera 2000; Markens 2004) based on ceramic criteria entirely different from those Paddock (1983c) and others (Kowalewski et al. 1989; Balkansky 2002) use to define Phase IV. Finally, the Chila phase, corresponding to the Late Postclassic period, has been expanded by incorporating pottery from other valley sites (Markens 2004, 2008) and represents a much shorter temporal interval than Monte Albán Phase V as defined by Paddock and others (Blanton et al. 1993). The phase equivalents appear in Table A1.1 (see columns marked Blanton et al. 1993 and Urcid 2003). We now turn to a consideration of the radiocarbon dates.

RADIOCARBON DATES FOR THE LATE CLASSIC AND POSTCLASSIC PERIODS IN THE VALLEY OF OAXACA

Table A1.2 provides a list of the thirty-six radiocarbon samples presented in this appendix. Each sample is identified by its laboratory number, the site and context of discovery, and the phase of any pottery found in association with the sample. The sample dates are provided in two formats: as uncalibrated and calibrated dates. Finally, references are provided to indicate the source of information about the sample. The initials "SACOI" in the table's reference column accompany each of the twelve samples recovered during the SACOI project.

Table A1.3 presents an array of the thirty-six uncalibrated dates spanning the Late Classic–Postclassic periods. The SACOI dates are highlighted by light gray shading. Perhaps the most striking feature of the table as a whole is the fact that all the sample dates can be arranged to form a smooth incremental progression through time, beginning in the upper lefthand corner with the earliest Peche and Xoo phase dates and continuing down to the bottom right of the page to the Late Postclassic Chila phase dates. This suggests that samples are well distributed throughout this temporal

interval. The only slight break in the series occurs between the last two Liobaa phase dates: samples Beta-205986 and Beta-205990.

A second important observation is that the operation of ordering the sample dates from early to late gathers together those carbon samples found with pottery from the same phase. This indicates that the ceramic attributes used to define each of the pottery phases Peche, Xoo, Liobaa, and Chila are in fact good temporal markers. Although this is the case in general, it is also evident that the Peche phase sample (Beta-63236) overlaps with the earliest Xoo phase date (Beta-20592) from Lambityeco. This suggests that the Peche phase cannot yet be isolated on the basis of this set of radiocarbon dates. We note, however, that there is at present only one Peche phase radiocarbon sample. The placement of the Peche phase date at the earliest part of the temporal continuum makes sense intuitively, for Peche phase pottery corresponds to the Monte Albán Transition phase IIIA-IIIB initially defined by Caso and his colleagues. Pottery of this phase shares attributes with the earlier Monte Albán IIIA phase and the later Monte Albán IIIB-IV or what we call the Xoo phase.

Turning next to the set of Xoo or IIIB-IV phase dates, we note that there is complete temporal overlap between the ranges of the three Monte Albán samples (I-15921, TX-1815, and I-15920) and the Lambityeco samples. This implies that the Phase IV defined by Paddock (Paddock, Mogor, and Lind 1968) is contemporary with the IIIB-IV or Xoo phase of Monte Albán and should therefore be placed in the Late Classic period. As mentioned above, the subtle differences between the Monte Albán IIIB-IV or Xoo phase ceramic assemblage and the Phase IV assemblage of Lambityeco are the result of local preferences within the same ceramic phase.

We now consider the Liobaa phase dates corresponding to the Early Postclassic period. Two Early Postclassic Liobaa samples (Beta-205984 and Beta-205986) were recovered from Lambityeco during the SACOI project. One of the samples (Beta-205986) 920±30 CE comes from an oven dug through the floor in the room of an abandoned Xoo phase house whose tomb is dated to 520±70 CE (SACOI Beta-205983). No pottery was found in the feature, which may have been used to process salt. The second date, Beta-205984, corresponds to an outdoor open-air ceramic oven dating to 940±60 CE and is associated with Liobaa phase pottery. Liobaa phase pottery is wholly unlike the ceramics Paddock used to define Phase IV (Paddock, Mogor, and Lind 1968) at Lambityeco. The Liobaa assemblage is made from coarse brown paste and consists of jars or *ollas*, boot-shaped jars known as *patojos*, conical/hemispherical bowls, miniature vessels, and poorly made handled censers or *sahumadores*. The pottery occurs as a widespread but light scatter in the plow zone of the site. Not a single Liobaa

sherd was recovered in any of the nine tombs, thirty-four burials, and other sealed features of the seventeen Xoo phase Lambityeco residences explored during the SACOI project.

Table A1.4 presents the radiocarbon dates after calibration. Calibrated dates are generally preferred for two reasons. The intervals for calibrated dates are associated with a 95 percent probability that the computed date falls within the specified interval whereas uncalibrated dates are associated with a lower 68 percent probability. It is also known that uncalibrated dates contain a systematic error factor for they do not correct for fluctuations in the carbon content of the atmosphere through time. Calibrated dates are sometimes associated with two or more non-overlapping intervals depending where on the calibration curve the sample falls. Multiple intervals for a single sample are indicated in Table A1.4.[1] Finally the SACOI dates are once again highlighted in gray.

In general terms the calibrated dates do not change the overall interpretation offered for the set of uncalibrated dates presented in Table A1.3. The calibrated series still forms a steady progression of overlapping dates from the Late Classic through the Postclassic period, and samples associated with pottery from the same phase are positioned adjacent to one another after arranging the dates in a temporal series from oldest to most recent. The calibrated dates are useful because they indicate in some instances how the temporal limits of a phase may be fine-tuned. For example, one of the uncalibrated dates from Lambityeco SACOI, Beta-205982, places the tomb of a residence in the Peche phase, yet only Xoo phase pottery was found. The calibrated sample interval, however, falls well within the range of other Xoo phase dates.

A second insight concerns the terminal date for the Xoo phase. Whereas the calibrated dates of Xoo or IIIB-IV samples collected years ago present intervals on the order of 500 years, the SACOI dates from the succeeding Liobaa phase are much more manageable (samples Beta-205987, Beta-205989, Beta-205984, Beta-205986, and Beta-205990) and present a cluster of Early Postclassic dates associated with Liobaa phase pottery spanning the interval from 860 CE to 1300 CE. These dates suggest that the terminal date for the Late Classic Xoo phase may fall between 800–900 CE, somewhat later than previously proposed (Markens 2008; Winter 2006). This adjustment would explain the presence of the two Tohil Plumbate vessels that Caso and his colleagues recovered from Monte Albán Tombs 47 and 52, which otherwise contained Xoo phase pottery (Caso, Bernal, and Acosta 1967:431; E. W. Andrews V, personal communication, 2009). Tohil Plumbate is a pan-Mesoamerican diagnostic of the Early Postclassic period (see Neff 1989a, 1989b).

That said, there also are some very obvious limitations inherent in this set of calibrated dates. Several of the carbon samples, especially those acquired decades ago, display temporal intervals far too long to be useful. Samples such as M-2096 from Guilá Naquitz or M-1151 from Yagul display ranges 600 years or more in duration. These extremely long ranges may result from smaller sample size or shorter counting time in the detector. On a more general level, the Late Classic period is simply not one of the intervals for which radiocarbon dating is very precise (C. Patrick, personal communication, 2009). We see this especially in the series of Late Classic Xoo phase dates where the average range is about 500 years in length.

To assign calendar dates to the phases in Table A1.4 we divide the area of overlap between the later dates of a phase and the earlier dates of the succeeding one. We place the Late Classic Peche phase from 550 to 650 CE, the Xoo phase from 650 to 850 CE, the Early Postclassic Liobaa phase from 850 to 1200 CE, and the Late Postclassic Chila phase from 1200 to 1521 CE.

Finally, we note that reassigning the Phase IV ceramic assemblage of Lambityeco to the Late Classic period entails two important implications. First, other sites identified as Early Postclassic components during the settlement pattern survey of the valley (Blanton et al. 1982; Finsten 1995; Kowalewski et al. 1989) based on similarities of pottery to the Lambityeco assemblage should also be reassigned to the Late Classic. Doing so suggests that not only Monte Albán but most, if not all, of the major urban centers throughout the valley experienced a similarly sudden population decline. These include Jalieza, Macuilxóchitl, Cuilapan, El Palmillo, Santa Ana del Valle, and El Cerro de la Campana, among others. Second, we need to reconsider existing models of political, economic, and social reorganization that took place in the valley during the Early Postclassic period.

Acknowledgments. The authors are most grateful to Mr. Christopher Patrick, Deputy Director of Beta Analytic Radiocarbon Dating Laboratory of Miami, Florida, for his calibration of radiocarbon samples acquired decades ago and for his attentive response to the many questions asked of him. We also acknowledge with gratitude the laboratory's president, Mr. Darden Hood, who kindly offered sound advice regarding the appropriate format for presenting the radiocarbon samples in Table A1.2. Michael Lind and Javier Urcid made many helpful suggestions during the preparation of this appendix for which we extend our sincere thanks. The authors assume responsibility for any errors.

NOTE

1. The two most recent ranges for two radiocarbon samples were omitted from Table A1.4 to economize on space. (1) Sample Beta-205992 from Xaagá, Area C, Structure C, Feature 17: ranges 1720–1820 CE and 1920–1950 CE are omitted from the table. (2) Sample M-1250 from Yagul, Patio A, North Room: ranges 1770–1800 CE and 1940–1950 CE are omitted from the table as well.

TABLE A1.1. Chronological chart for the State of Oaxaca

Years	Period	Valley of Oaxaca (Urcid 2003)	Valley of Oaxaca (Blanton et al. 1993)	Mixteca Alta (Winter 2006)		Mixteca Baja (Winter 2006)
				Nochixtlán	Huamelulpan	
1521	Late Postclassic	Chila	Monte Albán V	Natividad		Nuyoo
1400						
1200	Early Postclassic	Late Liobaa				
1000		Early Liobaa	Monte Albán IV			
800	Late Classic	Xoo	Monte Albán IIIB	Las Flores	Late III	Ñuiñe
600		Peche				
400	Early Classic	Pitao/Dxu' Complex	Monte Albán IIIA		Early III	
200	Late Preclassic	Tani	Monte Albán II	Ramos	II	Ñudée
1 C.E. / B.C.E.		Nisa				
200		Pe	Monte Albán Late I		I	
400	Middle Preclassic	Danibaan	Monte Albán Early I	Yucuita		Yatiyuta/Yododea
600		Rosario	Rosario	Cruz D		Yutañuusavi
800		Guadalupe	Guadalupe	Cruz C		(Santa Teresa)
1000	Early Preclassic	San José	San José	Cruz B		
1200		Hacienda Blanca Complex	Tierras Largas	Cruz A		
1400		Tierras Largas				
1600		Espiridión Complex				

Cuicatlán Cañada (Spencer and Redmond 1997; Winter 1989b)	**Lower Río Verde River Drainage** (Joyce, Winter, and Mueller 1998)	**Isthmus of Tehuantepec** (Zeitlin and Zeitlin 1990)	**Mazateca**	**Chinantla**	**Mixe Region**
Iglesia Vieja	Yucudzaa	Ulam/Lagarto Complex	(Cueva de Tenango)	(Ayotzintepec) (Cerro Marín)	(Móctum)
	Yugüe	Aguada			
Trujano	Yuta Tiyoo	Tixum	(Eloxochitlán)	(Ayotzintepec)	(Móctum)
	Coyuche	Xuku			
	Chachahua	Niti			
Lomas	Miniyua	Kuak		(Ayotzintepec)	(Juquila Mixes)
Perdido	Minizundo	Goma			
	Charco	Bicunisa			
(Tecomaxtlahua)		Ríos			
		Golfo			
		Lagunita			
(Rancho Dolores Ortíz)					

TABLE AI.2. Radiocarbon dates from the Valley of Oaxaca for the Late Classic and Postclassic periods

Number	*Laboratory number*	*Site and context*
1	Beta-63236	Monte Albán 1993 North Platform VGPS, Pit 7P. Associated with Peche phase pottery.
2 (New Date)	Beta-205982	Lambityeco Area B Tomb 2003-19. Associated with Xoo phase pottery.
3 (New Date)	Beta-205983	Lambityeco Area B Tomb 2003-25. Associated with Xoo phase pottery.
4	M-2096	Guilá Naquitz Zone A. Associated with Xoo phase pottery.
5 (New Date)	Beta-205985	Lambityeco Area B Tomb 2003-22. Tomb in Xoo phase residence.
6	GX-1480	Lambityeco Mound 190, Floor 2. Associated with Xoo phase pottery.
7	GX-1482	Lambityeco Mound 195, Tomb 6. Associated with Xoo phase pottery.
8	I-3258	Lambityeco Mound 195, offering. Associated with Xoo phase pottery.
9	I-2679	Lambityeco Mound 195. Associated with Xoo phase pottery.
10	I-15921	Monte Albán 1989 Mound III South Platform. Associated with Xoo phase pottery.
11	I-3257	Lambityeco Mound 195. Associated with Xoo phase pottery.
12	TX-1815	Monte Albán 1972 Terrace 634-6, Feature 72-19. Associated with Xoo phase pottery.
13	I-15920	Monte Albán 1989 Mound III South Platform. Associated with Danibaan, Pe, and Peche phase pottery.
14	GX-1573	Lambityeco Building 195 sub. Associated with Xoo phase pottery.
15	SI- 514	Guilá Naquitz Zone A. Associated with Xoo phase pottery.
16	M-1151	Yagul Mound 5-W. Associated with Tomb 10, Xoo phase.
17	M-1251	Mitla South group Tomb 3. Associated with Liobaa phase pottery.
18	GX-1614	Pasa a la Carrera. Mound 20-S. Associated with probable Liobaa phase pottery.
19	M-2105	Hierve el Agua. Test 1. Xoo phase pottery.
20 (New Date)	Beta-205989	Xaagá Area E Tomb 2003-2. Associated with Liobaa phase pottery.

Published uncalibrated date	*Uncalibrated conventional radiocarbon age in years BP*	*2 Sigma calibrated age in calendar years as computed by Beta Analytic Radiocarbon Dating Laboratory*	*Reference*
500±60 CE	1450±60	450 CE and 460–480 CE and 530–670 CE	Winter 1994
450±60 CE	1500±60	420–660 CE	SACOI; Markens 2008
520±70 CE	1430±70	460–480 CE and 520–700 CE	SACOI; Markens 2008
620±130 CE	1330±130	430–980 CE	Flannery, Moser, and Maranca 1985
560±40 CE	1390±40	610–690 CE	SACOI; Markens 2008
640±100 CE	1310±100	560–900 CE and 920–960 CE	Paddock, Mogor, and Lind 1968
690±100 CE	1260±100	610–990 CE	Paddock, Mogor, and Lind 1968
700±95 CE	1250±100	610–1000 CE	Paddock, Mogor, and Lind 1968
720±100 CE	1230±100	640–1010 CE [1]	Paddock, Mogor, and Lind 1968
710±80 CE	1240±80	650–980 CE	Winter and Herrera 2000
730±100 CE	1220±100	640–1020 CE	Paddock, Mogor, and Lind 1968
740±100 CE	1210±100	640–1020 CE	Winter 2000
750±80 CE	1200±80	660–1010 CE	Winter and Herrera 2000
755±90 CE	1200±90	650–1020 CE	Rabin 1970
740±40 CE	1210±40	690–900 CE	Flannery, Moser, and Maranca 1985
890±150 CE	1060±150	660–1270 CE	Rabin 1970
840±110 CE	1110±110	670–1160 CE	Bernal 1963
835±95 CE	1120±100	670–1060 CE and 1080–1150 CE	Rabin 1970; S. Kowalewski, personal communication, April 10, 2003
940±110 CE	1010±100	780–1230 CE	Drennan 1983
880±40 CE	1070±40	890–1020 CE	SACOI; Markens 2008

continued on next page

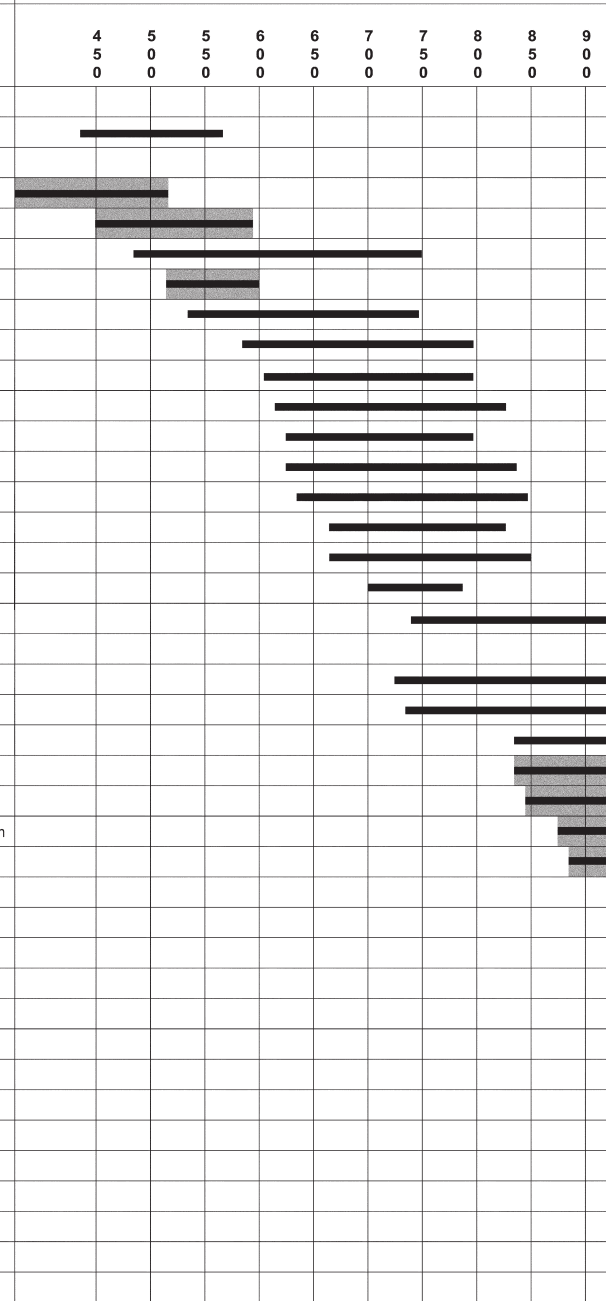
TABLE A1.2—*continued*

Number	*Laboratory number*	*Site and context*
21 (New Date)	Beta 205987	Xaagá Area H Tomb 3002-6. Associated with Liobaa phase pottery.
22	Beta- 205984	Lambityeco Area A Feature 10, oven. Associated with Liobaa phase pottery.
23 (New Date)	Beta-205986	Lambityeco Area B Feature 55, oven intrusive into Xoo phase house. No pottery.
24 (New Date)	Beta-205990	Xaagá Area E Tomb 2003-1. Associated with Liobaa phase pottery
25	M-1248	Yagul Room 13, North subfloor hearth. Associated with Liobaa/Chila phase pottery.
26 (New Date)	Beta-205988	Xaagá Area B Feature 3, offering of Chila phase pottery.
27	SI-513	Guilá Naquitz Feature 7. Associated with Chila phase pottery.
28	Beta-138612	El Sabino Zimatlán, Tomb 3. Associated with Late Liobaa/Chila phase pottery.
29	Beta-66503	Monte Albán 1993 South Platform. Organic remains extracted from soil layer beneath defensive wall N1 built over the South Platform in the Postclassic period. No pottery description.
30	M-1249	Yagul Rooms 16 and 17. Chila phase structure.
31	GX-1704	Mitla Fortress, Wood found in wall made of adobe in Building III. Associated with Phase V (Chila phase?) pottery.
32 (New Date)	Beta- 205980	Macuilxóchitl Mound 1. Residence associated with Chila phase pottery.
33	SI-510	Cueva Blanca Zone A. Phase V (Chila phase?) occupation.
34	M-1250	Yagul Patio A, North Room, subfloor hearth. Associated with Chila phase pottery.
35 (New Date)	Beta-205991	Xaagá Area C, Structure C2, Feature 19, Tlecuil. Associated with Chila phase pottery.
36 (New Date)	Beta-205992	Xaagá Area C, Structure C1, Feature 17, Tlecuil. Associated with Chila phase pottery.

Published uncalibrated date	*Uncalibrated conventional radiocarbon age in years BP*	*2 Sigma calibrated age in calendar years as computed by Beta Analytic Radiocarbon Dating Laboratory*	*Reference*
920±70 CE	1030±70	880–1170 CE	SACOI; Markens 2008
940±60 CE	1010±60	900–1170 CE	SACOI; Markens 2008
920±30 CE	1030±30	980–1030 CE	SACOI; Markens 2008
1160±60 CE	790±60	1160–1300 CE	SACOI; Markens 2008
1200±100 CE	750±100	1040–1410 CE	Bernal and Gamio 1974
1200±50 CE	750±50	1200–1300 CE	SACOI; Markens 2008
1270±80 CE	680±80	1210–1420 CE	Flannery, Moser, and Maranca 1985
1250±40 CE	700±40	1260–1310 CE and 1360–1385 CE	Herrera and Winter 2003
1320±50 CE	630±50	1280–1420 CE	Winter 1994
1380±100 CE	570±100	1260–1480 CE	Bernal and Gamio 1974; Drennan 1983
1390±80 CE	560±80	1280–1460 CE	Rabin 1970
1390±40 CE	560±40	1300–1430 CE	SACOI; Markens 2008
1430±50 CE	520±50	1310–1360 CE and 1390–1450 CE.	Rabin 1970
1580±100 CE	370±100	1460–1680 CE and 1770–1800 CE and 1940–1950 CE	Bernal and Gamio 1974
1580±50 CE	370±50	1430–1650 CE	SACOI; Markens 2008
1760±40 CE	190±40	1650–1700 CE and 1720–1820 CE and 1920–1950 CE	SACOI; Markens 2008

TABLE AI.3. Uncalibrated radiocarbon dates from the Valley of Oaxaca

SAMPLE	PROVENIENCE
Peche phase	
Beta-63236	Monte Albán NP 1993 VGPS Pit 7P
Xoo phase	
Beta-205982	Lambityeco Area B Tomb 2003-19
Beta-205983	Lambityeco Area B Tomb 2003-25
M-2096	Guilá Naquitz Zone A
Beta-205985	Lambityeco Area B Tomb 2003-22
GX-1480	Lambityeco Str. 190-1 Floor 2
GX-1482	Lambityeco Str. 195-3 Tomb 6
I-3258	Lambityeco Str. 195-2
I-2679	Lambityeco Str. 195-2
I-15921	Monte Albán 1989 SP Mound III
I-3257	Lambityeco Str. 195-1
TX-1815	Monte Albán 1972 Feature 19
I-15920	Monte Albán 1989 SP Mound III
GX-1573	Lambityeco Str. 195-3SE, SE room
SI-514	Guilá Naquitz Zone A
M-1151	Yagul Mound 5-W Tomb 10
Liobaa phase	
M-1251	Mitla South Group Tomb 3
GX-1614	Pasa a la Carrera Mound 20-S
M-2105	Hierve el Agua Test Pit 1
Beta-205989	Xaagá Area E Tomb 2003-2
Beta-205987	Xaagá Area H Tomb 2003-6
Beta-205984	Lambityeco Area A Feature 10 hearth
Beta-205986	Lambityeco Area B Feature 55
Beta-205990	Xaagá Area E Tomb 2003-1
Chila phase	
M-1248	Yagul Room 13 North hearth
Beta-205988	Xaagá Area B Feature 3 offering
SI-513	Guilá Naquitz Feature 7
Beta-138612	Zimatlán Tomb 3
Beta-66503	Monte Albán 1993 SP under Wall N1
M-1249	Yagul Rooms 16–17
GX-1704	Mitla Fortress Building III
Beta-205980	Macuilxóchitl Mound 1
SI-510	Cueva Blanca Zone A
M-1250	Yagul Patio A North Room
Beta-205991	Xaagá Area C Str. C2 Ft. 19 hearth
Beta-205992	Xaagá Area C Str. C1 Ft. 17 hearth



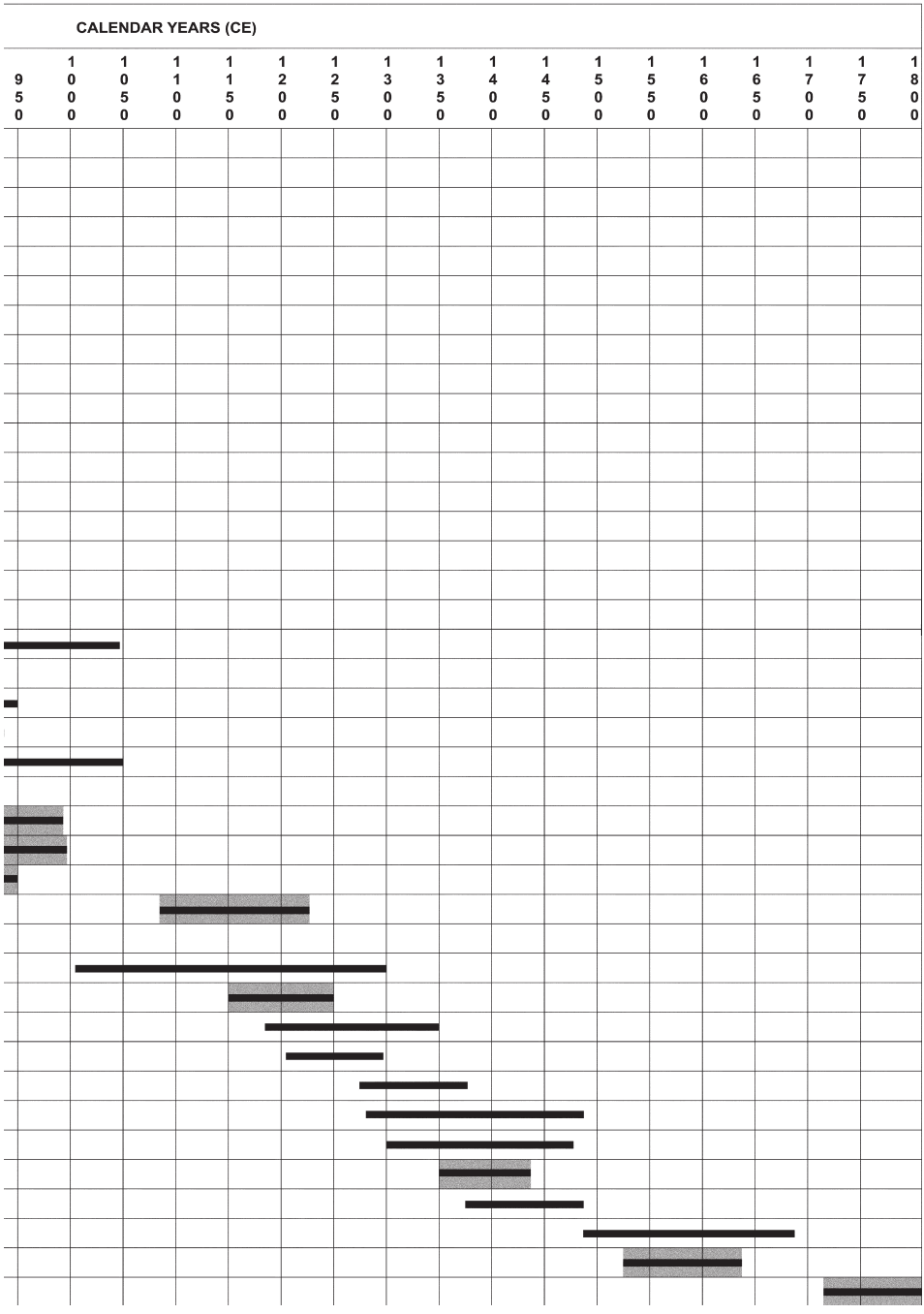
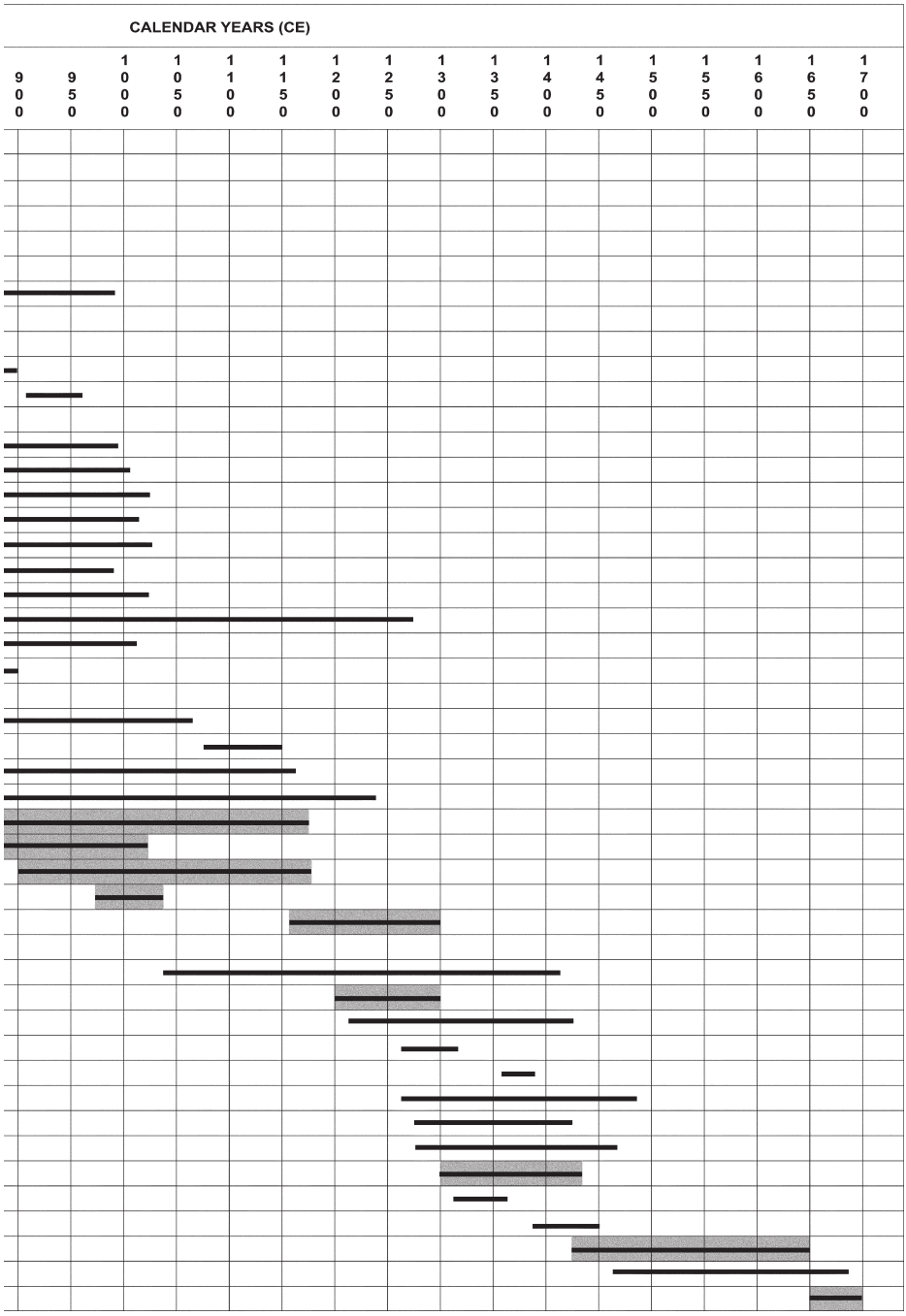

CALENDAR YEARS (CE)
950
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600
1650
1700
1750
1800

TABLE AI.4. Calibrated radiocarbon dates from the Valley of Oaxaca

SAMPLE	PROVENIENCE
	450 500 550 600 650 700 750 800 850
Peche phase	
Beta-63236	Monte Albán NP 1993 VGPS Pit 7P
Xoo phase	
Beta-205982	Lambityeco Area B Tomb 2003-19
M-2096	Guilá Naquitz Zone A
Beta-205983	Lambityeco Area B Tomb 2003-25
GX-1480	Lambityeco Str. 190-1 Floor 2
Beta-205985	Lambityeco Area B Tomb 2003-22
GX-1482	Lambityeco Str. 195-3 Tomb 6
I-3258	Lambityeco Str. 195-2
TX-1815	Monte Albán 1972 Feature 19
I-2679	Lambityeco Str. 195-2
I-3257	Lambityeco Str. 195-1
I-15921	Monte Albán 1989 SP Mound III
GX-1573	Lambityeco Str. 195-3SE, SE room
M-1151	Yagul Mound 5-W Tomb 10
I-15920	Monte Albán 1989 SP Mound III
SI-514	Guilá Naquitz Zone A
Liobaa phase	
GX-1614	Pasa a la Carrera Mound 20-S
M-1251	Mitla South Group Tomb 3
M-2105	Hierve el Agua Test Pit 1
Beta-205987	Xaagá Area H Tomb 2003-6
Beta-205989	Xaagá Area E Tomb 2003-2
Beta-205984	Lambityeco Area A Feature 10 hearth
Beta-205986	Lambityeco Area B Feature 55
Beta-205990	Xaagá Area E Tomb 2003-1
Chila phase	
M-1248	Yagul Room 13 North hearth
Beta-205988	Xaagá Area B Feature 3 offering
SI-513	Guilá Naquitz Feature 7
Beta-138612	Zimatlán Tomb 3
M-1249	Yagul Rooms 16–17
Beta-66503	Monte Albán 1993 SP under Wall N1
GX-1704	Mitla Fortress Building III
Beta-205980	Macuilxóchitl Mound 1
SI-510	Cueva Blanca Zone A
Beta-205991	Xaagá Area C Str. C2 Ft. 19 hearth
M-1250	Yagul Patio A North Room
Beta-205992	Xaagá Area C Str. C1 Ft. 17 hearth


CALENDAR YEARS (CE)
900
950
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600
1650
1700

appendix 2

The Lambityeco Mounds

The following data on the Lambityeco mounds were compiled by Lind from information collected by David Peterson, Sam Ball, and Steve Kowalewski in their survey of the site. The primary data were recorded on bag cards located in the Instituto de Estudios Oaxaqueños archives in Mitla, Oaxaca, Mexico, currently being curated by the Centro Regional INAH–Oaxaca. The mound numbers, shown on the site map (Fig. 4.1), begin with #10, because 1–9 were not used, and continue through #223 with some numbers in between not used.

The data for each mound include, when available, its location by zone—for example, N3/W6 (the square on the map in which the mound can be found)—the phase or phases to which it corresponds based on surface collections and/or excavation, its height, its basal dimensions north-south and east-west, whether or not it represents a structure (if known), and any comments on the nature of the mound. During the survey, the Monte Albán phase numbers were used. These have been converted to the phase names that are used in this study, except the Tani, Peche, and Liobaa phases, which were not recognized in the survey. The phase names have been abbreviated as follows: R=Rosario; D=Danibaan; P=Pe; N=Niza; Pt=Pitao; X=Xoo; and C=Chila.

Mound No.	*Zone in Fig. 4.1*	*Phase or Phases*	*Height*	*Basal Size N-S/E-W*	*Structure*	*Comments*
10	N3/W4	R, P, X	1m	15m/36m	?	North of and parallel to Complex 14
11	N2/W4	R, D, P, N	1m	28m/13m	Platform?	Forms west platform of Complex 14
12	N3/W4	R, P, N	1m	13m/21m	Platform?	Forms north platform Complex 14
13	N2/W4	R, P, N	1m	13m/21m	Platform?	Forms south platform of Complex 14
14	N3/W4	R, P, N, Pt, X	5m	40m/16m	Temple?	Forms major structure (temple?) of Complex 14, which includes platforms formed by Mounds 11, 12, and 13. Plaster floors and stone walls are visible. Faces west and is located on east side of a plaza, which measures 33m N-S and 26m E-W.
15	N2/W3	R, P, N, Pt	8m	43m/23m	Temple?	Forms major structure (temple?). Plaster floors visible. May have plaza to east or west or both.
16	N2/W4	R, P, N	1m	12m/22m	?	—
17	N2/W4	R, P, N	1m	23m/23m	?	—
18	N1/W3	P	5m	35m/35m	Temple?	—
19	N2/W4	D, P	1m	27m/32m	?	—
20	N2/W4	D, P	1m	30m/32m	?	—
21	N2/W4	D, N, Pt, X	5m	58m/53m	Temple base?	Has Mound 22 on top of its southwest corner.
22	N2/W4	D, N	5m	23m/31m	Temple?	Upper tier of Mound 21.
23	N2/W3	D, P, N	5m	22m/22m	Temple?	—
24	N2/W5	D, P	<1m	25m/15m	?	—
25	N3/W4	N	2m	50m/33m	?	—
26	N4/W4	D, P	1m	48m/48m	?	—

27	N4/W4	D, P	1m	17m/30m	Ballcourt?	On south side of 1m high raised area that measures 48m N-S and 35m E-W and that also supports Mound 28. Possibly south side of a ballcourt.
28	N4/W4	D, P	1m	17m/30m	Ballcourt?	On north side of 1m high raised area that measures 48m N-S and 35m E-W and that also supports Mound 27. Possibly north side of a ballcourt.
29	N4/W3	P, Pt	<1m	35m/33m	?	—
30	N4/W3	P	<1m	43m/43m	?	—
31	N4/W4	D, P, N, Pt, X, C	1m	41m/30m	?	Triangular-shaped mound.
32	N5/W4	D, P	1m	50m/42m	?	—
33	N4/W2	D, P	1m	?	?	—
34	N5/W4	D, P, X	3m	40m/50m	?	—
35	N5/W4	D, P	3m	31m/26m	Elite house?	Plaster floors are visible.
36	N6/W3	N	<1m	18m/12m	?	—
37	N6/W4	D	5m	38m/25m	Temple?	Has a plaza or low (<1m high) platform that measures 38m N-S and 20m E-W on its west side.
38	N7/W5	X	1m	30m/31m	?	—
39	N7/W5	X	<1m	12m/12m	?	—
40	N7/W6	X	<1m	22m/22m	?	—
41	N7/W6	X	1m	48m/48m	House	Possible tomb evident in southwest sector of mound.
42	N8/W6	X	<1m	13m/18m	House	Metate, chalcedony knife blade, and carbonate (evidence of salt production), and A-7 on mound.
43	N8/W6	X	<1m	18m/18m	Midden	Mound surface has considerable ash from salt-production activities and refuse. Balancán Fine Orange present.
44	N8/W6	X, C	<1m	35m/33m	Midden	Mound surface has ash, carbonate (evidence of salt production), and refuse. A-7 present.

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Mound No.	*Zone in Fig. 4.1*	*Phase or Phases*	*Height*	*Basal Size N-S/E-W*	*Structure*	*Comments*
45	N7/W6	X	1m	35m/23m	House	Evidence of house with salt-production activities.
46	N13/W2	X	1m	12m/13m	?	—
47	N7/W6	X, C	<1m	23m/23m	House	Peterson notes evidence of house.
48	N7/W6	Pt, X	<1m	20m/18m	House	Evidence of burned wattle and daub.
49	N8/W6	X	<1m	18m/17m	House	Peterson notes evidence of house.
50	N7/W6	N	<1m	13m/13m	?	—
51	N7/W6	X, C	<1m	15m/15m	?	—
52	N7/W6	X	1m	32m/30m	?	Has an extension (16m N-S and 38m E-W) to the south toward the roadcut.
53	N10/W12	X	1m	?	House	Plaster floor exposed by plowing.
54	N7/W7	X, C	1m	26m/25m	Midden	Posthole probe revealed only ash and refuse.
55	N7/W7	X, C	1m	22m+/41m	Midden	Road cut through south side of mound. No structures exposed, but in 1967, Lind found a salt boiler in ash-filled mound and refuse.
56	N6/W6	X, C	1m	35m/58m	?	Triangular-shaped mound like Mound 31.
57	N6/W7	X, C	10m	38m+/76m	Temple?	Road cut through north side of mound. Fowler shaved the north side and found a series of superimposed plaster floors.
58	N6/W6	P, X	2m	38m/38m	?	—
59	N5/W6	X	1m	42m/42m	?	—
60	N5/W6	X, C	1m	36m/27m	?	—
61	N4/W7	D, P, X	3m	38m/50m	?	—
62	N4/W6	D, C	<1m	15m/17m	?	—
63	N4/W6	D, P, X	3m	41m/41m	?	—
64	N5/W7	P, X, C	<1m	33m/33m	?	—

65	N10/W12	X	<1m	?	House	Plaster floor exposed by plowing.
66	N4/W5	D, P, Pt	1m	36m/43m	?	—
67	N3/W4	D	<1m	13m/15m	?	—
68	N3/W5	D, N	<1m	13m/13m	?	—
69	N3/W5	D, P	<1m	35m/70m	?	—
70	N2/W5	D, P	<1m	15m/13m	?	—
71	N3/W6	P, X	<1m	20m/26m	?	Attached to south side of Mound 83.
72	N3/W6	?	<1m	16m/20m	?	—
73	N6/W7	X	<1m	?	?	—
74	N3/W6	D, P, X	<1m	12m/13m	?	—
75	N3/W7	D, P, X	1m	23m/23m	?	—
76	N3/W7	D, P, X	1m	22m/22m	?	—
77	N3/W7	D, P, C	1m	23m/22m	?	—
78	N3/W6	?	<1m	22m/22m	?	—
79	N10/W8	X	<1m	?	?	—
80	N8/W5	X	3m	46m/33m	?	—
81	N7/W4	D, P	1m	25m/25m	?	—
82	N5/W6	P, X, C	<1m	26m/40m	?	—
83	N4/W6	P, X, C	2m	40m/48m	?	Has extension (10m N-S and 7m E-W) on its east side that may represent a staircase. Mound 71 is attached to its south side.
84	N6/W6	X, C	<1m	26m/25m	?	—
85	N3/W7	?	<1m	10m/8m	?	—
86	N3/W7	?	<1m	10m/10m	?	—
87	N3/W7	D	<1m	18m/8m	?	—

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Mound No.	*Zone in Fig. 4.1*	*Phase or Phases*	*Height*	*Basal Size N-S/E-W*	*Structure*	*Comments*
88	N3/W5	D, X	<1m	15m/18m	?	—
89	N8/W10	X	<1m	16m/12m	Midden	In 1972, Peterson partially excavated this mound and found no structures, only ash relating to salt production and refuse.
90	N8/W10	X	<1m	30m/26m	Midden	Peterson placed three randomly located postholes into this mound and found no structures, only ash relating to salt-production activities and refuse.
91	N8/W10	X	<1m	13m/20m	House	Excavations revealed four superimposed houses and a family tomb (Tomb 9) associated with salt production.
92	N7/W10	X	<1m	15m/11m	House	Excavations revealed superimposed houses and a family tomb (Tomb 8).
93	N3/W12	P, X	1m	41m/20m	Midden	Peterson partially excavated this mound and found only ash relating to salt production and refuse.
94	N6/W10	X	<1m	13m/15m	?	—
95	N5/W1	P	<1m	21m/23m	?	—
96	N7/W9	X	1m	10m/18m	?	Along with four other mounds (97, 98, 99, 100), it surrounds a central moundless area that contained a wattle-and-daub house partially excavated by Peterson.
97	N7/W8	X	2m	21m/8m	?	Along with four other mounds (96, 98, 99, 100), it surrounds a central moundless area that contained a wattle-and daub-house partially excavated by Peterson.
98	N6/W9	X	<1m	10m/20m	?	Along with four other mounds (96, 97, 99, 100), it surrounds a central moundless area that contained a wattle-and-daub house partially excavated by Peterson.

99	N7/W9	X	<1m	21m/10m	?	Along with four other mounds (96, 97, 98, 100), it surrounds a central moundless area that contained a wattle-and-daub house partially excavated by Peterson.
100	N6/W9	X	<1m	13m/11m	?	Along with four other mounds (96, 97, 98, 99), it surrounds a central moundless area that contained a wattle-and-daub house partially excavated by Peterson.
101	N6/W9	X	2m	31m/23m	Midden	Peterson excavated trenches through this mound and found it to be refuse from salt-production activities. It has an extension to the southwest that measures 17m N-S and 3m E-W.
102	N4/W13	C	<1m	?	Midden	Peterson has determined that this mound is refuse from Chila phase salt-production activities.
103	N4/W13	C	<1m	?	Midden	Peterson has determined that this mound is refuse from Chila phase salt-production activities.
104	N5/W13	C	<1m	?	Midden	Peterson has determined that this mound is refuse from Chila phase salt-production activities.
105	N5/W13	C	<1m	?	Midden	Peterson has determined that this mound is refuse from Chila phase salt-production activities.
106	N5/W12	C	<1m	?	Midden	Peterson has determined that this mound is refuse from Chila phase salt-production activities.
107	N4/W12	C	<1m	?	Midden	Peterson has determined that this mound is refuse from Chila phase salt-production activities.
108	N3/W12	P	<1m	?	Midden	Peterson has determined that this mound is refuse from Pe phase salt-production activities.
109	N6/W13	P	<1m	?	Midden	Peterson has determined that this mound is refuse from Pe phase salt-production activities.

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Mound No.	*Zone in Fig. 4.1*	*Phase or Phases*	*Height*	*Basal Size N-S/E-W*	*Structure*	*Comments*
110	N4/W12	?	<1m	?	Midden	Peterson has determined that this mound, cut in half by the road, is refuse from salt-production activities.
111	N6/W9	?	<1m	?	Midden	Peterson has determined that this mound is refuse from salt-production activities.
112–122	—	—	—	—	—	Numbers 112–122 were not used.
123	N5/W13	X	1m	36m/35m	?	—
124	N5/W13	P, X	1m	22m/17m	?	Attached to west side of Mound 125.
125	N5/W12	P, X	5m	37m/33m	Elite residence	In 1967, Lind examined a looters' pit on top of this mound that had exposed part of a patio floor with a walkway (67cm wide and 17cm above patio floor) and the east wall of a room. The wall had a 10cm high foundation with a 28cm high sloping stone wall above it (Photos 67-58-10, -11, and -12 in Mitla photo file).
126	N5/W13	P, X	1m	51m/16m	?	L-shaped mound. Its northwestern leg measures 17m N-S and 16m E-W.
127	N6/W13	X	<1m	35m/28m	?	—
128	N6/W13	X	1m	35m/23m	House	Peterson notes evidence of a tomb in the south-central part of the mound.
129	N6/W12	X	1m	26m/25m	?	—
130	N6/W12	X	5m	33m/30m	Elite residence or temple?	—
131	N6/W12	X	1m	10m/25m	?	—
132	N6/W12	X	1m	18m/23m	?	—
133	N7/W13	X	1m	18m/20m	?	Evidence of Balancán Fine Orange.

134	N7/W12	X	2m	25m/32m	Midden	Peterson notes evidence for salt production.
135	N6/W11	X	6m	53m/46m	Temple?	—
136	N7/W11	Pt, X	1m	20m/16m	?	—
137	N7/W11	P, Pt, X	2m	22m/31m	?	—
138	N7/W11	X	1m	15+m/26m	?	North side destroyed by roadcut.
139	N7/W12	P, X	1m	25m/26m	?	Balancán Fine Orange present.
140	N6/W11	X	5m	37m/35m	Elite residence or temple?	—
141	N7/W13	X	1m	18+m/22m	?	South side destroyed by road.
142	N8/W13	X	<1m	22m/18m	?	—
143	N8/W13	X	1m	18m/15m	?	—
144	N8/W13	X	<1m	15m/15m	?	—
145	N7/W12	X	3m	36m/21m	Platform?	Possible platform along the west side of a plaza that measures 33m N-S and 38m E-W of a system whose principal mound is Mound 155.
146	N8/W12	X	2m	25m/24m	?	—
147	N8/W12	X	2m	23m/20m	?	—
148	N7/W11	X	1m	25+m/27m	Elite house	Partially excavations in 1972–73 revealed plaster floors and stone walls, including a sloping stone wall. South edge destroyed by roadcut.
149	N7/W10	X	<1m	15m/14m	House	Peterson notes plaster floors and stone foundations.
150	N8/W12	Pt, X	1m	27m/25m	Platform?	Possible platform along the north side of a plaza that measures 33m N-S and 38m E-W of a system whose principal mound is Mound 155.

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Mound No.	*Zone in Fig. 4.1*	*Phase or Phases*	*Height*	*Basal Size N-S/E-W*	*Structure*	*Comments*
151	N7/W9	X	<1m	13+m/14m	House	Peterson notes plaster floors and stone walls of a house associated with salt production. South edge destroyed by roadcut.
152	N8/W9	X	2m	18m/18m	House	Peterson notes plaster floors, stone walls, and a possible tomb.
153	N8/W10	X	1m	13m/12m	House	Peterson reports plaster floors.
154	N8/W10	X	<1m	16m/17m	House	Peterson notes plaster floors, stone walls, and a possible tomb. Metate found on mound surface.
155	N7/W11	Pt, X	12m	40m/37m	Temple	Major temple of System 155 with a plaza on its west side as shown by excavations. A second plaza (41m N-S and 25m E-W) may occur on east side.
156	N8/W9	X	<1m	15m/16m	House	Peterson reports plaster floors.
157	N8/W10	X	3m	18+m/22m	Elite house	Peterson notes a tomb destroyed by tractor plowing and plaster floors exposed in roadcut along north side of mound. A large metate and the ceramic pan of a hearth were also found.
158	N8/W9	X	1m	23m/29m	House	Peterson reports plaster floors.
159	N8/W8	X	1m	20m/18m	?	—
160	N7/W11	X	1m	36m/16m	Platform?	Possible platform along east side of a plaza whose principal mound is Mound 155.
161	N8/W8	X, C	1m	18m/19m	?	—
162	N9/W9	X	1m	21m/17+m	?	Destroyed along western edge.
163	N9/W8	X	<1m	21m/17m	?	—
164	N7/W9	X	<1m	?	Midden	Peterson notes that a salt boiler was found in situ in this mound. Northeastern part of the mound was destroyed by a roadcut.
165	N8/W11	X	1m	22m/18m	?	Irregular-shaped mound with an extension on its southeast side that measures 8m N-S and 7m E-W.

166	N9/W8	X	<1m	18m/13m	Midden	Peterson notes ash and carbonate, evidence of salt-production activities and refuse.
167	N9/W8	X	1m	13m/14m	Midden	Peterson reports that the south side of the mound was cut by Route 190. He shaved the cut with shovels and found ash, carbonate, and sherds from salt boilers and refuse.
168	N10/W8	X	<1m	15m/15m	House	Peterson notes floors, carbonate, and Fine Orange. He states it is a house involved in salt production.
169	N9/W8	X	<1m	15m/17m	?	—
170	N8/W11	P, X	5m	31m/30m	Elite house or temple?	—
171	N9/W8	X	<1m	17m/16m	House	Peterson notes floors and a metate.
172	N9/W7	X	<1m	13m/13m	House	Peterson notes floors and obsidian points.
173	N10/W7	X	<1m	22m/18m	?	—
174	N9/W8	X	1m	23m/20m	House	Peterson notes plowed surface of mound revealed plaster floors, a possible destroyed tomb, and evidence for salt production.
175	N9/W12	P, X, C	5m	22m/23m	Elite house or temple?	—
176	N9/W10	X	1m	17m/18+m	?	Destroyed on west side.
177	N9/W13	X	<1m	18m/20m	House	Peterson reports evidence of floors, walls, one A-7 sherd, and a miniature bowl.
178	N9/W13	X	<1m	16m/13m	House	Peterson reports evidence of floors, walls, one A-7 sherd, and one red painted sherd.
179	N9/W12	X	<1m	13m/13m	House	Peterson reports evidence of floors, walls, one A-7 sherd, and one bat-claw vessel.
180	N9/W7	X	1m	23m/30m	House	Peterson reports plaster floors, a piece of wattle and daub, and a miniature bowl. Irregular mound with extension to the east (15m N-S and 8m E-W).

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Mound No.	*Zone in Fig. 4.1*	*Phase or Phases*	*Height*	*Basal Size N-S/E-W*	*Structure*	*Comments*
181	N9/W12	X, C	1m	18m/15m	House	Peterson notes floors, walls, a walkway, a metate, and a painted red sherd.
182	N9/W12	X, C	2m	27m/22m	House	Peterson notes evidence of house floor, a metate, several manos, a miniature bowl, and a carved stone model of a tomb façade.
183	N9/W12	Pt, X	3m	30m/28m	?	—
184	N9/W12	X	2m	17+m/23m	House	Peterson notes visible plaster floors in roadcut that destroyed the northern edge of the mound.
185	N11/W9	X	4m	43m/40m	Elite house	Salvage excavations by Winter, Deraga, and Fernández (1979) were conducted to preserve an exposed tomb (Tomb 11).
186	N9/W13	X	<1m	10m/12m	House	Peterson notes floors and walls.
187	N9/W13	X	<1m	13m/11m	House	Peterson notes floors and walls.
188	N9/W13	X	1m	21m/20m	House	Peterson notes floors and walls.
189	N9/W13	X	1m	26m/21m	House	Peterson notes plaster floor and stone walls.
190	N8/W11	X	3m	30m/40m	Elite house	Completely excavated. Revealed five stratified elite houses and associated tomb (Tomb 2).
191	N9/W13	X	1m	12+m/16m	House	North edge of mound destroyed by roadcut, revealing plaster floors. Also evidence of salt-production activities.
192	N11/W12	X	<1m	20m/17m	?	—
193	N11/W13	X	2m	41m/38m	?	—
194	N9/W9	X	2m	18m/22m	?	—
195	N9/W11	X	6m	33m/35m	Elite house	Completely excavated. Revealed six superimposed elite houses with three associated tombs (Tombs 1, 5, and 6). Forms major structure of System 195.
195N	N9/W11	X	<1m	6m/26m	Platform	North platform of System 195.

195S	N9/W11	X	1m	6m/26m	Platform	South platform of System 195.
195W	N9/W11	X	1m	31m/8m	Platform	West platform of System 195.
196	N9/W12	X	<1m	25m/30m	House	Peterson notes plaster floor fragments.
197	N9/W11	Pt, X	<1m	16m/16m	House	Peterson notes plaster floor fragments.
198	N9/W10	X	<1m	33m/25+m	?	West side of mound destroyed.
199	N11/W12	X	<1m	16m/14m	?	—
200	N1/W5	P	?	?	?	—
201	N7/W11	?	1m	13m/17m	?	—
202	N1/W4	P	?	?	?	—
203	N12/W15	X	<1m	20m/18m	?	—
204	N12/W15	X	<1m	46m/19m	?	—
205	N10/W4	X	2m	35m/31m	?	—
206	N12/W14	X	<1m	41m/18m	?	—
207	N11/W11	X	<1m	41m/46m	House	Peterson notes plaster floor fragments. This mound, together with Mounds 208 and 209, is on a slightly raised area that measures 86m N-S and 108m E-W.
208	N11/W11	X	<1m	23m/20m	?	This mound, together with Mounds 207 and 209, is on a slightly raised area that measures 86m N-S and 108m E-W.
209	N11/W11	X	<1m	10m/10m	?	This mound, together with Mounds 207 and 208, is on a slightly raised area that measures 86m N-S and 108m E-W.
210	N11/W3	X	1m	25m/27m	?	—
211	N10/W10	X	1m	25m/30m	?	—
212	N11/W6	X	<1m	21m/46m	?	—
213	N10/W5	X	1m	15m/15m	?	—
214	N9/W5	X	3m	48m/38m	Elite House?	—
215	N11/W7	X	<1m	?	?	—

Mound No.	*Zone in Fig. 4.1*	*Phase or Phases*	*Height*	*Basal Size N-S/E-W*	*Structure*	*Comments*
216	N9/W4	N	<1m	23m/20m	?	—
217	N10/W4	X	1m	26m/25m	?	—
218	N12/W3	X	1m	50m/23m	?	—
219	N12/W3	X	<1m	18m/15m	?	—
220	N9/W9	P	?	?	?	—
221	N13/W9	X	1m	45m/41m	House	Peterson notes plaster floor fragments.
222	N9/W4	X	1m	?	?	—
223	N7/W10	X	<1m	?	Midden	The road cuts its southern half, which was shaved with a shovel by Peterson and revealed only ash and sherds from salt production and refuse.

appendix 3

Moundless Xoo Phase Structures at Lambityeco

At least eighteen Xoo phase structures have been discovered by pure chance in areas where no mounds occurred. These moundless structures were encountered accidentally during excavations in areas specifically chosen for their apparent lack of structures (e.g., Fowler's stratigraphic test pit project) and by farmers who chanced upon them in featureless fields. Each of these moundless structures is located on the map of Lambityeco (see Figs. 4.1 and 4.3) where they are identified by a symbol such as A, B, C, B-77 (Burial), T. 10 (Tomb), Sweatbath, and so forth.

The data for each structure include, when available, its location by zone—for example, N3/W6 (the square on the map in which the structure can be found) and the type of structure it represents (if known). The presence of these structures makes it apparent that many additional structures may be encountered in areas of the site that appear to be devoid of structures.

Symbol on Figs. 4.1 and 4.3	*Zone*	*Structure*	*Comments*
A	N8/W11	House	Peterson notes a dense scatter of small stones, which were probably cobblestone bases for house floors.
B	N8/W11	House	Peterson notes a dense scatter of small stones, which were probably cobblestone bases for house floors.
C	N8/W11	House	Peterson notes a dense scatter of small stones, which were probably cobblestone bases for house floors.
D	N8/W11	House	Peterson notes a dense scatter of small stones, which were probably cobblestone bases for house floors.
E	N8/W12	House	Peterson notes a dense scatter of small stones, which were probably cobblestone bases for house floors.
F	N8/W12	House	Peterson notes a dense scatter of small stones, which were probably cobblestone bases for house floors.
T. 3 (star)	N9/W11	House	Fully excavated House of Tomb 3 (see Chapter 8).
T. 4 (star)	N9/W11	House	Fully excavated House of Tomb 4 (see Chapter 8).
T. 10 (star)	N8/W12	House	House of Tomb 10 partially excavated by Fowler, who exposed parts of stratified plaster patios and house floors.
T. 12 (star)	N6/W12	House	House of Tomb 12. The tomb was salvaged by Roberto Zárate (1992) of the Centro Regional INAH–Oaxaca.
T-67 (star)	N5/W12	House	Looted tomb and associated house examined and photographed by Lind in 1967.
T-68 (star)	N7/W11	House	Looted tomb and associated house examined and photographed by Lind and Mogor in 1968.
B. 73 (circle)	N8/W11	House	Burial probably associated with a house excavated by Fowler in 1973.
B. 77 (circle)	N9/W10	House	Three burials probably associated with a house excavated by the Centro Regional INAH–Oaxaca in 1977.
B. 78 (circle)	N9/W10	House	Burial probably associated with a house excavated by the Centro Regional INAH–Oaxaca in 1978.
Sweatbath (square)	N9/W10	Sweatbath	Sweatbath north of Mound 195 excavated by Paddock in 1961.
Sweatbath (square)	N8/W11	Sweatbath	Sweatbath west of Mound 190 excavated by Fowler in 1973.
(triangle)	N7/W9	House	Wattle-and-daub house excavated by Peterson.

References

Acosta, Jorge R.
1965 Preclassic and Classic Architecture of Oaxaca. In *Handbook of Middle American Indians*, Vol. 3, *Archaeology of Southern Mesoamerica,* Part 2, ed. Robert Wauchope and Gordon Willey, 814–836. University of Texas Press, Austin.

Autry, William O.
1973 Post Formative Burial Practices: Valley of Oaxaca, Mexico. M.A. Thesis, Department of Anthropology, University of North Carolina. Chapel Hill, North Carolina.

Ayre, Linda, and Stefano Varese
1978 *La Población Zapoteca en el Estado de Oaxaca según el Censo de 1970: Un Análisis Preliminar.* Estudios de Antropología e Historia, No. 10. Centro Regional de Oaxaca, Instituto Nacional de Antropología e Historia, Oaxaca.

Bach, Victoria
1971 Preliminary Report on Manos and Metates at Lambityeco. Unpublished manuscript on file at the Instituto de Estudios Oaxaqueños, Mitla, Oaxaca.

Balkansky. Andrew K.
2002 *The Sola Valley and the Monte Albán State: A Study of Zapotec Imperial Expansion*. Museum of Anthropology, University of Michigan, No. 36. Ann Arbor, Michigan.

Bawden, Garth
1982 Community Organization Reflected by the Household: A Study of Pre-Columbian Social Dynamics. *Journal of Field Archaeology* 9, No. 2: 165–181.

Bender, Margaret
1968 Mass Spectrometric Studies of Carbon 14 Variations in Corn and Other Grasses. *Radiocarbon* 10, No. 2: 468–472.

Bernal, Ignacio
1958a *Exploraciones en Cuilapan de Guerrero, 1902–1954*. Informes 7. Dirección de Monumentos Prehispánicos, Instituto Nacional de Antropología e Historia, Mexico D.F.
1958b Monte Albán and the Zapotecs. *Boletín de Estudios Oaxaqueños,* No. 1.
1960 Exploraciones arqueológicas en Noriega, Oaxaca. In *Homenaje a Rafael García Granados*, 83–88. Instituto Nacional de Antropología e Historia, Mexico D.F.
1963 Otra tumba cruciforme de Mitla. In *Estudios de Cultura Náhuatl* IV, 223–232. Universidad Nacional Autónoma de México, Mexico D.F.
1965 Archaeological Synthesis of Oaxaca. In *Handbook of Middle American Indians*, Vol. 3, *Archaeology of Southern Mesoamerica*, Part 2, ed. Robert Wauchope and Gordon Willey, 788–813. University of Texas Press, Austin.

Bernal, Ignacio, and Lorenzo Gamio
1974 *Yagul: El Palacio de los Seis Patios*. Instituto de Investigaciones Antropológicas, Universidad Nacional Autónoma de México. Mexico D.F.

Beutler, W. J., B. E. Fredrickson, A. Murtland, C. A. Swenney, W. D. Grant, and D. Baker
2003 The Natural History of Spondylolysis and Spondylolisthesis: 45-Year Follow-up Evaluation. *Spine* 28, No. 10: 1027–1035.

Blanton, Richard E.
1978 *Monte Albán: Settlement Patterns at the Ancient Zapotec Capital*. Academic Press, New York.

Blanton, Richard, Stephen Kowalewski, Gary Feinman, and Jill Appel
1981 *Ancient Mesoamerica: A Comparison of Change in Three Regions*. Cambridge University Press, Cambridge.
1982 *Monte Albán's Hinterland, Part I: The Prehispanic Settlement Patterns of the Central and Southern Parts of the Valley of Oaxaca, Mexico*. Museum of Anthropology, University of Michigan, Memoirs 15. Ann Arbor, Michigan.
1993 *Ancient Mesoamerica: A Comparison of Change in Three Regions*. Second edition. Cambridge University Press, Cambridge.

Boone, Elizabeth
1983 *The Codex Magliabechiano and the Lost Prototype of the Magliabechiano Group*. 2 Volumes. University of California Press, Berkeley, California.

Brockington, Donald L.
1973 *Archaeological Investigations at Miahuatlán, Oaxaca*. Vanderbilt University Publications in Anthropology, No. 7. Nashville, Tennessee.

Burgoa, Fray Francisco
1934 [1674] *Geográfica Descripción*. Vols. 1 and 2. Publicaciones del Archivo General de la Nación XXVI, Mexico.

Byland, Bruce, and John Pohl
1994 *In the Realm of Eight Deer: The Archaeology of the Mixtec Codices*. University of Oklahoma Press, Norman, Oklahoma.

Caballero, Margarita, and Beatriz Ortega Guerrero
1998 Lake Levels since about 40,000 Years Ago at Lake Chalco, near Mexico City. *Quaternary Research* 50: 69–79.

Canseco, Alonso
1580 Relación de Tlacolula y Mitla. In *Papeles de Nueva España*, ed. Francisco Del Paso y Troncoso, 4:144–154. Editorial Innovación, S.A, Mexico, 1981.

Çarate, Bartolomé
1581 Relación de Guaxilotitlán. In *Papeles de Nueva España*, ed. Francisco Del Paso y Troncoso, 4:196–205. Editorial Innovación, S.A, Mexico, 1981.

Carrasco, Pedro
1964 Family Structure of Sixteenth-Century Tepoztlán. In *Process and Pattern in Culture: Essays in Honor of Julian H. Steward,* ed. Robert A. Manners, 185–210. Aldine, Chicago.

Carroll, John
1974 Ceramics of Lambityeco. Unpublished manuscript on file at the Instituto de Estudios Oaxaqueños, Mitla, Oaxaca.

Caso, Alfonso
1932 *Las exploraciones en Monte Albán, Temporada 1931–1932*. Instituto Panamericano de Geografía e Historia No. 7, Mexico D.F.
1935 *Las exploraciones en Monte Albán, Temporada 1934–1935*. Instituto Panamericano de Geografía e Historia No. 15, Mexico D.F.
1938 *Exploraciones en Oaxaca. Quinta y Sexta Temporadas, 1936–1937*. Instituto Panaméricano de Geografía e Historia No. 34, Mexico D.F.
1965 Zapotec Writing and Calendar. In *Handbook of Middle American Indians*, Vol. 3, *Archaeology of Southern Mesoamerica*, Part 2, ed. Robert Wauchope and Gordon Willey, 931–947. University of Texas Press, Austin.

Caso, Alfonso, and Ignacio Bernal
1952 *Urnas de Oaxaca*. Memorias del Instituto Nacional de Antropología e Historia, No. 2. Mexico D.F.
1965 Ceramics of Oaxaca. In *Handbook of Middle American Indians*, Vol. 3, *Archaeology of Southern Mesoamerica*, Part 2, ed. Robert Wauchope and Gordon Willey, 871–895. University of Texas Press, Austin.

Caso, Alfonso, Ignacio Bernal, and Jorge R. Acosta
1967 *La Cerámica de Monte Albán*. Memorias del Instituto Nacional de Antropología e Histora, No. 13. Mexico D.F.

Caso, Alfonso, and Daniel Rubín de la Borbolla
1936 *Exploraciones en Mitla*. Instituto Panamericano de Geografía e Historia No. 21, Mexico D.F.

Castriota-Scanderberg, Alessandro, and Bruno Dallapiccola
2005 *Abnormal Skeletal Phenotypes: From Simple Signs to Complex Diagnoses*. Springer-Verlag, Berlin.

Coe, Michael D., and Rex Koontz
2002 *Mexico: From the Olmecs to the Aztecs*. Fifth edition. Thames and Hudson, New York.

Cook, Scott
1975 El Mercado y El Mercadeo: Dimensiones del Comercio en una Industria Lapidaria Zapoteca. In *Mercados de Oaxaca*, ed. Martin Diskin and Scott Cook, 173–203. Instituto Nacional Indigenista, Mexico D.F.

Córdova, Fray Juan de
1987 *Vocabulario en Lengua Çapoteca*. Facsimile edition. INAH and Ediciones Toledo, Oaxaca, Mexico.

Cowgill, George L.
1988 Onward and Upward with Collapse. In *The Collapse of Ancient States and Civilizations*, ed. Norman Yoffee and George L. Cowgill, 244–276. University of Arizona Press, Tucson.

Cruz, Wilfrido
1946 *Oaxaca Recóndita*. Comité Organizador del CDL Aniversario de la Ciudad de Oaxaca de Juárez, Gobierno del Estado de Oaxaca, H. Ayuntamiento de Oaxaca.

Del Río, Juan
1580 Relación de Tlalistac. In *Papeles de Nueva España*, ed. Francisco Del Paso y Troncoso, 4:177–182. Editorial Innovación, S.A, Mexico, 1981.

Diskin, Martin, and Scott Cook (editors)
1975 *Mercados de Oaxaca*. Instituto Nacional Indigenista, Mexico D.F.

Drennan, Robert D.
1983 Appendix: Radiocarbon Dates from the Oaxaca region. In *The Cloud People*, ed. Kent Flannery and Joyce Marcus, 363–370. Academic Press, New York.
1989 The Mountains North of the Valley. In *Monte Albán's Hinterland, Part II*, by Stephen A. Kowalewski et al., 367–384. Memoirs of the Museum of Anthropology University of Michigan, No. 23. Ann Arbor, Michigan.

Espíndola, Nicolás
1580 Relación de Miaguatlán. In *Papeles de Nueva España*, ed. Francisco Del Paso y Troncoso, 4:123–131. Editorial Innovación, S.A, Mexico, 1981.

Evans, Susan Toby
2004 *Ancient Mexico and Central America: Archaeology and Culture History.* Thames and Hudson, London.

Faulseit, Ronald
2008 Cerro Danush: An Exploration of the Late Classic Transition in the Tlacolula Valley. Report for Project 07056, Tulane University, and Report to FAMSI at http://www.famsi.org/reports/07056/index.html.

Feinman, Gary M.
1980 The Relationship between Administrative Organization and Ceramic Production in the Valley of Oaxaca, Mexico. Ph.D. Dissertation, Department of Anthropology, The Graduate Center, City University of New York, New York.
1982 Patterns in Ceramic Production and Distribution, Periods Early I through V. In *Monte Albán's Hinterland, Part I: The Prehispanic Settlement Patterns of the Central and Southern Parts of the Valley of Oaxaca, Mexico*, by Richard Blanton et al., 181–206. Museum of Anthropology, University of Michigan, Memoirs 15. Ann Arbor, Michigan.
1998 Scale and Social Organization: Perspectives on the Archaic State. In *Archaic States*, ed. Gary Feinman and Joyce Marcus, 95–133. School of American Research Press, Santa Fe, New Mexico.

Feinman, Gary M., and Linda M. Nicholas
1990 At the Margins of the Monte Albán State: Settlement Patterns in the Ejutla Valley, Oaxaca, Mexico. *Latin American Antiquity* 1: 216–246.
1993 Shell Ornament Production in Ejutla: Implications for Highland-Coastal Interaction in Ancient Oaxaca. *Ancient Mesoamerica* 4: 103–119.
1996 Defining the Eastern Limits of the Monte Albán State: Systematic Settlement Pattern Survey in the Guirún Area, Oaxaca, Mexico. *Mexicon* 18 (5): 91–97.

Fernández Dávila, Enrique
1997 Origen y desarrollo de la Civilización Zapoteca: San José Mogote, Etla. *Arqueología Mexicana* 5, No. 26: 18–23.

Finsten, Laura
1983 The Classic-Postclassic Transition in the Valley of Oaxaca, Mexico. Ph.D. Dissertation, Department of Sociology and Anthropology, Purdue University.
1995 *Jalieza, Oaxaca: Activity Specialization at a Hilltop Center.* Vanderbilt University Publications in Anthropology, No. 48, Nashville.

Flannery, Kent
1983 The Legacy of the Early Urban Period: An Ethnohistoric Approach to Monte Albán's Temples, Residences, and Royal Tombs. In *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations,* ed. Kent Flannery and Joyce Marcus, 132–136. Academic Press, New York.

1998 The Ground Plans of Archaic States. In *Archaic States*, ed. Gary Feinman and Joyce Marcus, 15–57. School of American Research Press, Santa Fe, New Mexico.

Flannery, Kent (editor)
1970 Preliminary Archaeological Investigations in the Valley of Oaxaca, Mexico: A Report to the National Science Foundation and the Instituto Nacional de Antropología e Historia. Museum of Anthropology, University of Michigan, Ann Arbor. Mimeo.
1976 *The Early Mesoamerican Village*. Academic Press, New York.
1985 *Guila Naquitz: Archaic Foraging and Early Agriculture in Oaxaca, Mexico*. Academic Press, Orlando, Florida.

Flannery, Kent, and Joyce Marcus
1976 Formative Oaxaca and the Zapotec Cosmos. *American Scientist* 64: 374–383.
1983 The Changing Politics of A.D. 600–900. In *The Cloud People*, ed. Kent Flannery and Joyce Marcus, 183–185. Academic Press, New York.

Flannery, Kent, and Joyce Marcus (editors)
2003 *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations; With a New Introduction by the Editors*. Percheron Press, Clinton Corners, New York.

Flannery, Kent, Joyce Marcus, and Stephen Kowalewski
1981 The Preceramic and Formative of the Valley of Oaxaca. In *Supplement to the Handbook of Middle American Indians,* Vol. 1, *Archaeology*, ed. Victoria Reifler Bricker and Jeremy Sabloff, 48–93. University of Texas Press, Austin, Texas.

Flannery, Kent V., Chris L. Moser, and Sylvia Maranca
1985 The Excavations of Guilá Naquitz. In *Guilá Naquitz: Archaic Foraging and Early Agriculture in Oaxaca, Mexico*, ed. Kent Flannery, 65–95. Academic Press, Orlando, Florida.

Flannery, Kent V., and C. Earle Smith Jr.
1983 Monte Albán IV Foodstuffs in Guilá Naquitz Cave. In *The Cloud People*, ed. Kent Flannery and Joyce Marcus, 206. Academic Press, New York.

Fowler, William
1974 Lambityeco Stratpit Survey Report. Unpublished manuscript on file at the Instituto de Estudios Oaxaqueños, Mitla, Oaxaca.

Fox, John W., Garrett W. Cook, Arlen F. Chase, and Diane Z. Chase
1996 Questions of Political and Economic Integration: Segmentary Versus Centralized States among the Ancient Maya, *Current Anthropology* 37, No. 5: 795–801.

Garibay, Ángel
1996 *Teogonía e Historia de los Mexicanos: Tres Opúsculos del siglo XVI*. Colección Sepan Cuantos, No. 37. Editorial Porrúa, Mexico.

Gaxiola, Margarita
1984 *Huamelulpan: Un centro urbano de la Mixteca Alta*. Colección Científica, No. 114. Instituto Nacional de Antropología e Historia, Mexico D.F.

Grube, Nikolai
2000 The City-States of the Maya. In *A Comparative Study of Thirty City-State Cultures*, ed. Mogens Herman Hansen, 547–565. The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark.

Gutiérrez, Esteban
1609 Relación de Miguatlan. In *Papeles de Nueva España*, ed. Francisco Del Paso y Troncoso, 4:289–300. Editorial Innovación, S.A, Mexico, 1981.

Hansen, Mogens Herman (editor)
2000 *A Comparative Study of Thirty City-State Cultures*. The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark.
2002 *A Comparative Study of Six City-State Cultures*. The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark.

Haug, Gerald H., Detley Günther, Larry C. Peterson, Daniel M. Sigman, Konrad A. Hughen, and Beat Aeschliman
2003 Climate and the Collapse of Maya Civilization. *Science* 299, no. 5613: 1731–1735.

Herrera, Alicia
2000 Algunas Categorías Cerámicas de la Fase Liobaa. In *Cerámica de la Fase Xoo (Monte Albán IIIB-IV) del Valle de Oaxaca*, by Cira Martínez et al., 299–312. Contribución No. 8 del Proyecto Especial Monte Albán 1992–1994, Centro Regional INAH de Oaxaca.

Herrera, Alicia, and Marcus Winter
2003 *Tres tumbas Postclásicas en el Sabino, Zimatlán, Oaxaca*. Arqueología Oaxaqueña, Series No. 1. Conaculta and Instituto Nacional de Antropología e Historia, Oaxaca.

Hirth, Kenneth G.
1998 The Distributional Approach: A New Way to Identify Marketplace Exchange in the Archaeological Record. *Current Anthropology* 39, no. 4: 451–476.

Hodder, Ian, and Scott Hutson
2003 *Reading the Past: Current Approaches to Interpretation in Archaeology*. Third edition. Cambridge University Press, Cambridge.

Hodell, David A., Mark Brenner, and Jason H. Curtis
2001 Solar Forcing of Drought Frequency in the Maya Lowlands. *Science* 292, no. 5520: 1367–1370.

Hodell, David A., Jason H. Curtis, and Mark Brenner
1995 Possible Role of Climate in the Collapse of Classic Maya Civilization. *Nature* 375: 391–394.

Hodges, Denise C.
1989 *Agricultural Intensification and Prehistoric Health in the Valley of Oaxaca, Mexico*. Memoirs of the Museum of Anthropology, University of Michigan, no. 22, Ann Arbor, Michigan.

Jansen, Maarten
1984 El Códice Ríos y fray Pedro de los Ríos. *Boletín de Estudios Latinoamericanos y del Caribe* 36: 69–81.

Joyce, Arthur
2003 Imperialism in Pre-Aztec Mesoamerica: Monte Albán, Teotihuacan, and the Lower Río Verde Valley. In *Warfare and Conflict in Ancient Mesoamerica*, ed. M. Brown and T. Stanton, 49–72. Altamira Press, Walnut Creek, California.

Joyce, Arthur, Laura Arnaud Bustamante, and Marc Levine
2001 Commoner Power: A Case Study from the Classic to the Post-classic Collapse on the Oaxaca Coast. *Journal of Archaeological Method and Theory* 8, no. 4: 343–385.

Joyce, Arthur A., Marcus Winter, and Raymond G. Mueller
1998 *Arqueología de la Costa de Oaxaca: Asentamientos del Periodo Formativo en el Valle del Río Verde Inferior.* Estudios de Antropología e Historia No. 40. Instituto Nacional de Antropología e Historia, Oaxaca.

Kearney, Michael
1972 *The Winds of Ixtepeji: World View and Society in a Zapotec Town*. Holt, Rinehart and Winston, New York.

Kepecs, Susan M.
2003a Chikichel. In *The Postclassic Mesoamerican World*, ed. Michael E. Smith and Francis Berdan, 259–268. University of Utah Press, Salt Lake City, Utah.
2003b Salt Sources and Production. In *The Postclassic Mesoamerican World*, ed. Michael E. Smith and Francis Berdan, 126–130. University of Utah Press, Salt Lake City, Utah.

Kirkby, Anne
1973 *The Use of Land and Water Resources in the Past and Present Valley of Oaxaca, Mexico*. Museum of Anthropology, University of Michigan, Memoirs 5. Ann Arbor, Michigan.

Kowalewski, Stephen
1982 Population and Agricultural Potential: Early I through V. In *Monte Albán's Hinterland, Part I: The Prehispanic Settlement Patterns of the Central and Southern Parts of the Valley of Oaxaca, Mexico*, by Richard Blanton et al. 149–180. Museum of Anthropology, University of Michigan, Memoirs no. 15. Ann Arbor, Michigan.
2003 Backcountry Pots. *Ancient Mesoamerica* 14, no. 1: 67–75.

Kowalewski, Stephen, Gary Feinman, Laura Finsten, Richard Blanton, and Linda Nicholas
1989 *Monte Alban's Hinterland, Part II: Prehispanic Settlement Patterns in Tlacolula, Etla, and Ocotlán, the Valley of Oaxaca, Mexico.* University of Michigan, Museum of Anthropology, Memoirs no. 23. Ann Arbor, Michigan.

Lind, Michael D.
1971 The Lambityeco Obsidian. Unpublished manuscript on file at the Instituto de Estudios Oaxaqueños, Mitla, Oaxaca.
1977 Mixtec Kingdoms in the Nochixtlán Valley: A Preconquest to Postconquest Archeological Perspective. Unpublished Ph.D. Dissertation, Department of Anthropology, University of Arizona, Tucson, Arizona.
1979 *Postclassic and Early Colonial Mixtec Houses in the Nochixtlán Valley, Oaxaca.* Vanderbilt University Publications in Anthropology, no. 23. Nashville, Tennessee.
1987 *The Sociocultural Dimensions of Mixtec Ceramics.* Vanderbilt University Publications in Anthropology, no. 33. Nashville, Tennessee.
1991–1992 Unos problemas con la cronología de Monte Albán y una nueva serie de nombres para las fases. *Notas Mesoamericanas* no. 13, 177–192. Universidad de las Américas, Cholula, Puebla, Mexico.
1994 Monte Albán y el Valle de Oaxaca durante la Fase Xoo. In *Monte Albán: Estudios Recientes*, ed. Marcus Winter, 99–111, Contribución No. 2 del Proyecto Especial Monte Albán 1992–1994, Oaxaca.
2000 Mixtec City-States and Mixtec City-State Culture. In *A Comparative Study of Thirty City-State Cultures*, ed. Mogens Herman Hansen, 567–580. The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark.
2001 Lambityeco and the Xoo Phase: The Elite Residences of Mound 195. In *Memoria de la Primera Mesa Redonda de Monte Albán: Procesos de cambio y conceptualización del Tiempo,* ed. Nelly Robles, 113–128. Conaculta, Instituto Nacional de Antropología e Historia, Mexico, D.F.
2002 Lambityeco, Tomb 6. In *Homenaje a John Paddock*, ed. Patricia Plunket, 45–66. Universidad de las Américas, Cholula, Puebla, Mexico.
2008 The Classic to Postclassic at Lambityeco. In *After Monte Albán: Transformation and Negotiation in Oaxaca, Mexico,* ed. Jeffrey P. Blomster, 171–192. University Press of Colorado, Boulder.
2009 Unidades domésticas de Lambityeco durante la fase Xoo. In *Memorias de la Cuarta Mesa Redonda de Monte Albán*, ed. Nelly Robles, 107–122. Instituto Nacional de Antropología e Historia, Mexico D.F.

Lind, Michael D., and Javier Urcid
1983 The Lords of Lambityeco and Their Nearest Neighbors. *Notas Mesoamericanas* no. 9, 78–111. Universidad de las Américas, Cholula, Puebla, Mexico.
1990 La zona arqueológica de Lambityeco. In *Lecturas Históricas del Estado de Oaxaca*, Vol. 1, ed. Marcus Winter, 287–307. Instituto Nacional de

Antropología e Historia and Gobierno del Estado de Oaxaca, Mexico D.F.

Mann, Robert W., and Sean P. Murphy
1990 *Regional Atlas of Bone Disease: A Guide to Pathologic and Normal Variation in the Human Skeleton*. Charles C. Thomas, Springfield, Illinois.

Marcus, Joyce
1983 Rethinking the Zapotec Urn. In *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations,* ed. Kent Flannery and Joyce Marcus, 144–148. Academic Press, New York.
1998 The Peaks and Valleys of Archaic States: An Extension of the Dynamic Model. In *Archaic States*, ed. Gary Feinman and Joyce Marcus, 59–94. School of American Research Press, Santa Fe, New Mexico.

Marcus, Joyce, and Kent Flannery
1996 *Zapotec Civilization: How Urban Society Evolved in Mexico's Oaxaca Valley.* Thames and Hudson, London.

Markens, Robert J.
2004 Ceramic Chronology in the Valley of Oaxaca, Mexico, during the Late Classic and Postclassic Periods and the Organization of Ceramic Production. Unpublished Ph.D. dissertation, Department of Anthropology, Brandeis University, Waltham, MA.
2008 Advances in Defining the Classic-Postclassic Portion of the Valley of Oaxaca Ceramic Chronology. In *After Monte Albán: Transformation and Negotiation in Oaxaca, Mexico,* ed. Jeffrey P. Blomster, 49–94. University Press of Colorado, Boulder.

Markens, Robert J., and Cira Martínez
2001 Resumen de cerámica de la fase Xoo (Monte Albán IIIB-IV). In *Memoria de la primera Mesa Redonda de Monte Albán,* ed. Nelly Robles, 301–327. Conaculta Instituto Nacional de Antropología e Historia, Mexico D.F.

Markens, Robert, Marcus Winter, and Cira Martínez
2008 Ethnohistory, Oral History, and Archaeology at Macuilxóchitl: Perspectives on the Postclassic Period (800–1521 CE) in the Valley of Oaxaca. In *After Monte Albán: Transformation and Negotiation in Oaxaca, Mexico*, ed. Jeffrey P. Blomster, 193–215. University Press of Colorado, Boulder.

Markham, Charles W.
1981 *Prehispanic Settlement Dynamics in Central Oaxaca, Mexico: A View from the Miahuatlan Valley.* Vanderbilt University Publications in Anthropology, no. 26, Nashville, Tennessee.

Martin, Simon, and Nikolai Grube
2000 *Chronicle of the Maya Kings and Queens: Deciphering the Dynasties of the Ancient Maya.* Thames and Hudson, London.

Martínez, Cira
1994 La cerámica de estilo teotihuacano en Monte Albán. In *Monte Albán: Estudios Recientes,* ed. Marcus Winter, 25–54. Proyecto Especial Monte Albán 1992–1994, Contribución No. 2. Oaxaca.

Martínez, Cira, Robert Markens, Marcus Winter, and Michael Lind
2000 *Cerámica de la Fase Xoo (Monte Albán IIIB-IV) del Valle de Oaxaca*. Contribución No. 8 del Proyecto Especial Monte Albán 1992–1994, Centro Regional INAH de Oaxaca, Oaxaca.

Méndez, Enrique
1988 Tumba 5 de Huijazoo. *Arqueología* 2: 7–16. Dirección de Monumentos Prehispánicos, Instituto Nacional de Antropología e Historia, Mexico.

Metcalfe, Sarah E., F. A. Street-Perrott, R. B. Brown, P. E. Hales, R. A. Perrott, and F. M. Steininger
1989 Late Holocene Human Impact on Lake Basins in Central Mexico. *Geoarchaeology* 4: 119–141.

Minc, Leah D.
2006 Monitoring Regional Market Systems in Prehistory: Models, Methods, and Metrics. *Journal of Anthropological Archaeology* 25: 82–116.

Mogor, Joseph
1968 Plan and Profile of the Tomb 6 Skeletal Remains and Offerings. Drawing in the archives of the Instituto de Estudios Oaxaqueños, Mitla, Oaxaca, Mexico.

Neely, James, Christopher Caran, and Barbara Winsborough
1990 Irrigated Agriculture at Hierve el Agua, Oaxaca, Mexico. In *Debating Oaxaca Archaeology*, ed. Joyce Marcus, 115–189. Museum of Anthropology, University of Michigan, Anthropological Papers No. 84. Ann Arbor, Michigan.

Neff, Hector
1989a The Effect of Interregional Trade on Plumbate Production. In *Economies of the Soconusco Region of Mesoamerica*, ed. B. Voorhies, 249–267. University of Utah Press, Salt Lake City.
1989b Origins of Plumbate Production. In *Economies of the Soconusco Region of Mesoamerica*, ed. B. Voorhies, 175–193. University of Utah Press, Salt Lake City.

O'Hara, Sarah L., and Sarah E. Metcalfe
1997 The Climate of Mexico since the Aztec Period. *Quaternary International* 43/44: 25–31.

Oliveros, Arturo
1992 Ignacio Bernal (1947–1988): Vida y obra. *Cuadernos de Arquitectura Mesoamericana* 18: 85–96.

Oudijk, Michel R.
2002 The Zapotec City-State. In *A Comparative Study of Six City-State Cultures*, ed. Mogens Herman Hansen, 73–90. The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark.
2008 The Postclassic Period in the Valley of Oaxaca: The Archaeological and Ethnohistorical Records. In *After Monte Albán: Transformation and Negotiation in Oaxaca, Mexico*, ed. Jeffrey Blomster, 95–118. University Press of Colorado, Boulder.

Paddock, John
1978 The Middle Classic Period in Oaxaca. In *Middle Classic Mesoamerica: A.D. 400–700*, ed. E. Pasztory, 45–62. Columbia University Press, New York.
1983a Lambityeco. In *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations,* ed. Kent Flannery and Joyce Marcus, 197–204. Academic Press, New York.
1983b *Lord Five Flower's Family: Rulers of Zaachila and Cuilapan*. Vanderbilt Publications in Anthropology, No. 29. Nashville, Tennessee.
1983c Some thoughts on the Decline of Monte Albán. In *The Cloud People: Divergent Evolution of the Zapotec and Mixtec Civilizations*, ed. Kent V. Flannery and Joyce Marcus, 186–188. Academic Press, New York.
1989 *Oaxaqueños de antes en el Museo Frissell de Mitla*. Casa Oaxaqueña de la Cultura and Dirección de Comunicación Social, Gobierno del Estado. Oaxaca, Mexico

Paddock, John (editor)
1966 *Ancient Oaxaca*. Stanford University Press, Stanford, California.

Paddock, John, Joseph Mogor, and Michael Lind
1968 Lambityeco Tomb 2: A Preliminary Report. *Boletín de Estudios Oaxaqueños,* no. 25.

Parsons, Elsie Clews
1936 *Mitla: Town of the Souls and Other Zapoteco-Speaking Pueblos of Oaxaca, Mexico*. University of Chicago Press, Chicago.

Parsons, Mary H.
1972 Spindle Whorls from the Teotihuacan Valley, Mexico. In *Miscellaneous Studies in Mexican Prehistory,* ed. M. Spence, J. Parsons, and M. Parsons, 45–80. Museum of Anthropology, University of Michigan, Anthropological Papers, No. 45. Ann Arbor, Michigan.

Paso y Troncoso, Francisco del
1905 *Papeles de Nueva España,* Vol. 4, *Relaciones Geográficas de la Diócesis de Oaxaca*. Estudio Tipográfico Sucesores de Rivadeneyra, Madrid.

Payne, William O.
1970 A Potter's Analysis of the Pottery from Lambityeco Tomb 2. *Boletín de Estudios Oaxaqueños* no. 29.

Peeler, Damon
1994 *Mapa de Monte Albán*. Proyecto Especial Monte Albán 1992–1994, Contribución No. 6. Instituto Nacional de Antropología e Historia, Oaxaca.

Peterson, David
1974a The 1974 Survey. Unpublished manuscript on file at the Instituto de Estudios Oaxaqueños, Mitla, Oaxaca.
1974b Preliminary Paper on Yegüih. Unpublished manuscript on file at the Instituto de Estudios Oaxaqueños, Mitla, Oaxaca.
1976 Ancient Commerce. Unpublished Ph.D. dissertation, Department of Anthropology, New York State University at Binghamton.
1979 Minor Subsurface Data on Lambityeco, Oaxaca. Unpublished manuscript on file at the Instituto de Estudios Oaxaqueños, Mitla, Oaxaca.
1991 El Calendario Astronómico de Lambityeco. *El Imparcial*, Domingo 9 de Junio. Oaxaca de Juárez, Oaxaca.

Pohl, John
1999 The Lintel Paintings of Mitla and the Function of the Mitla Palaces. In *Mesoamerican Architecture as a Cultural Symbol,* ed. Jeff Kowalski, 177–203. Oxford University Press, New York.

Potter, David
1974 Lambityeco Excavations—Architecture. Unpublished manuscript on file at the Instituto de Estudios Oaxaqueños, Mitla, Oaxaca.

Quiñones-Keber, Eloise
1995 *Codex Telleriano-Remensis: Ritual, Divination, and History in a Pictorial Aztec Manuscript*. University of Texas Press, Austin.

Rabin, Emily
1970 The Lambityeco Friezes: Notes on Their Contents, with an Appendix on C14 Dates. *Boletín de Estudios Oaxaqueños* no. 33.

Rivera, Iván
2000 Las Manifestaciones del Poder durante el Clásico en la Mixteca Baja de Oaxaca: La evidencia Iconográfica y Arqueológica. *Cuadernos del Sur* 6, no. 15: 5–36.
2002 La Iconografía del Poder en los Grabados del Cerro de la Caja, Mixteca Baja de Oaxaca. In *Iconografía Mexicana IV: Iconografía del Poder*, ed. Beatriz Barba de Piña Chan, 49–74. Instituto Nacional de Antropología e Historia, Mexico D.F.

Robichaux, Hubert R.
2002 The Compatibility of Epigraphic, Geographic, and Archaeological Data, with a Drought-Based Explanation for the Classic Maya Collapse. *Ancient Mesoamerica* 13, no. 2: 341–345.

Robles, Nelly
1986 Problemática Urbana de la Zona de Monumentos de Mitla. *Cuadernos de Arquitectura Mesoamericana* 7: 17–26.

Romney, Kimball, and Romaine Romney
1966 *The Mixtecans of Juxtlahuaca, Mexico*. John Wiley and Sons, New York.

Santley, Robert, and Rani Alexander
1996 Teotihuacan and Middle Classic Mesoamerica: A Precolumbian World System? In *Arqueología mesoamericana: Homenaje a William T. Sanders*, ed. Alba Mastache, Jeffrey Parsons, Robert Santley, and Mari C. Serra Puche, 1: 173–194. INAH, Mexico.

Séjourné, Laurette
1960 El simbolismo de los rituales funerarios en Monte Albán. *Revista Mexicana de Estudios Antropológicos* 16: 77–90.

Seler, Eduard
1904 [1895] The Wall Paintings of Mitla. *Bureau of American Ethnology, Bulletin No. 28*, 243–324.

Sellen, Adam T.
2002 Storm God Impersonators from Ancient Oaxaca. *Ancient Mesoamerica* 13, no. 1: 3–19.

Smith, Michael E.
1992 Braudel's Temporal Rhythms and Chronology Theory in Archaeology. In *Archaeology, Annales, and Ethnohistory*, ed. A. Bernard Knapp, 23–34. Cambridge University Press, Cambridge.
2000 Aztec City-States. In *A Comparative Study of Thirty City-State Cultures*, ed. Mogens Herman Hansen, 581–595. The Royal Danish Academy of Sciences and Letters, Copenhagen, Denmark.

Smith, Michael E., and Francis Berdan (editors)
2003 *The Postclassic Mesoamerican World*. University of Utah Press, Salt Lake City.

Smith, Michael E., and Michael D. Lind
2005 Xoo-Phase Ceramics from Oaxaca Found at Calixtlahuaca in Central Mexico. *Ancient Mesoamerica* 16: 169–177.

Smith, Michael E., and Lisa Montiel
2001 The Archaeological Study of Empires and Imperialism in Pre-Hispanic Central Mexico. *Journal of Anthropological Archaeology* 20: 245–284.

Smith, Michael E., and Katharina J. Schreiber
2006 New World States and Empires: Politics, Religion, and Urbanism. *Journal of Archaeological Research* 14, no. 1: 1–52.

Smith, Robert
1958 The Place of Fine Orange Pottery in Mesoamerican Archaeology. *American Antiquity* 24, no. 2: 151–160.

Smith Stark, C. Thomas
2002 Dioses, Sacerdotes y Sacrificio: Una Mirada a la religión Zapoteca a través del *Vocabvlario en Lengua Çapoteca* (1578) de Juan de Córdova.

In *La Religión de los Binnigul'sa'*, ed. Victor de la Cruz and Marcus C. Winter, 89–195. Instituto Estatal de Educación Pública de Oaxaca y el Instituto Oaxaqueño de las Culturas, Colección Voces del Fondo. Oaxaca, Mexico.

Spencer, Charles S., and Elsa M. Redmond
1997 *Archaeology of the Cañada de Cuicatlán, Oaxaca*. Anthropological Papers of the American Museum of Natural History, No. 80. New York.

Spores, Ronald
1972 *An Archaeological Settlement Survey of the Nochixtlán Valley, Oaxaca*. Vanderbilt University Publications in Anthropology, No. 1. Nashville, Tennessee.

Swezey, William
1975 Mound 91, Lambityeco: A Description of an Ancient Kiln. *Sociedad Mexicana de Antropología, XIII Mesa Redonda, Arqueología II*, 179–184.

Taylor, William
1972 *Landlord and Peasant in Colonial Oaxaca*. Stanford University Press, Stanford, California.

Thiemer-Sachse, Ursula
1990 La Insurreción de Tetiquipa-Río Hondo en 1547, México del Sur. *Lateinamerika* 25: 34–48.

Trigger, Bruce
2003 *Understanding Early Civilizations*. Cambridge University Press, Cambridge.

Urcid, Javier
1983 The Tombs and Burials from Lambityeco: A Prehispanic Community in the Valley of Oaxaca, Mexico. Unpublished M.A. thesis, Department of Anthropology, Universidad de las Américas, Cholula, Puebla, Mexico.
1992 Zapotec Hieroglyphic Writing. 2 vols. Unpublished Ph.D. dissertation, Department of Anthropology, Yale University, New Haven, Connecticut.
1993 The Pacific Coast of Oaxaca and Guerrero: Westernmost Extent of the Zapotec Script. *Ancient Mesoamerica* 4: 141–165.
1995 A Peculiar Stone with Zapotec Hieroglyphic Inscriptions. *Mexicon* 5, no. 26: 18–23.
1998 Codices on Stone: The Genesis of Writing in Ancient Oaxaca. In *Mexican Codices and Archaeology*, Indiana Journal of Hispanic Literatures 13: 7–16.
1999 La Lápida Grabada de Noriega: Tres Rituales en la Vida de un Noble Zapoteca. *Indiana* 16: 211–264. Gebr. Mann Verlag, Berlin, Germany.
2001 *Zapotec Hieroglyphic Writing*. Studies in Pre-Columbian Art and Archaeology, No. 34. Dumbarton Oaks, Washington, D.C.
2002 La Faz Oculta de una Misteriosa Máscara de Piedra. In *Memoria de la Segunda Mesa Redonda de Monte Albán: Sociedad y Patrimonio Arqueológico*

en el Valle de Oaxaca, ed. Nelly Robles, 212–248. Conaculta, INAH, Mexico D.F.

2003 Las urnas del Barrio Zapoteca de Teotihuacan. *Arqueología Mexicana* 11, no. 64: 54–57.

2005 *Zapotec Writing: Knowledge, Power, and Memory in Ancient Oaxaca*. FAMSI, http://www.famsi.org/zapotecwriting/.

Urcid, Javier, and Arthur A. Joyce

2001 Carved Monuments and Calendrical Names: The Rulers of Río Viejo, Oaxaca. *Ancient Mesoamerica* 12, no. 2: 199–216.

Urcid, Javier, and Adam T. Sellen

2008 A Forgotten House of Ancestors from Ancient Xoxocotlán. *Baessler-Archiv* 56: 117–224.

Urcid, Javier, and Marcus Winter

2003 Nuevas Variantes Glíficas Zapotecas. *Mexicon* 25, no. 5: 123–128.

Urcid, Javier, Marcus Winter, and Raúl Matadamas

1994 Nuevos monumentos grabados en Monte Albán, Oaxaca. In *Escritura zapoteca prehispánica*, ed. Marcus Winter, 2–52. Contribución No. 4 del Proyecto Especial Monte Albán 1992–1994, INAH, Oaxaca.

Villagar, Francisco

1580 Relación de Tecuicuilco. In *Relaciones Geográficas del Siglo XVI: Antequera, tomo segundo*, ed. René Acuña, 85–102. Universidad Nacional Autónoma de México, Mexico D.F., 1984.

Warner, Rose Ella, and C. Earle Smith Jr.

1968 Boll Weevil Found in Pre-Columbian Cotton from Mexico. *Science* 162: 911–912.

Welte, Cecil

1965 *Mapa de las Localidades del Valle de Oaxaca (Cuenca Superior del Río Atoyac) según el Censo de 1960*. Oficina de Estudios de Humanidad del Valle de Oaxaca, Oaxaca.

Whitecotton, Joseph

1977 *The Zapotecs: Princes, Priests, and Peasants*. University of Oklahoma Press, Norman.

1982 Zapotec Pictorials and Zapotec Naming: Towards an Ethnohistory of Ancient Oaxaca. In *Papers in Anthropology*, ed. Joseph Whitecotton and Judith Whitecotton, 23, no. 2: 285–343. University of Oklahoma Press, Norman.

1983 The Genealogy of Macuilxochitl: A 16th-Century Pictorial from the Valley of Oaxaca. *Notas Mesoamericanas* 9: 58–75.

1990 *Zapotec Elite Ethnohistory: Pictorial Genealogies from Eastern Oaxaca*. Vanderbilt University Publications in Anthropology, No. 39. Nashville, Tennessee.

2003 Las genealogías del Valle de Oaxaca. Época Colonial. In *Escritura Zapoteca: 2500 años de Historia*, ed. María de los Ángeles Romero Frizzi, 305–339. INAH and CIESAS, Mexico.

Winter, Marcus

1972 Tierras Largas: A Formative Community in the Valley of Oaxaca, Mexico. Unpublished Ph.D. dissertation, Department of Anthropology, University of Arizona, Tucson.

1974 Residential Patterns at Monte Albán, Oaxaca, Mexico. *Science* 186: 981–987.

1976 The Archeological Household Cluster in the Valley of Oaxaca. In *The Early Mesoamerican Village*, ed. Kent V. Flannery, 25–31. Academic Press, New York.

1986 Templo-Patio-Adoratorio: Un conjunto arquitectónico no residencial en el Oaxaca prehispánico. *Cuadernos de Arquitectura Mesoamericana* 7: 51–59.

1989a From Classic to Post-Classic in Pre-Hispanic Oaxaca. In *Mesoamerica after the Decline of Teotihuacan, A.D. 700–900,* ed. Richard Diehl and Janet Berlo, 123–130. Dumbarton Oaks Research Library and Collection, Washington, D.C.

1989b *Oaxaca: The Archaeological Record*. Minutiae Mexicana, Mexico D.F.

1990 ¿Existe un Postclásico Temprano en Oaxaca? In *Mesoamérica y Norte de México: Siglos IX–XII*, ed. F. Sodi Miranda, 195–203. Instituto Nacional de Antropología e Historia, Mexico D.F.

1994 Nuevas determinaciones de radiocarbono de Monte Albán. In *Monte Albán: Estudios Recientes*, ed. Marcus Winter, 119–120. Contribución No. 2 del Proyecto Especial Monte Albán 1992–1994, Oaxaca City.

1996 *Cerro de las Minas: Arqueología de la Mixteca Baja*. Casa de la Cultura, Huajuapan de León, Oaxaca.

1997 Classic to Postclassic in the Valley of Oaxaca: A View from Monte Albán. In *U Mut Maya VI: Reports and Readings Inspired by the Advanced Seminars Led by Linda Schele at the University of Texas at Austin 1994–1996*, ed. C. Jones and T. Jones, 21–42. Eureka Printing Company, Bayside, CA.

1998 Monte Albán and Teotihuacan. In *Rutas de Intercambio en Mesoamérica: III Coloquio Pedro Bosch-Gimpera*, ed. Evelyn Childs Rattray, 153–184. Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas, Mexico D.F.

2000 Apéndice A. Fechas de Radiocarbono Relacionadas a la Fase Xoo: Exploraciones en Monte Albán 1972. In *Cerámica de la Fase Xoo (Época Monte Albán IIIb-IV) en el Valle de Oaxaca*, by Cira Martínez et al., 269–272. Proyecto Especial Monte Albán 1992–1994, Contribución No. 8. Centro INAH–Oaxaca, Oaxaca.

2001 Palacios, Templos y 1.300 Años de Vida Urbana en Monte Albán. In *Reconstruyendo la Ciudad Maya: El Urbanismo en las Sociedades Antiguas*, ed. Andrés Ciudad Ruiz, María Josefa Iglesias Ponce de León, and

María del Carmen Martínez Martínez, 277–301. Publicaciones de la S.E.M.A. No. 6, Sociedad España de Estudios Mayas, Madrid.

2003 Monte Albán and Late Classic Site Abandonment in Highland Oaxaca. In *The Archaeology of Settlement Abandonment in Middle America*, ed. Takeshi Inomata and Ronald W. Webb, 103–119. University of Utah Press, Salt Lake City.

2006 La Cerámica del Clásico en Oaxaca. In *La Producción Alfarera en el México Antiguo II*, ed. B. Merino Carrión and A. García Cook, 91–118. Colección Científica, Instituto Nacional de Antropología e Historia, Mexico D.F.

2007a *Cerro de las Minas: Arqueología de la Mixteca Baja*. Segunda Edición Revisada. Centro INAH Oaxaca, Conaculta, INAH, Oaxaca.

2007b La Cerámica del Posclásico de Oaxaca. In *La Producción Alfarera en el México Antiguo V*, ed. B. Merino Carrión and A. García Cook, 79–91. Colección Científica, Instituto Nacional de Antropología e Historia, Mexico D.F.

2008 Classic to Postclassic in Four Regions: The Mazateca, the Chinantla, the Mixe Region, and the Southern Isthmus. In *After Monte Albán: Transformation and Negotiation in Oaxaca, Mexico*, ed. Jeffrey P. Blomster, 393–426. University Press of Colorado, Boulder.

Winter, Marcus, William Autry, Richard Wilkinson, and Cira Martínez

1995 *Entierros de Monte Albán: Dos Estudios*. Contribución No. 7 del Proyecto Especial Monte Albán 1992–1994. Centro INAH Oaxaca, Oaxaca.

Winter, Marcus, Daría Deraga, and Rodolfo Fernández

1979 La Tumba 77-11 de Lambityeco, Tlacolula, Oaxaca. In *Los procesos de cambio (en mesoamérica y áreas circunvecinas)*, 425–429. Sociedad Mexicana de Antropología y Universidad de Guanajuato, Mexico.

Winter, Marcus, and Alicia Herrera Muzgo T.

2000 Apéndice B. Fechas de Radiocarbono Relacionadas a la Fase Xoo: Exploraciones en Monte Albán 1989. In *Cerámica de la Fase Xoo (Época Monte Albán IIIB-IV) en el Valle de Oaxaca*, by Cira Martínez et al., 273–276. Proyecto Especial Monte Albán 1992–1994, Contribución No. 8. Centro INAH Oaxaca, Oaxaca.

Winter, Marcus, and William Payne

1976 Hornos para cerámica hallados en Monte Albán. *Boletín del Instituto Nacional de Antropología e Historia* 16: 37–40.

Wolfman, Daniel

1973 A Re-Evaluation of Mesoamerican Chronology A.D. 1–1200. Unpublished Ph.D. dissertation, Department of Anthropology, University of Colorado, Colorado Springs.

1990 Mesoamerican Chronology and Archaeomagnetic Dating, A.D. 1–1200. In *Archaeomagnetic Dating*, ed. J. Eighmy and R. Sternberg, 261–308. University of Arizona Press, Tucson.

Yaeger, Jason, and David A. Hodell
2008 The Collapse of Maya Civilization: Assessing the Interaction of Culture, Climate, and Environment. In *El Niño, Catastrophism, and Culture Change in Ancient America*, ed. Daniel H. Sandweiss and Jeffrey Quilter, 187–242. Dumbarton Oaks, Washington, D.C.

Zárate, Roberto
1992 La Tumba 12 de Lambityeco. *Cuadernos del Sur* 2: 5–22.

Zeitlin, Judith F., and Robert N. Zeitlin
1990 Arqueología y Época Prehispánica en el Sur del Istmo de Tehuantepec. In *Lecturas Históricas de Oaxaca*, Vol. 1, Época Prehispánica, ed. M. Winter, 393–454. Instituto Nacional de Antropología e Historia and Gobierno del Estado de Oaxaca, Mexico D.F.

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