MESOAMERICA'S CLASSIC HERITAGE

FROM TEOTIHUACAN TO THE AZTECS

EDITED BY

DAVÍD CARRASCO, LINDSAY JONES, AND SCOTT SESSIONS

UNIVERSITY PRESS OF COLORADO

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International Standard Book Number 0-87081-512-1

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

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Printed in the United States of America.

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, University of Southern 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 Z39.48–1984

Library of Congress Cataloging-in-Publication Data

Mesoamerica's classic heritage : from Teotihuacan to the Aztecs /
edited by Davíd Carrasco, Lindsay Jones, and Scott Sessions.
p. cm.
Includes bibliographical references.
ISBN 0-87081-512-1 (cloth : alk. paper)
1. Teotihuacán Site (San Juan Teotihuacán, Mexico) 2. Indians of
Mexico—Antiquities. 3. Mexico—Antiquities. I. Carrasco, Davíd.
II. Jones, Lindsay, 1954– . III. Sessions, Scott.
F1219.1.T27M46 1999
972'.01—dc21 99-11257
CIP

Front cover: José María Velasco, *Pirámide del Sol,* 1878 (courtesy of the Banco Nacional de Comercio Exterior and the Museo de Arte Moderno, Mexico City). *Back cover:* Glyphs from La Ventilla, Teotihuacan (courtesy of Rubén Cabrera Castro). *Back flap:* Huehueteotl censer with Kan crosses, from Cerro de las Mesas, Veracruz (courtesy of Karl Taube).

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The Construction of the Underworld in Central Mexico

Transformations from the Classic to the Postclassic

Linda Manzanilla

The Mesoamerican tradition, a long-duration process of basic core ideas and peripheral formal changing aspects, was marked by a dicotomy: fertility and warfare. In this chapter, I will review some of the uses through time of underground spaces in Central Mexico, with particular emphasis in the inclusion of the following set: water spring or water deposit–amphibian beings–fertility inside mountains or pyramids.

I thank the following people for their participation in particular studies of my project, "The Study of Tunnels at Teotihuacan": Luis Barba and Agustín Ortiz for the geophysical and geochemical prospection, as well as for the chemical studies; Raúl Valadez for the paleofaunal analysis; Emily McClung, Rebeca Rodríguez, and Cristina Adriano for the paleobotanical data; Emilio Ibarra and Ruth Castañeda, for the pollen information; Judith Zurita and Gabriela Silva for the phytolith analysis; Cynthia Hernández and Rosanna Enríquez for the lithic analyses; Miguel Angel Jiménez and Claudia López for the ceramic distributional maps; Edith Ortiz, Rocío Arrellín, and Claudia López for the assistance in the exploration of the caves; and the Graphics Department of the Institute of Anthropological Research of the National Autonomous University of Mexico for their invaluable help. This interdisciplinary research was funded by the Institute of Anthropological Research of the National Autonomous University and by Grant no. H9106–0060 of the National Council of Science and Technology of Mexico (CONACYT), and with permission of the Archaeological Council of the National Institute of Anthropology and History (INAH). The geophysical work was also partially supported by an internal grant, IGF–02–9102. I would also like to thank doctors Zoltán de Cserna and Gerardo Sánchez Rubio of the Institute of Geology; José Lugo Hubp of the Institute of Geography; and Jaime Urrutia and Dante Morán of the Institute of Geophysics, National Autonomous University of Mexico, for their advice and suggestions at different stages of the geological research at Teotihuacan. We also thank the students of the Engineering Faculty of the university and of the National School of Anthropology and History for their participation.

THE OLMEC WORLD

Three different elements that bear relevance to what will develop in Late Formative and Classic times in Central Mexico will be traced since Middle Formative times in the Olmec world: one is related to caves and jaguars; the second seems to be related to toads/frogs and water deposits/springs; the third is the sacred mountain and the world tree. They will coalesce in different cults in later times, and thus we shall speak not only of caves, but also of springs, frogs/toads, and sacred mountains.

Caves. Contact with the deities, particularly important in the ruler's accession to the throne, occurred through cracks in mountains, the residences of the gods (Bernal-García 1994: 114–115). Mountain peaks and caves are named the same (*tzatAk*) in Copainalá Zoque (Harrison et al. 1981, in Bernal-García 1994: 116), and thus are seen as entrances to the underworld.

Numerous representations of caves are found in the Olmec art of La Venta (Altars 4 and 5), San Lorenzo Tenochtitlan, Laguna de los Cerros, and Chalcatzingo (Figures 2.1 and 2.2). Altars 4 and 5 at La Venta depict seated figures, probably rulers, emerging from a cave, and particularly in Altar 4, the access to the underworld is a jaguar's mouth (Magni 1995a: 94). The relationship of the jaguar's face and mouth with the subterranean world and the earth is also evident in the massive sealed serpentine offerings of La Venta (Ortiz and Rodríguez 1994:70).

At Chalcatzingo, Relief 1, the famous relief named The King depicts a male figure in a throne inside a cave as the representation of the earth's monster (Fig. 2.2). A series of plants emerge from the four corners. Spirals that may represent

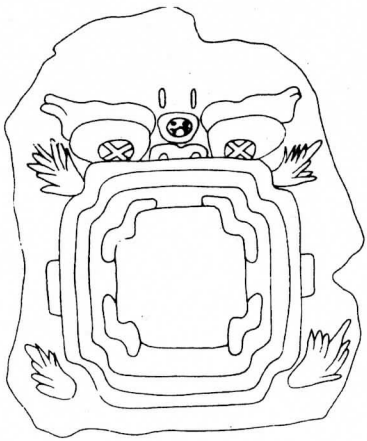

Fig. 2.1. Relief n. IX at Chalcatzingo (redrawn from de la Fuente 1996, vol. II: 25).

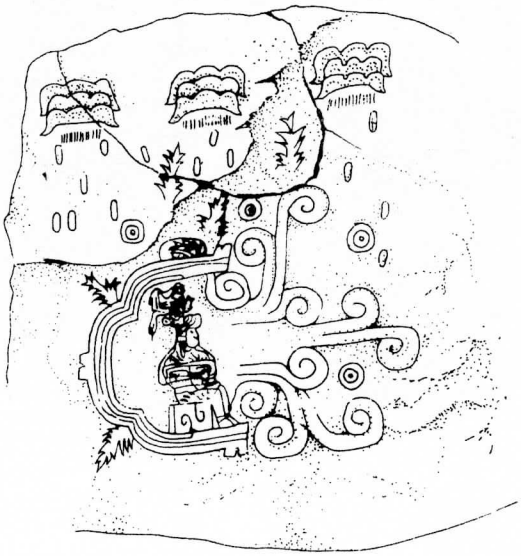

Fig. 2.2. Relieve n. I at Chalcatzingo (redrawn from de la Fuente 1996, vol. II: 25).

water or wind rise from the cave. In the upper part, three clouds full with water release rain. Thus, this representation relates the gates to the underworld with fertility cults (Ortiz and Rodríguez 1994: 75), with the main figure as the provider of rain (Taube 1995: 99), probably Tepeyollotl as the jaguar god that inhabits caves with water flows, the heart of the mountain (Angulo Villaseñor 1987b: 217). Thus, the three vertical levels of the Mesoamerican cosmos are represented in this relief (Magni 1995a: 9). Monument 9 at Chalcatzingo is related to the former, in that it represent the jaguar's mouth as a quadripartite cave entrance (see Figure 2.1).

On another line of evidence, Reilly (1994) has proposed an interesting interpretation of Complex A at La Venta, in which Tomb A, the sandstone sarcophagus (Monument 6), the sunken courtyard, and Massive offerings numbers 1 through 3, are seen as the materialization of the conception of the watery underworld, the primordial ocean, through the burial of jade celts and objects (particularly a jade frog and a jade clamshell) representing water, and fertility symbols, blue clays, organic materials, stingray spines, and shark's teeth. The entrance of Tomb A would symbolize the maw of the earth monster (Reilly 1994: 129).

Numerous caves in Guerrero offer polychrome mural paintings (Villela F. 1989). At the deepest sector of the Juxtlahuaca cave, a lordly figure stands near a smaller seating figure, probably evoking vassalage (Niederberger 1996: 96). It may suggest the connection of Olmec ancestry with caves (Grove 1970: 31).

At Oxtotitlán, one of the representations refers to a male figure dressed in a bird attire over the entrance of the cave, depicted as a feline's open mouth (Grove 1970: 8–9, frontispiece; Lombardo 1996: 6–11; Magni 1995a), a representation that

Grove (31) relates to rain, water, and fertility. The Oxtotitlán Cave would be thus seen as a shrine to water and fertility, and the nearby Quiatepec Mountain (the so-called hill of rain) would be related. Grove (14) has also suggested a relationship of the owl motif to rain, as in the Teotihuacan and Maya cultures.

Magni (1995a: 102–103, 1995b) has stated that the knuckle-duster and torch depictions in Olmec petaloid celts are related to ritual sequences inside caves, where men dressed in jaguar disguise crawl through narrow passages, imitating the jaguar's movements.

Water flows and amphibian beings. Taube has stated that the Olmecs developed "an elaborate ideology devoted to water and rain and, in addition, religious rituals of sacrifice and supplication designed to ensure agricultural abundance"(1995: 83). Thus they were the first "rainmakers," a tradition that we shall follow till the present day. Through the iconography of avian serpents, the Olmecs represented the fertilizing elements of wind, lightning, and rain, in a deity that preluded Itzamná or Ometeotl, according to Joralemon (83). Particularly in La Venta's Monument 19, the avian serpent, as a sky symbol, arches a seated male figure (87).

The Olmec Rain God is depicted with jaguarlike furrowed brows, and upper lips pulled up to the level of the nostrils (97–98). Protoclassic rain gods in the act of rainmaking may be recognized in Stela I at Izapa, as a prototype for the Maya god Chac (95).

Rain ceremonies may have involved ritual bathing, and ritual management of water and rain. Gómez Rueda (1997) cites numerous stone elements used for managing water among the Olmec: water deposits, subterranean ducts, open canals, aqueducts, control holes, fountains and troughs, gargoyles, dams, etc. At San Lorenzo Tenochtitlan, a long stone aqueduct has been excavated, moving water from a pond, and the presence of rubber balls is probably related to a cult devoted to water deities (Krotser 1973). Also at San Lorenzo, sinuous canals may be related to serpentine watery beings (Cyphers 1996: 65, fig. 3); Monument 9 is a fountain in the form of a duck. At Izapa, Chiapas, more than half of these stone monuments are related to water springs (Gómez Rueda 1997).

Particularly, El Manatí in Veracruz and Chalcatzingo in Morelos display elaborate Olmec offerings near or in springs or runoff channels at the base of the sacred mountains (Taube 1995: 99). At El Manatí, Veracruz, the mountain emerges as an island in a plain with lagoons and swamps; to the west of the mountain, springs emerge from the mountain in a bed of sandstone blocks. In the earliest phase, inside the bed of blocks, pottery vessels, stone bowls, mortars, jade axes and jade beads, and rubber balls were found. In a second phase, the Olmecs continued to place rubber balls and jade celts in clusters. By 1200 B.C.E. we see the burial of human wooden busts enveloped in mats like funerary bundles together with jade celts, hematite fragments, child bones, obsidian blades, white bowls, a staff with a shark's tooth, and another hexagonal staff with red and white paint (Ortiz and Rodríguez 1994). The relationship of child sacrifice, rubber balls, and springs evokes rain and fertility cults.

Chalcatzingo, Morelos, also has numerous elements involving water control (Angulo Villaseñor 1988): water springs with retention walls and diversion streams,

water deposits in Cerro Delgado caves, enclosed water storing places, dikes and diversion structures, dams, cisterns, etc. In Cave number 4, explored by Burton, sculpted canals in the rock were found, as well as a plastered and red-painted water deposit (Angulo Villaseñor 1988: 56).

At Teopantecuanitlan, Guerrero, Martínez Donjuán (1985, 1994) has excavated a Middle Formative ceremonial site with various elements of water control: a spring area with a dam near it, a megalithic aqueduct, and a batrachian altar. This set of traits is also related to the cruciform sunken courtyard flanked by four feline sculptures that probably represents the entrance to the watery underworld, because of its form and the insertion of clays and sands of different colors.

Frogs are also represented as altars (Altars 2, 53, and 54) (Norman 1976: 242, 247, 248) at Izapa, Chiapas, related to water control devices and the spring cult.

Sacred mountains and cosmic trees. Bernal-García (1994:122) and Schele (1995: 107–108) have related the Olmec ruler to maize as the central tree, and the power of the mountain. When the ruler spoke, he did so with the voice of the baby-jaguar, the Olmec ancestor who inhabits the cave inside a mountain. Due to the fact that for the accession to power the ruler needed a mountain, and that the Gulf Coast plain does not have many, the Olmecs then built sacred mountains in their sites (La Venta) or shaped large plateaus (San Lorenzo), except where mountains were prominent, as in San Martín Pajapan, Veracruz (Joralemon 1996: 53), or Chalcatzingo, Morelos (Angulo V. 1987a: 157). The sacred mountain would be conceived of as the place where the celestial gods, the terrestrial fertility and sustenance deities, and the underworld beings met (Angulo Villaseñor 1987a: 157).

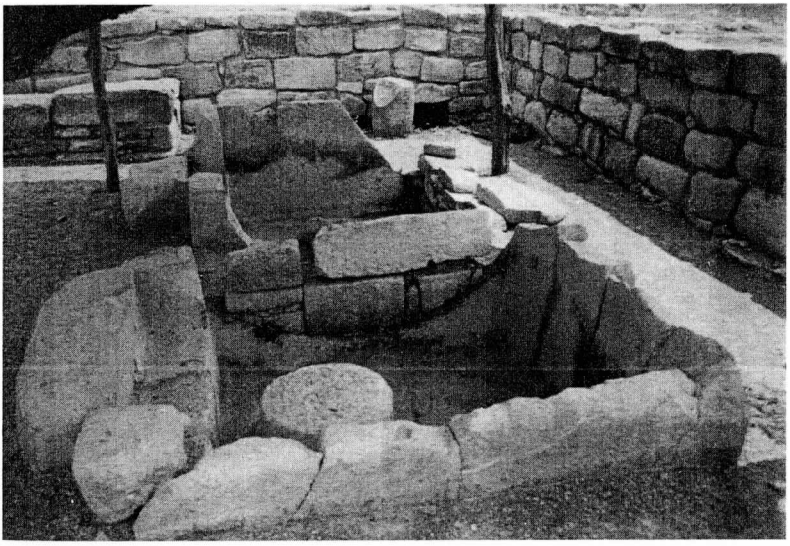

Fig. 2.3. Ritual tanks at Cuetlajuchitlán, Guerrero.

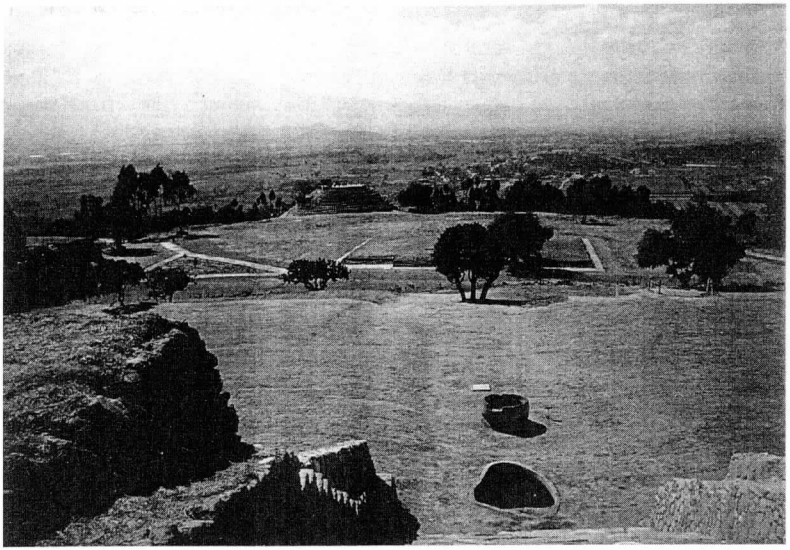

Fig. 2.4. Ritual water tanks in front of the Flower Pyramid at Xochitécatl, Tlaxcala.

The axis mundi of the Olmec cosmic model of three levels would be the world tree, the sacred mountain, or the ruler himself (Reilly 1994: 130). Horizontal space would be divided in quadrants, with a fifth point in the center, where the cosmic tree would pierce the center of the earth (Joralemon 1996: 53).

LATE FORMATIVE CENTRAL MEXICAN SITES

Cuetlajuchitlán, Guerrero, is a Late Formative planned site that continues the tradition of ritual water tanks (Figure 2.3), in groups of two, within the ceremonial precinct, related to a sweat-bath or *temazcal* and to rocks with depressions to concentrate pluvial water (Manzanilla López and Talavera González 1993; Talavera González and Rojas Chávez 1994; Manzanilla López 1996). The monolithic tanks have a seat in their western sides, and the water was channeled through a sophisticated hydraulic system (Manzanilla López 1996: photos 12, 13, 14, 15).

Similar monolithic tanks, also in groups of two, are found at Xochitécatl, Tlaxcala, in front of the Flower Pyramid (Figure 2.4); in one of them a batrachian sculpture was found (Figure 2.5), together with two anthropomorphic sculptures and a serpentine figure with an open mouth from which a human figure is emerging. Child burials of later times, associated with numerous shell beads and one greenstone bead, as well as bird bones, were found on the stairway (Serra Puche and Beutelspacher 1994: 9, 27–29, 31). This pyramid was devoted to fertility and rain cults, and probably involved the tunnels and chambers in the mound, which are cited in the historical sources of the sixteenth century.

At Totimehuacan, Puebla, Spranz (1966, 1967, 1968) excavated a 2 x 3 meter basaltic water tank, but now, for the first time, incorporated inside a pyramidal

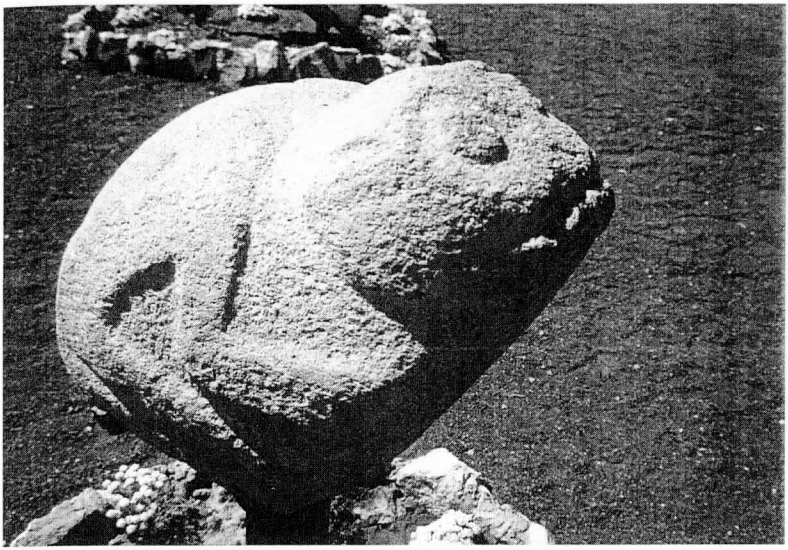

Fig. 2.5. Frog deity found inside one of the water tanks in front of the Flower Pyramid at Xochitécatl, Tlaxcala.

construction (Tepalcayo 1) with a tunneled access (Figures 2.6 and 2.7), and with four frog representations around the basin (Figure 2.8) (Spranz 1967: 20) dated around the beginnings of the era (Spranz 1973: 63). The batrachian-water deposit complex is thus included inside the artificial sacred mountain (Spranz 1967: 21, 1968: 20).

At Cholula, Puebla, the earliest structure under the great pyramid (Tlachihualtépetl) belonged to the Late Formative, and was situated on the shore of a lake fed by springs (Noguera in Dumond and Müller 1972: 1208; McCafferty 1996b: 303), although there are Middle Formative materials at the site (McCafferty 1996a: 2; 1996b: 302–303). The pyramid itself is built on top of a spring, and there is an interior chamber discovered deep inside the building (McCafferty 1996a: 3), perhaps copying Totimehuacan. The orientation of the Great Pyramid toward the setting sun on the summer solstice, and Durán's description of mountain worship to Tonacatecuhtli on top of it (McCafferty 1996a: 13–14), parallel the Pyramid of the Sun at Teotihuacan, as we shall see further on. The Tlachihualtépetl Great Pyramid of Cholula was represented in the *Historia tolteca-chichimeca* with a froglike rain deity on top of it, and a water spring at its base (see McCafferty 1996a: 3 and 4) (Figure 2.9).

Further evidence of a rain cult related to Tlaloc is also seen in the Calucan Cave in the Iztaccíhuatl volcano, with Late Formative to Aztec II ceramics; Tláloc vases were found, as well as a small water spring (Navarrete 1957: 18). On the eastern slope of the nearby Popocatépetl volcano, there are also evidences of Late Formative volcano cults, as well as some hints of a Tlaloc cult in a dispersed

village covered by a pumice eruption from the beginnings of the era. In courtyards surrounded by three houses with *talud-tablero* architecture that preludes Teotihuacan, small altars depicting the two volcanos are re-created, as well as the blowing faces of its deities (Plunket and Uruñuela 1998). It is possible that due to the large-scale volcanic eruptions around the beginning of the era, these groups moved to the Teotihuacan Valley, where they re-created the three-mound com-

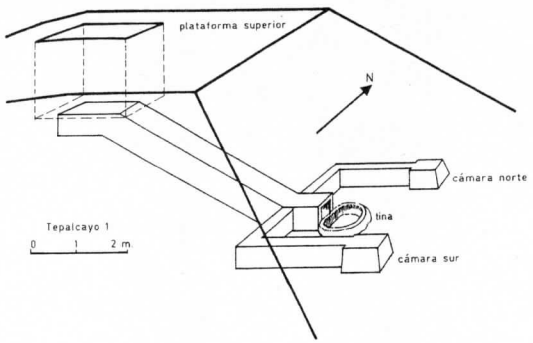

Fig. 2.6. Water basin inside a Formative pyramid at Totimehuacan, Puebla (redrawn from Spranz 1967: 21).

Fig. 2.7. Water basin inside Tepalcayo 2 at Totimehuacan, Puebla (redrawn from Spranz 1967: 20, Photo 15).

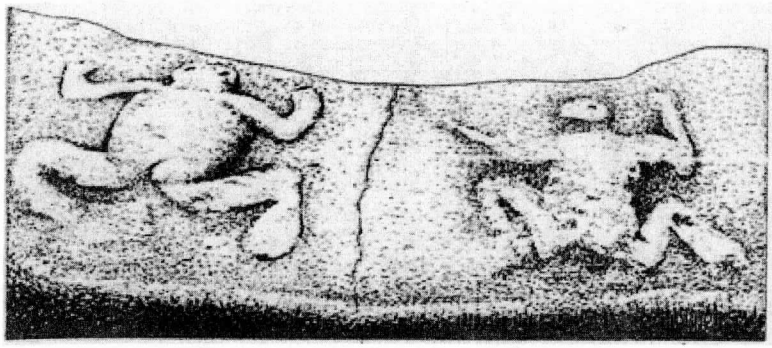

Fig. 2.8. Frog reliefs bordering the water tank at Totimehuacan, Puebla (redrawn from Spranz 1967: 20, Photo 16).

pounds in a monumental scale, and converted the volcano cult into a fertility/sacred-mountain religion, centered in the Pyramid of the Sun, as we shall propose further on.

In volcanic environments, where natural holes (lava tubes) are rare, pre-Hispanic groups of Late Formative and Early Classic times created artificial "caves" inside man-made sacred mountains, and incorporated springs and water deposits, as well as frogs, in their wombs. In karstic environments in eastern Puebla, however, Medina Jaen (1996) has detected subterranean water flows in travertinic geology and consequent caves at different levels; some (such as the ones in the Barranca del Águila) were occupied during the Formative horizon, and were facing large Formative sites such as Xochiltenango.

In the Ticumán sector of Morelos, in a limestone environment, two caves belonging to the Late Formative period have been recently excavated (Alvarado et al. 1994; Cruz Flores and Noval Vilar 1994). In the El Gallo Cave, an outstanding abundance of preserved organic materials as offerings, including maize, squash, beans, chile, plums, *chayote*, avocado, other seeds, fibers, textiles, and a polychrome gourd, accompanied an infant's funerary bundle with a dog (Morett Alatorre and Rodríguez Campero 1996: 36; Cruz Flores and Noval Vilar 1994). Less than a kilometer farther, the Chagüera Cave also had abundant organic materials, including seeds, grasses, fibers, textiles, wood, coprolites, sandals, and corncobs, together with numerous Formative vessels and groups of human remains in mats. Some of these funerary bundles lay on top of palm mats and beds of corncobs. A total of seventeen individuals of different ages have been detected (Alvarado et al. 1994). (The relationship of child burials with dogs will be an element that we will review further on.)

The Classic Horizon in the Teotihuacan Valley

In Teotihuacan, underground cavities were places where fertility could be propitiated. Particularly in the so-called Tlalocan of Tepantitla we can observe an idol on top of a *talud-tablero* structure that is placed on top of a cave with seeds. Frogs and

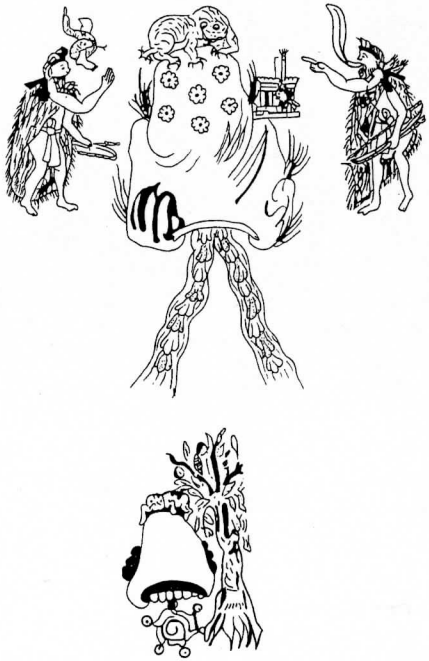

Fig. 2.9. Depictions of the Great Pyramid of Cholula (Tlachihualtépetl) from the *Historia tolteca-chichimeca* (redrawn from McCafferty 1996).

springs are also depicted in close association (see de la Fuente 1996, II: 233) (Figure 2.10).

The existence of underground holes in Teotihuacan is a well-known fact. Toponyms such as Oztoyahualco and Oztotícpac make reference to subterranean cavities.

Former archaeological research in Teotihuacan tunnels includes Linné's (1934) excavations at San Francisco Mazapa; de Terra and Bastien's (Armillas 1950) exploration of the Calaveras Pit, where thirty-five human skulls were found; Cook de Leonard (1952: 49) and Millon (1957: 12) at Oztoyahualco; Michael and Elizabeth Goodliffe's (1963) excavations in four interconnected tunnels in Purificación, with Teotihuacan, Mazapan, and Aztec II and III ceramics; Obermeyer's (1963) excavation of the Huexóctoc Cave in Oxtotícpac; Heyden's (1973, 1975; Baker et al. 1974) study of the tunnel below the Pyramid of the Sun, excavated by Acosta and used during Teotihuacan II times (first to third centuries C.E.) for ritual purposes; Basante's explorations (1982, 1986) in several tunnels and holes in the valley; and finally Soruco's exploration (1985, 1991) of a cavity probably built for solar observations, located to the southeast of the Pyramid of the Sun. In August 1992, we began the extensive excavation of four tunnels to the east of the Pyramid of the Sun (Manzanilla 1994a, 1994b; Manzanilla et al. 1996; Manzanilla et al. 1994;

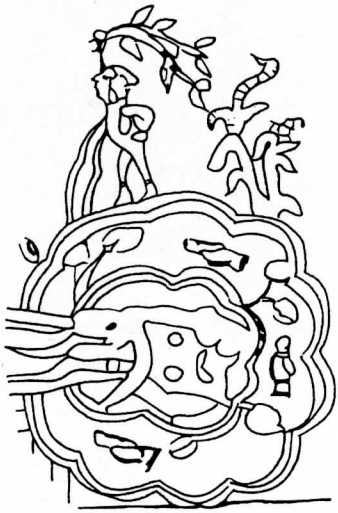

Fig. 2.10. Frogs from which springs and water flows emerge are also depicted at the Tlalocan of Tepantitla (redrawn from de la Fuente 1996, II: 233).

Manzanilla et al. 1989; Barba et al. 1990; Arzate et al. 1990; Chávez et al. 1988; Chávez et al. 1994). In 1994, two other cavities were tested by INAH's *Proyecto Especial 1992–1994*, one of which is a smaller replica of Soruco's solar observatory (Moragas Segura 1994).

Soruco Sáenz's (1985, 1991) exploration of the so-called Astronomical Cave, used for solar observations and located to the southeast of the Pyramid of the Sun, revealed a basalt stela on an altar displaying a ray of light at its center during the beginnings of the summer solstice. Around it, several jars, bowls, miniatures, vases, Gulf Coast pottery, twenty prismatic blades, a Xipe Totec figurine, as well as copal resin, red and green pigments, amaranth, chile, tomato, cactus, maize, and frogs' long bones, were found. It is interesting to note the relationship of rain prediction with fertility symbols (edible plants) and with incense and frog bones, as in Formative times.

During the study of the depressions around the Pyramid of the Sun, the absence of buildings in the area between the pyramid and the depression to the east on Millon's topographic map (1973) was noted. This is unusual because all of the rest of the area surrounding this important structure is heavily occupied. If this information is considered together with the way in which depressions are formed—that is, as a result of the collapse of the roof of extraction tunnels—then it can be proposed that one of the reasons why the Teotihuacanos did not build any construction in this area was because of the risk of cave-ins. The preliminary exploration of a cave extending underground from the depression toward the

pyramid, provided enough evidence to lead us to suggest the existence of similar tunnels extending throughout the zone.

Our project, "The Study of Tunnels at Teotihuacan," has provided evidence that virtually all the underground cavities of the Teotihuacan Valley were originally extraction places excavated around 80 C.E., to obtain pyroclastic construction materials; later these underground holes were used either ritually or domestically. Thus, the tunnel underneath the Pyramid of the Sun could be conceived as one of the many tunnels that run under the ancient city, in the northern part of the Valley, and not as a natural cave.

The system of tunnels and caves in the Teotihuacan Valley was originally, then, a group of quarries dated in the Patlachique or Tzacualli periods, for the extraction of porous volcanic materials, and are, thus, man-made. We therefore rectify our previous idea, derived from Heyden (1975) and Millon (1973), that they were natural, because there is no natural phenomenon in volcanic contexts that can produce large or long holes, except solid lava tubes. And this is not the case.

There are examples of C^{14} dates from our caves (Beta 69912), as well as from the lower tunnel of the Pyramid of the Sun (M–1283; Millon, Drewitt, and Bennyhoff 1965: 33) and the Temple of Quetzalcoatl (Cabrera in Rattray 1991: 12), that are placed around the year 80 C.E. This could be evidence of great construction enterprises involving the tunnels and the main pyramids. It is also possible that after the city was built, these underground spaces were conceived of as a Tlalocan, in a way similar to that of Balankanché, Yucatán (Andrews 1970).

The Pyramid of the Sun at Teotihuacan is the only structure not constructed with the porous volcanic material known as *tezontle*, and coming from the tunnels. Instead, it was built mainly with earth and small fragments of tuff (5 to 10 cm) (Rattray 1974), that generally overlie the pyroclasts.

In 1989, we interviewed old men and women regarding the caves at Teotihuacan. Different persons mentioned the myth that in olden days, in February, a man was seen coming from under the Pyramid of the Sun carrying maize, amaranth, green beans, and zucchini. Many added also that under the Pyramid of the Sun there were *chinampa*-like fields were all this foodstuff was collected.

The concept of a mountain of sustenance—the Tonacatépetl of the Nahua tradition—is frequent in Mesoamerica, and also frequent is the sacred mountain with a cave from which water emerged (Freidel, Schele, and Parker 1993: 430). Instead of housing springs, as Heyden (1975) originally proposed for the Pyramid of the Sun, which would be a very improbable phenomenon in porous volcanic materials, there were perhaps small water filtrations that were received by stone water drainages inside the tunnel; other water courses inside the tunnels could derive from vertical seepage in the northeastern sector of the valley. These courses have been mentioned in various interviews with local people. The real springs emerge in the alluvial plain in the southwestern part of the ancient city.

We propose that the Pyramid of the Sun represented the Tonacatépetl, or "mountain of sustenance"; this is reinforced by the mention made by the *Relación de Teotihuacan* in the sixteenth century (Paso y Troncoso 1979: 222) in which the idol in the summit of the pyramid was Tonacateuctli. This monumental construction is the only one built with organic soil, full with plant remains, coming from the

alluvial plain, perhaps as a reaction to the violent volcanic eruptions of the Xitle and Popocatépetl volcanos, at the beginnings of the era, that changed the demographic configuration of the Basin of Mexico. Other "mountains of sustenance" were built in rain-producing mountains such as Tetzcotzingo and Mount Tlaloc, as Townsend states (1993: 38). Finally, the Templo Mayor of Tenochtitlan would be a continuation of this tradition (Broda 1987).

The Pyramid of the Sun could have synthesized three intimately related concepts: the Tonacatépetl; the main temple for the state-god Tlaloc as a fertility deity; and the sacred mountain, the center of the universe, represented as the center of the four-petal flower, as López Austin (1989) suggests.

Teotihuacan was built as a sacred copy of the cosmos. Its terrestrial plane is divided into the four courses of the universe; it has a celestial plane with the sky itself and the summits of the temples, but also an underworld represented by the system of tunnels under the northern halves of the city. Its main avenue connected the natural sacred mountain of Cerro Gordo, where Tobriner (1972) detected a cave of special significance, with the Pyramid of the Sun (the artificial "mountain of sustenance") and the spring area to the south (Townsend 1993: 41). As Townsend states, following Aveni and Broda, the east-west avenue traces the path of the Pleiades in the summer solstice.

The Late Classic site of El Zapotal in Veracruz has a mound (n. 2) within which a *mictlan* or world of the dead was re-created. Huge clay human figures represent either Mictlantecuhtli, the Lord of the Dead, or women who died during childbirth, and are deposited together with human remains (Torres Guzmán 1972). Thus, in other areas of Mesoamerica, the concept of the *mictlan* would be developing and finally would arrive in the Basin of Mexico in the Late Postclassic period.

The Epiclassic and Early Postclassic Periods in Central Mexico

THE TEOTIHUACAN VALLEY

The existence of underground cavities in Teotihuacan is a well-known fact. Heyden (1981) reproduces the glyph of Teotihuacan from the *Codex Xolotl*, which represents the two large pyramids overlying a cave with a person inside. It is likely that this figure refers to the oracles that were frequently located within caves, as indicated in the *Relación de Teotihuacan* (Soruco Sáenz 1985: 107).

The general objective of our project consisted of locating and defining the tunnels and cavities that were of interest to archaeology because of their potential ritual or economic use, that is, the original extractive activities related to porous pyroclastic volcanic materials, large-scale storage, burials, offerings related to fertility rites, and domestic and manufacturing activities. Many of these functions, as well as numerous activity areas related to post-Teotihuacan occupational levels—such as hearths, hide preparation and weaving, wood cutting, bifacial obsidian production loci, etc.—were corroborated by the storage and funerary loci found in the Cueva de las Varillas and Cueva del Pirul, Epiclassic and Early Postclassic tunnel occupations behind the Pyramid of the Sun, as we shall see further on. As of this writing, we have thoroughly excavated four cavities to the east of the Pyramid of the Sun (Manzanilla 1994; Manzanilla et al. 1996).

Cueva del Pirul is the last one excavated. In different chambers of the tunnel, under Aztec structures and activity areas, we have found fourteen Coyotlatelco burials belonging to the sixth to tenth centuries C.E., including: two seated adults (one with bilobated skull, and another dated in the sixth century), two young adults in fetal positions, four sets of child burials, and six perinatal burials. A group of six burials, mainly infants, was placed around a ritually "killed" hemispherical monochrome bowl with plastic design, also named "Jiménez Sealed Brown" (Good and Obermeyer 1986: 258, plate 7; Nichols and McCullough 1986: plates 8 and 9; Cobean 1990: 194–198). This design type has been related by Cobean to the Coyotlatelco Sphere and to the Corral Complex; he suggests that these bowls were used to drink chocolate. In our excavations, we have found numerous examples of this type with different kinds of sealed motifs. Another type frequently found in contact with the disintegrated tuff is the negative-painted bowl (Good and Obermeyer 1986: plate 11).

Near two of the children and one new-born baby, three complete and articulated dog skeletons were found: two adults and a puppy, one of them with skeletal malformations. They could have been conceived of as guides to the underworld. Modest storage-bin bottoms were also found in the first chamber of this tunnel. In another sector, a newborn baby was placed inside a bowl near one of the seated adults (with a calibrated radiocarbon average date of 550 C.E.), and an eight-month-old baby in fetal position covered with another bowl (Manzanilla et al. 1996).

The third tunnel—Cueva de las Varillas, 50 m in length—has a vast entrance chamber 18 m. in diameter, with seven small niches and a tunnel that crosses three small chambers. To one side, it is connected to another chamber that had well-preserved funerary and storage contexts. In this tunnel here are some hints of a cult that involved marine and aquatic elements, such as different types of mother-of-pearl shells, a ray's cauda, and fragments of turtle shells, perhaps related to an ideal reconstruction of the Tlalocan (Tlaloc's watery underworld) that the newborn-baby burials, as well as Tlaloc sacrificial victims with amaranth masks, suggest.

Twelve Mazapa burials were found: a group of three seated-adult burials facing south were excavated underneath a pillar left in the chamber; two infant burials were placed near the adult ones at the level of their heads. All of these burials had nearly complete and ritually killed pottery vessels as offerings, as well as some projectile points. This first group appeared to be placed in the northeastern fringe of the chamber.

Higher on there were seven newborn babies, some of them in a seated position and some in fetal position; they were placed in an east-west band in the central part of the chamber, under a sanctuary. These had only triangles or rectangles of cut mica as offerings, as well as some hearths with Teotihuacan *candeleros* and projectile points.

In tunnels behind the Pyramid of the Sun, the Epiclassic–Early Postclassic people constructed a shrine for the *tlaloque* (Tlaloc's assistants), represented by the seven babies deposited in the central part of the chamber, precisely underneath a hole in the cavity's roof, a hole that may have allowed the pouring of

rainwater on top of the shrine. The adult burials—probably Tlaloc's sacrificial victims—were seated with their backs to a pillar left behind to prevent the collapse of the cavity, and facing south (Figure 2.11). In some of the storage bins, amaranth was found, a plant from which masks were made for Tlaloc's sacrificial victims (Manzanilla and McClung de Tapia 1996). At San Francisco Mazapa, Linné (1934: 37) found a Mazapa house on top of a tunnel, and in this cavity, large storage jars were found. In the funerary chamber of the Varillas tunnel, we also found seven circular storage-bin bottoms distributed in different sectors and at depths corresponding to the adult burials. Fifty meters inside the tunnel, in an inner chamber, we had already found six of these storage contexts, but with no apparent association to the burials.

Thus, two of the four cavities gave us elements to confirm the three functions we expected to find for the tunnels: storage areas probably related to fertility rites in the womb of the earth; burials related to the underworld concept; and baby burials related to the rituals to Tlaloc. In all four of them we also found living-area floors, and Epiclassic and Postclassic domestic activity areas.

MORELOS DURING THE EPICLASSIC

At Xochicalco, a system of more than nineteen man-made tunnels, of which the so-called Observatory is just a part, also represent a series of quarries from which one of the two types of limestone for building the city came from. Since the eighteenth century, there are precise descriptions of the tunnels by Alzate y Ramírez (Peñafiel 1890). Togno (1903) describes nine interconnected tunnels in the north and northeastern sectors of the site. Their walls were plastered and painted in red (Krickeberg 1949: 212).

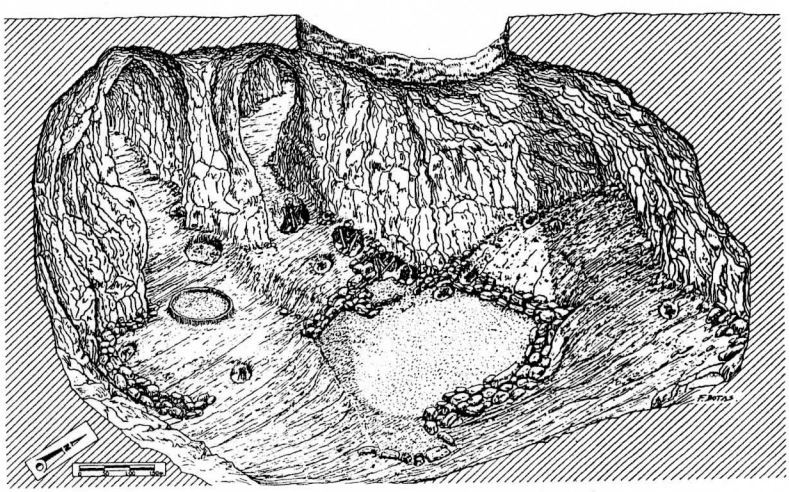

Fig. 2.11. Drawing representing the funerary chamber of the *Varillas* Tunnels to the east of the Pyramid of the Sun at Teotihuacan (drawn by Fernando Botas).

In recent geophysical work we have undertaken inside and on top of the Cueva de los Jabalíes and Cueva de los Amates (better known as the Observatory), there is evidence of interconnection between these systems, as well as a gridlike plan (Manzanilla 1993). The eastern parts of both systems continue beneath the western part of the Acropolis, suggesting continuation to the main plaza. The tunnels were excavated in different levels of the mountain, suggesting either stratification of the systems, or stairlike ascensions. The Observatory marked the zenital passage of the sun in the beginnings of the summer solstice, the rainy season, and is thus equivalent to the so-called Astronomical Cave at Teotihuacan.

The Late Postclassic of Central Mexico

The Nahuas associated three concepts with the underworld: Mictlan, Tlillan, and Tlalocan. Mictlan was located to the north, and was guarded by Mictlantecuhtli and Mictecacihuatl (Mendoza 1962). The Nahuas thought that the sun entered the Mictlan during the first month of its zenital passage, that is Toxcatl (in May), in the prelude to the rainy season (Broda 1982: 94); thus, the observatories in Building P at Monte Albán, Xochicalco, and the Astronomical Cave at Teotihuacan were used to observe these zenital passages.

In the archaeological excavations at Templo Mayor, interesting sculptures related to the Mictlan have also been found,. In 1981, a monolith of Huehueteotl, the Fire God, was found, with atypical traits such as a Tlaloc mask and aquatic symbols, and thus has been identified by López Austin (1985) as the Fire God in the world of the dead. Its other names, Ayamictlan and Xiuhtecuhtli, are mentioned in the *Florentine Codex* as related to the residence of this god: the navel of the earth, the water enclosure (López Austin 1985: 262). In recent excavations by López Luján (1996) at Templo Mayor of Tenochtitlan, two huge Mictlantecuhtli ceramic sculptures were found underneath the Eagle's Precinct, thus evidencing the re-creation of the Mictlan underneath the sacred core of the city.

For the Totonacs, the realm of the dead is an underworld where the Fire God and the Death God dwell (Ichon 1969: 138). The Popolucas conceived the underworld as a region with dangerous passages, in which two roads existed: the one to the right was narrow, difficult, debris-strewn, and ascending toward the sky; the one to the left was large, smooth, clean, and descending gently to hell (Foster 1945: 186).

With respect to the Tlillan, it is an artificial cave where the goddess Cihuacoatl dwelt. Broda (1987: 80) proposes that Cihuacoatl is an old goddess of the earth and also Tlaloc's wife. In the Mayan area, at Chichén Itzá, the so-called High-Priest Tomb also has an artificial cave excavated underneath a stepped pyramid (Thompson 1938).

According to Anderson (1988: 153–154), Tlalocan was conceptualized in many ways among the Nahuas of Central Mexico:

a) In the *Florentine Codex*, it was depicted as a place of great wealth where there was no suffering, and where maize was abundant, as were squash, amaranth, chile, and flowers. In the "Prayer to Tlaloc" of the *Florentine Codex*, translated by Sullivan (1965: 45), it is said that sustenance has not disappeared, but rather that the gods have hidden it in Tlalocan.

b) In several examples of Nahuatl poetry, it was portrayed as a place of beauty where birds with lovely feathers sang, on top of pyramids of jade.
c) It was described as a construction consisting of four rooms around a patio, with four containers filled with water. One was good and the other three were associated with frosts, sterility, and drought. Durán (1967: 82) mentions that this Tlalocan was represented on Mount Tlaloc, in the eastern fringe of the Basin of Mexico, as a walled enclosure with a patio and a figure representing Tlaloc, around which were placed other smaller figures representing the lesser mountains. Sahagún mentions that the mountain was a disguise, because it was a jar full of water.
d) Tlalocan was also thought of as an underground space filled with water that connected the mountains with the sea. It was a place where rivers originate. Furthermore, "Tlaloc" may be translated as "long cave" (Broda 1987: 101–2). Durán and Tezozómoc mention that Tlalocan and Cincalco could be the same concept: one enters them through a cave (Graulich 1987: 252). Sullivan's (1965: 55) translation of the *Florentine Codex*'s "Prayer to Tlaloc" states the following, refering to the Gods of Rain:

> And you who inhabit the four quarters of the universe,
> you the Lords of Verdure, you the Providers,
> you the Lords of the Mountain Heights, you the Lords of the Cavernous Depths

In the *Florentine Codex*, it is said that the mountains were conceived of as hollow upside-down vessels full with water, and Torquemada adds that each was inhabited by an assistant to Tlaloc (a *tlaloque*) that engendered clouds and provoked rains (de Vega Nova and Pelz Marín 1994). Thus, mountains and caves are intimately related in Late Postclassic times.

During this period, there are numerous examples of cave cults in Central Mexico. We have, for example, the Chimalacatepec Cave in Morelos (Broda and Druzo Maldonado 1994; De Vega Nova and Pelz Marín 1994), a real lava tube with various offerings: censers, vessels, polished stones, figurines, duck figures, greenstones, pendants, black-and-green idols, etc. The vessels could have been deposited to receive infiltrating water. The censers are frequently cited in water-petition ceremonies inside the caves. The idols are fertility symbols (Broda and Druzo Maldonado 1994).

On another line of evidence, the foundation of Tenochtitlan mentioned in the historical sources of the sixteenth century involved two caves with springs that were sighted when the sacred place announced by Huitzilopochtli was located; immediately afterwards, the ball court was traced, even before Huitzilopochtli's shrine was built (Tezozómoc 1975: 62 *et seq.*). Some cite the fact that the water from the springs flowed from caves or rocks (Figures 2.12 and 2.13). It was the site where the heart of Copil (the god Huitzilopochtli's nephew) had been thrown (Dahlgren et al. 1982). In recent geotechnical work under the cathedral of Mexico City, Ovando and I (Ovando-Shelley and Manzanilla 1997) have detected three springs, one of which is near the ball court.

The Tetzcutzingo Mountain near Texcoco is a rainmaking "mountain of sustenance" (Townsend 1993), where the spring-canal-water/basin-frog complex is

found in open air (Figure 2.14). Thus, the Tonacatépetl, the archetypical sacred mountain, was the house of maize and of water, and the *tlaloque* were its guardians.

On the other hand, Tlaloc's half of the Templo Mayor at Tenochtitlan, the Aztec capital, was the mythical re-creation of the primordial mountain of sustenance (Broda 1989: 40). Different ceremonies that relate water and rain deities with mountains and caves have been studied by Broda (1971, 1982, 1987, 1989, 1991a, 1991b, 1994). In those related to caves, she stresses that the Tonacatépetl—the "mountain of sustenance"—was the reservoir of food and water, and water came out from Tlalocan through water springs (Broda 1971: 259).

Another fact that should be mentioned is that Xipe Totec had a temple in Tenochtitlan, called Netlatiloyan, at the base of which was a cave where the skins of the flayed were hidden (Sahagún 1969, vol. I: 237). It is interesting to note that Linné (1934; Scott 1993) found a shattered Xipe Totec sculpture associated with sixteen graves belonging to the Mazapa culture, in his excavations at Xolalpan, near the tunnels that we described in the Valley of Teotihuacan.

Fig. 2.12. Foundation of Mexico-Tenochtitlan, from the *Codex Aubin* (redrawn from Dahlgren et al. 1982: 47).

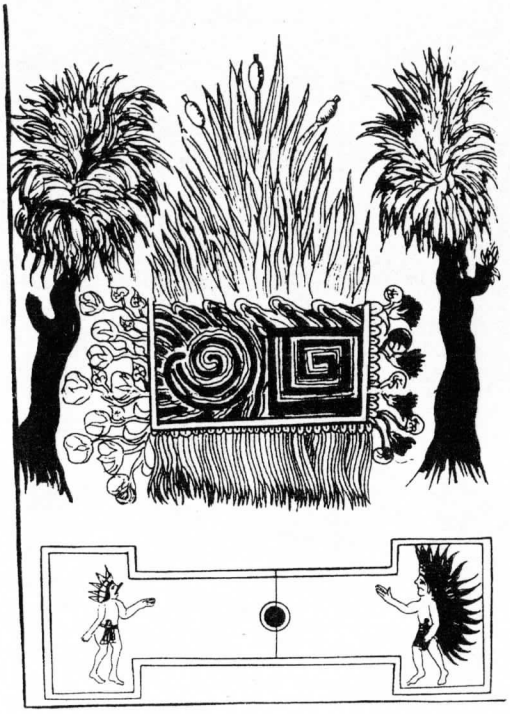

Fig. 2.13. Foundation of Mexico-Tenochtitlan, from the *Historia tolteca-chichimeca* (redrawn from Townsend 1993: 190).

Modern Times and Cave Rituals

At present, hail-preventing ceremonies are still held in different parts of Central Mexico: the Sierra Nevada range in the Basin of Mexico (Bonfil 1968; Glockner 1996), the Valley of Teotihuacan (Martel 1922), the Toluca Basin (Christensen 1962), and other areas. Bonfil (1968) carefully registered these rites in the Amecameca area near the Popocatépetl and Iztaccíhuatl volcanos, among the so-called *graniceros*, *aureros*, *tiemperos*, and *trabajadores temporaleños*, derived from pre-Hispanic magicians called *teciuhtlazqui* or *teciuhpeuhqui* ("those who throw or conquer hail") (Bonfil 1968: 101). Some of the most important offerings are placed in the Las Cruces cave-temple.

Sahagún described ceremonies to the water deities in the high volcanos of Central Mexico in which amaranth figures were offered during the first days of May, the Holy Cross feast (Glockner 1996: 51–52).

In San Francisco Mazapa, in the Valley of Teotihuacan, a legend was recorded in 1922 in which a cave was used to predict good or bad crops. If the stones in the mouth of the cave were humid, good weather was expected

(Christensen 1962: 247). Water-petition ceremonies are also present in the mountains of Guerrero, particularly at Ostotempa (Sepúlveda 1973), where a deep fault receives the offerings, so that four giants, representatives of the winds who live in caves, bring good rain.

In recent ethnographic work in the Sierra de Puebla, with Nahuat-speaking groups, Aramoni (1990) and Knab (1991) have shed light on a persistence of the concepts related to "Talokan," as they call it. In them, caves are entrances to this underworld, and the informants state that Tamoanchan is the deepest part of the Talokan. "Crossing the doors of the underworld and further on, in the deepness, there is a splendorous world. There the miracle of fertility resides" (Aramoni 1990: 144). In this Talokan, the future human beings, as well as all seeds and animal species, are found; from Talokan all power and wealth emerge, and are concentrated in the Heart of the Mountain, the Tepeyólot or "treasure of the mountain" (145–146). The Nahuas of Cuetzalan also speak of three roads as the final destiny of men: one with God (the sky); another under the earth (Talokan), and the last through caves, which is the devil's road, the Miktan (148).

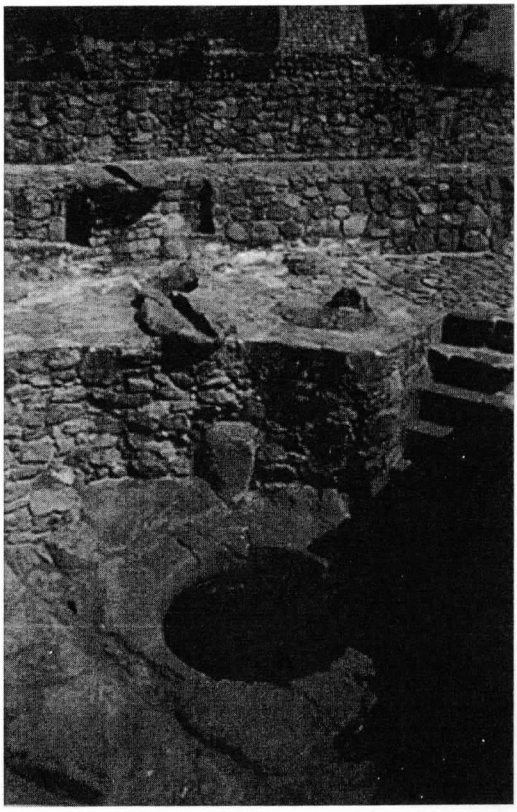

Fig. 2.14. View of the water basins with frog sculptures at Tetzcutzingo, Estado de México.

Knab (1991) describes a myth that mentions the geography of the underworld or "Talocan," as conceived by the inhabitants of San Miguel Tzinacapan. These caves are also considered to be entrances to the underworld, as evidenced by these descriptions:

a) The mythical northern entrance, Mictalli or Miquitalan, is represented by a "cave of the winds" and accesses the world of the dead. Tobriner (1972) makes reference to a gorge on the northeastern slope of Cerro Gordo on the northern fringe of the Teotihuacan Valley, with a cave that emitted a sound of water. A map dating to 1580 represents this gorge on the southeastern portion of the hill. Tobriner also suggests that the Street of the Dead in Teotihuacan was built pointing toward Cerro Gordo because of the association of this mountain with the God of Water (113).
b) The southern entrance of the mythical cave Talocan is called Atotonican and it is a place of warmth; a hot spring that produces vapor and clouds resides in the back of the cave. On the other hand, it is well known that the area of springs is situated in the southwestern sector of the valley, another parallel with respect to the myth.
c) The mythical eastern access is called Apan, a large lake in the underworld that joins the sea. The lacustrine basin of Apan is precisely located to the east of the Teotihuacan Valley.
d) The western entrance of Talocan is a mountain called Tonalan, where the sun stops on its voyage. Mount Tonalan is actually a low mountain located on the northwestern boundary of the valley, between Cerro Gordo and Cerro Malinali.

It is possible that the myth of Nahuat-speakers in the Sierra de Puebla is derived from a version based on the sacred geography of the Teotihuacan Valley, but it is equally probable that both have their source in an archetypical Mesoamerican conception of the underworld.

Thus, the construction of sacred space is a tradition derived from Formative times, and culminated with the building of cities as models of the cosmos.

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