Reconstructing Olmec Life at San Lorenzo

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INTRODUCTION

Over a period of thousands of years, the earliest inhabitants of Mesoamerica gradually developed plant domestication, agricultural practices, and sedentary life. During the second millennium B.C., these early egalitarian societies became larger and more stratified. By 1200 B.C., a distinct and increasingly complex civilization began to emerge along the Gulf Coast of what is now the Mexican state of Veracruz: the Olmec.

The Olmec lived in the tropical lowlands, along the coastal plain of Veracruz and Tabasco, sometimes called the Olmec heartland (fig. 1). The exuberance and fertility of the environment facilitated key aspects of life, and the culture achieved a strong regional integration and marked cultural pattern. Although other areas of Mesoamerica may show Olmec influence, none of these is characterized by the constellation of cultural traits that define the Olmec heartland.

Olmec culture was originally defined by its art, and even today sites with monumental or portable sculpture in that style are often identified as Olmec. The Olmec style is distinctive in its sculptural technique and concepts, the most notable being the colossal heads, monolithic thrones, and fantastic representations of animals and humans. Nevertheless, the Olmec cultural pattern possesses additional characteristics now under study: the shape, location, and layout of settlements; public and private architecture; the scale and application of particular technologies; and patterns of regional and long-distance trade.

The Olmec was not the first culture to develop in Mesoamerica. The Soconusco region, on the Pacific Coast, shows significant cultural developments before 1500 B.C. (Clark 1994), but it never achieved the complexity of the Olmec. Alfonso Caso (1965), Miguel Covarrubias (1957), Matthew Stirling (1968), and Michael Coe (1965c) once proposed the Olmec as the "mother culture"; although not the earliest culture, it is America's first civilization (Coe 1968). The Olmec established a number of traits of the Mesoamerican cultural tradition, which are found in virtually all ancient Mesoamerican societies. Some scholars have proposed that the Olmec were not as highly developed as once thought and that other societies achieved a similar degree of development (Grove 1989b; Demarest 1989; Hammond 1988). Instead of mother culture, these scholars speak of contemporaneous sister cultures, a Complex X, or "a complex lattice of interaction...with multiple centers of cultural innovation," and assume the existence of cultures of a similar developmental level in Early Formative Mesoamerica. Recent research by the San Lorenzo Tenochtitlan Archaeological Project shows that the scale and degree of development at San Lorenzo during the Early Formative period far surpasses all other contemporaneous sites. Thus, scholars such as Caso, Covarrubias, Stirling, Bernal, and Coe, among others, were correct in their initial evaluation of the Olmec heartland as the focus of the earliest and most complex Formative culture. San Lorenzo, the first regional center to develop in the heartland, should be recognized as the premier Olmec center of the Early Formative period.

THE PHYSICAL SETTING

San Lorenzo is located in the municipality of Texistepec in Veracruz, a territory included within the lower Coatzacoalcos River drainage. The lower reaches of the Coatzacoalcos River flow through a broad, low plain that has many characteristics of a delta. The waters feeding the system originate in the Sierra Atravesada and its tributaries. This drainage, the only completely tropical river system in modern Mexico, defines the widest part of the Gulf coastal plain at approximately 60 kilometers. As it emerges onto the plain, where it has frequently migrated, the river achieves the classic pattern of meanders characterized by a constantly changing hydrology. Today the lower Coatzacoalcos River drainage is a plain with a complex pattern of ancient and recent oxbow lakes and meanders.

Within the plain, ancient geologic terraces dating from the Miocene period emerge as high ground between 30 and 80 meters above sea level. Now, as in the past, people seek out the high ground for permanent habitation. San Lorenzo, for example, is located in the highest area in the
study region and is always safe from flooding. Some 60 kilometers to the northwest, the majestic volcanic mountains of Santa Marta and San Martín maintain a lofty vigil of the zone from the Tuxtla, and Tres Picos looms to the south. Closer to San Lorenzo, the two highest points, once sacred to the Olmec, are the salt domes of Cerro El Mixe and the Cerro El Manati.

In ancient times, high tropical jungle covered the region like a canopy. The Olmec preference for hard, well-polished axes reflects the challenge presented by their environment; to plant crops, the jungle had to be constantly cut down and pared back. Thirty-five years ago the jungle still existed, but now it has virtually disappeared, having been replaced with vast grasslands and agricultural fields. Deforestation and the effects of cattle-ranching, industry, and agriculture have totally altered the landscape.

The study of the regional geomorphology conducted by Mario Arturo Ortiz reveals new aspects of the environment around San Lorenzo (Ortiz and Cyphers, in press). Ortiz has defined a sequence of alluvial changes caused by the emergence of salt structures and by regional tectonics. Erosion, sedimentation, and subsidence have also contributed to the changes in the terrain.

These new data indicate that, during the Formative period, San Lorenzo was surrounded by two branches of the ancient Coatzacoalcos River, no longer active. One of these coincides with the Tapatapa River, to the west of San Lorenzo. The other channel, the Potrero Nuevo-Azul, passed close to the site on the east at the foot of the elevated lands; however, this channel does not coincide with the present course of the Chiquito River, which may be more recent. The bifurcation of the river created two confluences, the southern one at the Las Camelas pass, and another to the north of Tenochtitlan (fig. 2). In both confluences important Early Formative settlements (with monumental stone art), such as El Remolino and Loma del Zapote, are located. In addition, other confluences uniting with the Tapatapa on the west can be identified. These river courses have been dramatically altered due to the uplift of the volcanic mass of the Tuxtla (Herrera 1978), known to have been active during the Early and Middle Formative (Drucker 1943; Sandley 1992: 155; Byrne and Horn 1986). Major changes in drainage patterns since the Early Formative period have been recently detected by Ortiz and suggest that sites such as Tres Zapotes and Laguna de los Cerros may have been connected to the lower
Coatzacoalcos drainage by fluvial courses.

In a sense, the high ground of San Lorenzo was an island, similar to La Venta in Tabasco. It occupied a privileged place on high land in the lower Coatzacoalcos River drainage, where it dominated two or more river confluences, a strategic position for controlling communications, transportation, and trade. This geographic position afforded ideal opportunities for growth and development.

In the dry season when water levels were low, the main routes were the permanent rivers; in wetter months, the fluvial network expanded to include other channels swelled to form an elaborate web of communication and transportation routes, and uplands to the south were connected to the lower plain.

An understanding of the environment is key to understanding the Olmec way of life. From subsistence adaptations to settlement patterns, the Olmec were meticulous observers of the natural landscape, a talent that fostered their survival and progress.

**Archaeological Investigations at San Lorenzo**

The first scientific report of San Lorenzo was by Matthew Stirling, pioneer of Olmec archaeology, who was taken by friends to a new site with great stone monuments (1947; 1955). Stirling’s visit culminated in the formulation of a research project in 1945 and 1946, sponsored by The National Geographic Society and the Smithsonian Institution. The principal goal of the project was to discover new stone monuments to obtain more information on the Olmec culture and place it chronologically in relation to that of the Maya. While Stirling was in the field at San Lorenzo, other scholars were hotly debating the contemporaneity of San Lorenzo, La Venta, and Tres Zapotes to the Classic period Maya.

Stirling, with his wife, Philip Drucker, and Richard Stewart, built an archaeological field camp at the site and dedicated much time to inspecting the area. They found the largest Olmec colossal head, El Rey, quite near their camp. Trenches were dug in mound structures in the central area of the site; Stirling had been highly successful at La Venta in finding a center-line axis with many offerings, so he expected to find something similar at San Lorenzo. In this respect he must have been disappointed, however, because San Lorenzo did not follow the architectural pattern of La Venta.

On the basis of his work at San Lorenzo, Stirling proposed a number of theories about the Olmec, many of which remain controversial. He defined the three sites of San Lorenzo, Tenochtitlan, and Potrero Nuevo as San Lorenzo Tenochtitlan, because the boundaries between them were difficult to define. San Lorenzo stood out to him as the principal occupation because of the large number of monuments found there. His perception of the environment and geography was exceptionally accurate, despite the fact that detailed maps were nonexistent. It is clear from his reports that he traveled most of the terrain and was thus able to understand the lay of the land and the seasonal changes affecting it. For example, he conjectured that in ancient times the river passed closer to San Lorenzo than it does today. He noted the peninsula where
Potrero Nuevo is located, with its numerous low mounds that rise above floodwater in times of heavy rainfall. His reports deal mostly with the discovery of stone monuments and reporting accurately their location and description. Later, Coe reconstructed his excavations on the basis of his field notes (Coe and Diehl 1980).

The twenty-two monuments, including colossal heads, altars, and sculptures in the round, provided new data for Stirling’s theories. He was the first to propose that the colossal heads were portraits of prominent individuals, thus setting the stage for later interpretations of rulership. He also observed that the majority of representations in Olmec art were of humans and anthropomorphic beings, and noted the prevalence of the jaguar and jaguarlike beings along with snakes, eagles, and the stingray. His interpretation of Monument 1 from Tenochtitlan and Monument 3 from Potrero Nuevo as copulation scenes were widely accepted at one time (see Davis 1978). The copulation of a woman and a jaguar, according to Stirling, resulted in the birth of strange beings, often babies, that show a combination of jaguar and human features.

In his survey of San Lorenzo, Stirling noted that many monuments were found in ravines and supposed that these had been deliberately cast there by later peoples (1955: 9), a theme later developed by Coe and Richard Diehl (1980: 1, 188) as a great destruction caused by Nacaste-phase peoples. Stirling’s explorations formed the basis for all later investigations at San Lorenzo.

Almost twenty years after Stirling, Coe proposed the Río Chiquito Project, 1966–1968, which was designed to investigate more fully the site. Coe’s contributions to the archaeology of San Lorenzo are numerous and varied. Not only did he conduct an extensive program of excavation that permitted him to develop the first well-founded chronological sequence for the site, but also, with the aid of Ray Krotzer, he was able to map the heights of San Lorenzo. This resulted in the first detailed topographic map of a major Olmec center, and it continues to be the base map of the site used today. The Río Chiquito Project included the application of new technology to archaeological studies. Among these, the use of a cesium magnetometer to locate stone monuments stands out as a pioneering application of remote-sensing techniques to the Olmec heartland (Breiner and Coe 1972). Using this technique, seventeen stone monuments were added to the corpus of Olmec sculpture. An intensive program of aerial photography covering 77 square kilometers around San Lorenzo resulted in detailed topographic, soil, vegetation, and land-use maps. The final publication of the Río Chiquito Project provides a detailed catalogue of monuments, most of which are keyed into their original locations on the topographic map. Detailed cross-section maps of the excavations and meticulous descriptions of the stratigraphy and features encountered during excavation provide an excellent site report.

Coe and Diehl offer insights and interpretations in the final publication on the major issues pertaining to San Lorenzo. The earliest manifestation of occupation at San Lorenzo appeared during the Ojoche phase, 1500–1350 B.C., and the stratigraphic and chronological sequences indicate that Olmec culture developed in the Gulf Coast lowlands. San Lorenzo is interpreted as a highly developed society, at least a chiefdom–level organization, and may have even attained statehood. The leadership, represented in the colossal heads, was secular, not religious, and power resided in a hereditary lineage or dynasty (Coe 1972). The sociopolitical organization necessary to obtain and transport the large stones for the monuments required a highly efficient and strong centralized organization. Coe and Diehl propose that the Olmec lords gained control of the river levee lands, where highly productive grain crops insured a surplus production used to underwrite craft specialization and trade. The rulers’ economic power was based on the control and distribution of scarce resources. Basalt, greenstone, hematite, magnetite, ilmenite, and obsidian were traded, and specialized craft activities were conducted at the site. The Olmec of San Lorenzo are portrayed as warlike due to the presence of cannibalized remains and other evidence in their art.

With regard to the stone sculptures, Coe and Diehl propose that monuments were deliberately mutilated, laid out in lines, and covered up by the Olmec themselves. Areas such as Group D were considered the preferred dumping grounds for monuments at the time of the great destruction of the site around 900 B.C. (Coe and Diehl 1980: 11, 152).

The site map provides information about the extent and configuration of San Lorenzo. The large and deep ravines that dissect the site, as well as the long ridges, were considered to be deliberate constructions. In fact, Coe proposes that a bilateral symmetry in the overall layout existed, and that the plateau actually was a giant bird effigy never finished by the Olmec (cf. Diehl 1981). What is important in this observation is that Coe and Diehl recognized that the site is located on a natural elevated terrain, but the entire hill was somehow modified by the Olmec. Coe proposed also that the main area of the site contained the core ceremonial structures, which were dismantled for fill in later times (Coe and Diehl 1980: 1, 29), a theory not supported by Diehl (1981) and Kent Flannery (1982).

Following the Río Chiquito Project, the exploration of several magnetic anomalies continued under the auspices of the Instituto Nacional de Antropología e Historia. In 1969, under Francisco Beverido, the search resulted in the excavation of Colossal Head 7 (Monument 53) as well as several other sculptures and tests in the Basalt Workshop. In 1970, Jürgen Brüggemann came to the site to check the large anomaly detected near Laguna 8, which resulted in the discovery of Colossal Head 8 (Monument 61). Further anomalies were tested and several other monu-
ments discovered (Brüggeman and Hers 1970; Breiner and Coe 1972).

Twenty years later, I initiated the San Lorenzo Tenochtitlan Archaeological Project, which was originally designed to investigate one of the most ignored aspects of Olmec archaeology, the habitation areas. In time, the project gradually expanded its goals to cover more fully multiple aspects of ancient settlement patterns at the residential, community, and regional levels. The principal objectives are the delimitation and excavation of diverse areas with specific functions, extensive regional settlement survey, and the analysis of the ancient environment in order to reconstruct the landscape and its utilization for subsistence.

To understand and explain the differential use of space over time, excavations were conducted in the domestic, productive, and ceremonial areas. Special attention was given to the excavation of areas where sculpture had been found in order to obtain evidence from the original context regarding the function of the monuments.

The extensive regional surveys conducted by Stacey Symonds (1995) and Roberto Laragómez (1995) systematically and intensively covered 400 square kilometers of the San Lorenzo hinterland. A 20-meter spacing between surveyors permitted virtually all surface remains to be registered. With these data, the patterns of growth and location can be understood, allowing us to comprehend more fully the relationship between the hinterland areas and the regional center and the history of environmental exploitation.

The San Lorenzo Tenochtitlan Archaeological Project has successfully built upon the important work conducted by previous projects, and with the new data from six years of research at the site, a new view of San Lorenzo emerges for scholarly consideration.

**Ancient Life at San Lorenzo**

Before 1500 B.C., the first humans inhabited carefully selected sites throughout the lower Coatzacoalcos River drainage. The rivers and nearby Gulf of Mexico marked life’s tempo. Canoes traveled up and down the rivers, to and from settlements. Access to resources was via canoes and rafts, and trading networks facilitated access to foods and materials. Since early times, these settlers created and maintained complex relations within the region and with distant areas of Mesoamerica. They instituted a distinct culture pattern that gave rise to dramatic cultural transformations over a few centuries.

In this water-rich landscape, small sites were situated close to the river in strategic spots, defined by slight elevations barely safe from flooding. Such riverine locations were convenient to exploitable aquatic resources and fertile bottomland for cultivation. Floods of extraordinary magnitude invaded yards and forced the people to flee to higher ground temporarily, or perhaps they took refuge in lofts in their houses, as do the contemporary inhabitants of the region.

As the early inhabitants coordinated economically, socially, and politically, they began to form a regional, cultural identity in which cooperation, exchange, and production were administered on a more formal basis. In this early phase of development, a specific site, San Lorenzo, emerged as the most powerful place, and, by 1200 B.C., it was the capital of the lower Coatzacoalcos River drainage.

The transition to the florescent phase of San Lorenzo, traditionally considered between 1200 and 900 B.C. (Coe and Diehl 1980), was gradual, and not characterized by any abrupt changes. The Olmec development was sui generis on the Gulf Coast, eliminating transoceanic or highland diffusion as the source of Olmec culture.

At San Lorenzo, the rulers, their families, and attendants lived on the heights of the site. Palaces and elite residences are scattered across the central upper portion of the site, where most of the sculptures are found. An important palatial residence excavated by the project, the “Red Palace,” shows the ostentatious use of stone elements such as columns, aqueducts, and step coverings (fig. 3). Only the extremely wealthy and powerful could afford to incorporate a scarce and imported resource such as basalt.

Fig. 3. The Red Palace at San Lorenzo.
into a dwelling. Craft activities directly under the control of the elite are also concentrated around the Red Palace; examples are the Basalt Workshop and the Monument Recycling Workshop. The economic and symbolic value of stone made it important that raw materials, products, and discarded sculptures be safeguarded under the protection of the elite, who controlled the raw material, technology, and symbolic content of sculpting. Another important residence was built on a low (less than 2 meters high) but large clay platform measuring 50 by 75 meters; a 12-meter-long apsidal-shaped superstructure occupied the top along with activity areas and refuse pits.

Below, on the terraced sides of the plateau, concentrations of habitation areas are found. These dwellings are less elaborate and may be built of wattle-and-daub or mud walls made with the _terre à pisé_ technique. Floors were prepared with tamped dirt covered with a layer of irregularly shaped sedimentary stones, and the roofs were of palm thatch (Zurita, in press). Some dwellings tend to be large, covering more than 100 square meters. Buildings in the household cluster vary in form, size, and function. One residence has a low patio altar, indicating the establishment of a Mesoamerican pattern prevalent in later times. Cooking areas are found outside the main dwelling and consist of hearths with fire dogs or shaped clay hearths. The Olmec kept their structures clean, as is evidenced by the house floors already excavated. Garbage was deposited in pits, thrown into gullies as landfill, or thrown away from the dwellings usually downslope. Dwellings on the terraces show that craft activities were conducted at the domestic level. All dwellings are typified by the hoarding of stone pieces, whether these be sculpture fragments, discarded _manos, metates_, or other implements. The exorbitant cost of obtaining stone meant that the Olmec had to adopt an extremely pragmatic approach to its use, manufacture, and recycling.

The nature of Olmec subsistence is still elusive due to the poor preservation of botanical remains in the Tropics. However, with the powerful multidisciplinary application of palynology (Martinez, Ramirez-Arraiga, and Cyphers 1994), phytolith studies (Zurita, in press), and macrofossils analysis (Lane n.d.), it is now possible to confirm the presence of the Mesoamerican triad of maize, beans, and squash at San Lorenzo. The utilization of root crops, such as _yuca, malanga, camote_, and _nance_, is more difficult to ascertain, and to date, no evidence for their use has been recovered. Grinding stones, such as _manos, metates_, and mortars are additional evidence for the processing of grains. No ceramic griddles have been found at the site, so it is possible that maize was consumed as tamales instead of tortillas. The very large ceramic basins recovered in excavations could have been used for steaming tamales.

The Olmec relied on a variety of other food sources in addition to cultivated crops. Fish are abundant in the rivers, lagoons, and swamps and were a major protein source for the Olmec as for inhabitants of the region today. Contamination of the rivers and lagoons along with over-exploitation of these resources is rapidly diminishing their abundance. Fishing was generally an individual or family activity, except in the hunt of the bobo fish. Each fall the bobo fish migrates from upriver to spawn, and great organized fishing expeditions are organized along the lower Coatzacoalcos River to trap this enormous egg-laden fish, considered a delicacy. The presence of shark teeth in the excavations suggests that these were probably hunted either in the sea or in the rivers, since even in recent times the tide has brought them upriver. The Olmec also hunted white-tailed deer and white-lipped peccaries (Wing 1980); probably many other species were hunted but the remains of such prey were scattered by the dogs scavenging around the household garbage debris. The domesticated dog was also a source of food, as indicated by remains often found in domestic debris. In traditional societies, large festivities are characterized by the ostentatious consumption of protein, and dogs, fish, turtle, deer, and peccary would have been likely banquet food.

San Lorenzo is characterized by a large number of craft activities. The sculpture recycling and the ilmenite workshops are so extensive in area and quantity of materials that they seem to indicate an industrial scale of manufacture. With such production strategies achieved during the apogee phase, agriculture and the importation of foodstuffs must have been intensified to maintain an ever-increasing group of craftspeople and other nonfood producers.

The largest activity found to date is the recycling of monuments and the fabrication of preforms. Obsolete sculptures were hoarded for recarving west of the Red Palace. To the east of that structure was the Basalt Workshop; an 18-meter-ton monument was being mined as a source of basalt for _metate_ and lid preforms. The elite maintained tight control on the raw material, technology, and finished product.

On the southwestern edge of the plateau another specialized workshop area has been excavated. Here basalt recycling was also being conducted at a smaller scale for the fabrication of round basalt plates. Near this area, large pits filled with more than six metric tons of ilmenite multi-drilled blocks were recovered. These blocks are the used-up or discarded pieces of a rotation technology used in drilling (Di Castro, in press).

Obsidian working seems to have been conducted at the household level. Very few wasted cores have been found, even though prismatic obsidian blades are common during the apogee phase. It is likely that the cores were shattered to produce flakes for cutting and scraping. The obsidian at San Lorenzo derives from three basic sources: Guadalupe Victoria in Puebla, Otumba in Central Mexico, and El Chayal in Guatemala (Cobean et al. 1971; Cobean et al. 1991).
In archaeology, a number of methods are used for estimating the population, including site area and density of surface artifacts. At San Lorenzo, the large amount of overburden makes the application of artifact density a difficult method for estimating population. When Krotser finished the topographic map of the site, a number of small, low habitation mounds were noted on the surface. Coe and Diehl (1980:1, 29) used the presence of these two hundred mounds as a basis for estimating a resident population of one thousand for the site. Testing of these mounds in recent years shows them not to be Formative nor to contain evidence for structures, so that now it is necessary to reconsider the proposed population estimate for the site. Habitation occurs in defined areas of the site, as shown by survey and excavation, so the previous idea that Olmec centers such as San Lorenzo were vacant ceremonial centers must be discarded.

During recent site work, an intensive systematic survey was conducted by Lunagómez (1995), who discovered that surface remains extend from the heights to the 30-meter contour interval to cover approximately 600 hectares or 7 square kilometers during the Early Formative period. The limits of the site are presently being tested for the extent and intensity of habitation at the periphery, and initial tests show that the edges were fairly densely occupied. The depth of Formative deposits makes it difficult to calculate the density of structures across the site. Known structures are very large and are surrounded by other structures. We are still a long way from being able to discuss the nature of domestic units and the probable number of residents per household cluster, and hence for the site in general. But all evidence indicates that occupation covered the site and along the elevated ridge to the south and north, down to the floodplains below. The nature of the settlement also shows a complexity in structure types, sizes, and activity areas.

In general, the elite areas are found on the top of the plateau with the less important residences clustered on the terraces and slopes below. There is no evidence for the existence of agricultural plots on the elevated lands; on the contrary, all of this land appears to have been intensively occupied. The lands that were farmed would have been the levees and the floodplains as well as the now dissected upland to the south and west. The sustaining agricultural area for San Lorenzo would have been found away from the site, so farmers would have had to have traveled a considerable distance to their fields. This is a common pattern today in the region, where farmers may travel up to two hours on foot or horseback to their fields.

In addition to being farmers, fishermen, hunters, and artisans, the inhabitants of San Lorenzo were involved in regional and long-distance trade. Causeways in the region testify to the importance of the fluvial network in the life of ancient San Lorenzo, where they served as docks for receiving raw materials, produce, and other products. The presence of a natural dendritic communication and transportation system considerably reduces time in transport and makes it possible for a key central place to receive, store, and redistribute large quantities of foodstuffs, raw materials, and manufactured products. The strong emphasis on production or crafts at San Lorenzo goes hand in hand with its role as the main redistribution node in the river system.

**Art and Architecture**

Olmec art is characterized by diversity, not uniformity. The sculpture is highly varied in form and theme, even though a number of traits are common. Stirling (1955) and Beatriz de la Fuente (1981) have pointed out that the principal representation in Olmec art is the human form. In the elaborate Olmec belief system, status, power, and animals were intimately related to the rulers and supernatural deities. The central position of the feline in Olmec art has been repeatedly questioned; however, recent discoveries by the San Lorenzo Tenochtitlan Archaeological Project have augmented the number of feline representations for San Lorenzo. At present count, San Lorenzo possesses the largest number of clear feline representations of all Olmec sites, thus establishing the feline as one of the most ancient Olmec symbols. After the decline of San Lorenzo, feline representations may have declined in popularity or been transformed.

The intrinsic meaning of Olmec stone sculpture has provided an important basis for interpretation of that culture. Most monuments were found on the banks of ravines or other chance means outside a systematic archaeological context. Interpretation and reconstruction relied heavily on ethnohistoric and ethnographic analogies, because the monuments lack a context that could provide additional information. Olmec ideology and rituals need to be examined with accurate chronological and contextual controls to achieve accurate interpretations. An indispensable point of departure is rigorous archaeological context. “Context” implies associations with other objects, architecture, features, individuals, and groups, all of which provide archaeological and sociological information necessary for understanding meaning and function.

The emphasis of the San Lorenzo Tenochtitlan Archaeological Project is on the context of Olmec sculptures at San Lorenzo and hinterland sites. A case in point is the area of the site known as Group D, where Coe and Diehl (1980) reported monuments deliberately placed in lines and ceremonially covered. Recent excavations of the wider context of these monuments revealed the presence of additional and unaligned monuments deliberately stored for recarving (Cyphers, in press). The wider context of the sculpture revealed the presence of tools and debitage associated with the recarving process.

Contextual data recovered by the project indicates that
Olmec sculptures were not mere idols to be worshiped in sacred spaces. In fact, the sculptures were used in ensembles or groups to reenact mythological or historical events. The data to support this interpretation come from individual as well as specific groups of monuments. The use of monuments to form scenic displays indicates that each Olmec sculpture constitutes a distinctive piece of a conceptual framework about the earth and cosmos. When organized into scenic displays, the sculptures can evoke numerous concepts and their rearrangement can transmit a variety of messages.

The specific context of the large throne (Monument 14), Colossal Head 8 (Monument 61; cat. 1; fig. 4), the 171-meter-long basalt aqueduct, and other feline sculptures, illustrates the importance of the sculpture's setting. The location of the sculptures in and near a red-plastered earthen platform with associated offerings and sacrifices shows the theme of rulership associated with felines and water.

In the case of Loma del Zapote, three distinct settings of sculpture are indicated. The first is the decapitated and dismembered Xochiltepec torso, in which the position of the fractured legs indicated that it had to be seated atop an elevated surface. The use of human figures in conjunction with thrones is suggested by the Oxtotitlan, Guerrero, Olmec cave painting (Grove 1973), and this piece suggests that not only rulers but also stone figures were seated on thrones.

The second case from Loma del Zapote is that of a decapitated, dismembered, caped figure set on the edge of a structure containing a subfloor burial (fig. 5). Even though disfigured and ritually placed, the sculpture continued to hold important meanings associated with sacrifice and burial.

The third and most spectacular contextual case of scenic display is to be found on the Azulac acropolis, also part of the Loma del Zapote site (fig. 6). Two male twins face two stylistically similar felines, and all were ceremonially placed on the edge of a pavement separating lower and upper bodies of monumental architecture. The arrangement and characteristics of the human figures and felines provide parallels, perhaps coincidental, to later period myths about twins and jaguars, the most notable of which is the Popol Vuh’s tale of the Hero Twins (Edmonson 1971). The context of these sculptures clearly indicates that this is the abandoned display of a ritual reenactment of a historical or mythical event with possible astronomical symbolism.
In summary, the creation of scenic displays by the Olmec was a means to re-create mythological and historical events, and, at the same time, create the kinds of commemorative and/or cyclical festivities to celebrate them. The relocation of monuments for rites implied accompanying labor obligations and fomented the integration and participation of many social sectors. All of this served to confirm Olmec social identity, rulership, and cosmological principles.

The spaces built by human beings reflect their ideas about the universe they live in. Architectural spaces express their way of living and thinking as well as the way in which they conduct their activities. Architecture reflects the way they conceive the relationship among humans, environment, and cosmos, a concept called cosmovisión in Spanish.

The pattern of monumental architecture in Mesoamerica varies from site to site, but it can be characterized by a general predefined pattern in which mounds or pyramids were built around plazas. The Early Formative architecture of San Lorenzo is not typical of this later Mesoamerican pattern of pyramids and plazas. In San Lorenzo the monumental modification of natural landforms was the way the
Olmec formed desired spaces. The San Lorenzo plateau may be considered one of the largest works of monumental architecture in Early Formative Mesoamerica because it was modified using enormous human labor for the construction of terraces, filling and cutting operations, and earth removal, thus transforming the natural landscape into a space for both sacred and everyday purposes. This impressive activity is visible in the construction of two and three levels of long and wide terraces below the heights of San Lorenzo, which provided areas for habitation and production. The leveling of the plateau, achieved with thousands of cubic meters of earth fill brought in from the low-lying areas, and in conjunction with large retaining walls, required a considerable work force. Today the form of the plateau is distorted by erosion and human activity following the Olmec occupation, all of which have erased the original silhouette of this enormous earthen monument, possibly the first “sacred mountain” in Mesoamerica.

Other important architectural elements of the Early Formative period are the low earthen platforms and the causeways. The low platforms, frequently plastered with red-pigmented sands, were used for public, ceremonial, and residential activities. The Olmec were master builders and utilized the materials available in their local environment to construct their dwellings and sacred ceremonial buildings.

Sociopolitical Organization
San Lorenzo constituted a well-integrated and structured hierarchical society. The success of its integration and development was the result of adaptive strategies used to exploit its environment efficiently and take advantage of its optimum geographical location.

Previous studies considered San Lorenzo a fairly small, 53-hectare site (Marcus 1976), but recent work by the San Lorenzo Tenochtitlan Archaeological Project has demonstrated that it covers more than 900 hectares (Lunagómez 1995). Coupled with the data on the internal differentiation demonstrated by the site, San Lorenzo can be considered the largest and most complex Early Formative site in Mesoamerica. This constellation of functions and characteristics tends to indicate a society that has attained incipient statehood.

The population of San Lorenzo’s hinterland increased during the apogee phase, creating a hierarchical settlement pattern in which San Lorenzo functioned as the regional center around which a complicated administrative hierarchy of small and large sites was located, each specialized according to its geographical position (Lunagómez 1995; Symonds 1995). Because it was located in a strategic spot in the communication network, San Lorenzo was able to regulate the importation and exportation of local and regional products. The centralization of sites and the population increase coincided with intensive production specialization and the appearance of an exchange network regulated by the elite.

During this time, large monuments created in volcanic stone brought from the Tuxtla Mountains (Coe and Fernández 1980) were dedicated. An efficient organization that could control a large work force was necessary to conduct this extraordinary activity, in which stones as large as 25 metric tons were transported. It is not known if the monuments were brought as uncarved blocks and sculpted on the site or if they arrived already carved. Without the use of the wheel and beasts of burden, the Olmec relied completely on human labor force. Both land and water routes are feasible for the transport of stone, although it is obvious that land routes provided greater safety. The magnitude of the work force necessary to transport the stones places the Olmec on a plane of organization and technology truly exceptional for their times. Numerous workers, specialists in maneuvering ropes and knots, rollers and wood, as well as coordinators, were necessary. People in charge of feeding the work force added to the total number of individuals involved. The transportation of stones was an effort as monumental, or more so, than the construction of great architectural works.

The rulers of San Lorenzo, whose portraits are the ten colossal heads, achieved an extraordinary power that was legitimated and reinforced with complicated ceremonies and sumptuous monuments. The colossal heads and thrones were probably never transported to other communities because they are the most important symbols of Olmec leadership, centered at the capital of San Lorenzo.

Decadence
The florescence of San Lorenzo lasted until 900 B.C., when the site suffered a significant decline and population loss. The site was not totally abandoned because there is evidence for Middle and Late Formative occupation there. During the Classic period, however, there is no evidence for occupation. It is not until the Late Classic-Early Post-Classic that a significant occupation at the site and a powerful renewal of settlement in the region again occurs (Symonds 1995).

After the florescence of San Lorenzo, La Venta rose in importance. We do not know if La Venta, or some other site, was responsible for the decline of San Lorenzo. Various causes of its decadence have been proposed, including internal revolt, invasions, and a gradual loss of importance. The decadence of San Lorenzo may have been gradual, the result of internal problems in the functioning of the regional polity.

The research conducted by the San Lorenzo Tenochtitlan Archaeological Project adds another possible factor for the decline of the site. Regional evidence exists for tectonic activity emanating from the Tuxtla Mountains, which
could have had repercussions in the San Lorenzo region in terms of ash fall and subsequent ecological alterations. Evidence indicates that tectonic movements (uplift) affected the river courses and land altitude, thus effectively changing the physical geography.

A dramatically changing environment applies stress to human occupations and their traditional way of life. Gradual and/or sudden environmental disequilibrium may cause internal problems of a social, political, and economic nature, such as disruptions in trade and communications and significant crop losses. The search for additional archaeological evidence of natural catastrophe and specific human response and adaptation must continue for these questions to be addressed fully.

The transition to the Middle Formative shows a reduction in population and a change in the settlement pattern. Between 900 and 400 B.C. the importance of San Lorenzo waned, but its legacy continued in other Olmec sites that achieved greatness.

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