First Towns in the Americas

Searching for Agriculture, Population Growth, and Other Enabling Conditions

John E. Clark, Jon L. Gibson, and James Zeidler

We have long been interested in how and when seminomadic peoples settled down to live in villages and why they chose to do so. Villaging represented a fundamental change in social relationships, lifeways, notions of self, and probably much more. In a search for regularities in early village developments, we adopt a pan-American perspective and examine three of the most extraordinary village histories currently known for the Western Hemisphere. These cases are documented sufficiently well to allow for a broad, socio-ecological comparison of village trajectories—from previllage Archaic times to initial village formation to super-sizing events that transmogrified villages into towns. Most chapters in this volume (1, 2, 3, 5, 7, 9, 10) address the dynamics of village fissioning. Our study considers the less-frequent countervailing processes of population aggregation (see chapters 6, 8, and 12)—the fusion of small villages and hamlets into towns.

America’s earliest towns developed four to five millennia ago for reasons not well understood. We compare three independent cases to identify possible circumstances critical to their emergence. We pay particular heed to the food quest and demographic changes and their possible connections to evolving social complexity. As designated here, towns are sedentary communities intermediate between villages and cities in size and complexity. Towns are habitation and ceremonial centers with public plazas and structures, including mounds (Lewis, Stout, and Wesson 1998:5). America’s earliest towns evolved 4,900 to 3,600 years ago (all of the following dates are calibrated). Sites identified as first towns are Real Alto (2900 BC) in Ecuador, Paso de la Amada (1650 BC) in southern Mexico, and Poverty Point (1700 BC) in Louisiana (fig. 11.1). These towns arose in warm, lowland settings; with 1,500–3,000 inhabitants
each, these communities were twenty to forty times larger than coeval villages known for their regions.

Because of their size and chronology (fig. 11.2), the sites showcased here have been regarded as novel advances in social complexity, their progress supposedly stimulated by corn agriculture. As our comparative analysis reveals, however, the evolution of America's first towns cannot be blamed on agriculture, population pressure, or any other known prime mover. Instead, adequate explanation must take into account the cultural practices and perceptions of the villagers who built and occupied these first towns.

**Real Alto and the Valdivians**

As the postulated inventors of America's first pottery or, alternatively, as voyagers from Japan who introduced pottery technology to the Americas, the Valdivians hold a special place in the history of archaeological discourse. They take their name from the small type site of Valdivia on the south coast of Ecuador, reported in the 1950s. Real Alto, discovered in 1971 and first excavated in 1974 (Lathrap, Marcos, and Zeidler 1977), is the largest known settlement of the early Valdivians; because of decades of attention, it is now one of the best-known sites in Ecuador.

**Place, Time, and Space**

Real Alto is located 3.5 kilometers inland on a low ridge overlooking the floodplain of the Verde River in the Chanduy Valley of Ecuador's Santa Elena Peninsula (fig. 11.3). A combination of cool ocean currents and prevailing southerly winds create arid conditions for this region. It receives about 380 millimeters of rain annually and has a prolonged dry season, with frequent periods of drought. In Valdivia times, much of the Santa Elena Peninsula and coastal areas to the south supported xerophytic forest with substantial patches of open grassland. Wetter inland zones at slightly higher elevations were covered in tropical, deciduous woodlands (Pearsall 1983). Riparian zones and coastal/marine habitats were important for human subsistence, with the former supporting narrow bands of gallery forest, and the latter, extensive tracts of mangrove swamps and estuarine resources.
Figure 11.2. Comparative chronology for Real Alto, Paso de la Amada, and Poverty Point.

<table>
<thead>
<tr>
<th>Years Cal. BC</th>
<th>Real Alto</th>
<th>Paso de la Amada</th>
<th>Poverty Point</th>
</tr>
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<tbody>
<tr>
<td>1000</td>
<td>Jocotol</td>
<td>Early Woodland</td>
<td></td>
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<tr>
<td>1200</td>
<td>Machalilla</td>
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<tr>
<td>1400</td>
<td>Cuadros</td>
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<td>1600</td>
<td>Cherla</td>
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<tr>
<td>1800</td>
<td>Ocos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Locona</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Valdivia 7</td>
<td>Barra (Early Formative)</td>
<td>Late Archaic</td>
</tr>
<tr>
<td>2200</td>
<td>Valdivia 6</td>
<td></td>
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<tr>
<td>2400</td>
<td>Valdivia 5</td>
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<tr>
<td>2600</td>
<td>Valdivia 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2800</td>
<td>Valdivia 3</td>
<td>Chantuto B (Late Archaic)</td>
<td>Middle Archaic</td>
</tr>
<tr>
<td>3000</td>
<td>Valdivia 2b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3200</td>
<td>Valdivia 2a</td>
<td></td>
<td></td>
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<tr>
<td>3400</td>
<td>Valdivia 1b</td>
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<td></td>
</tr>
<tr>
<td>3600</td>
<td>Valdivia 1a</td>
<td></td>
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</tbody>
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First Towns in the Americas

Figure 11.3. Early Valdivia sites in southwestern Ecuador.

Absolute and relative chronologies for Valdivia culture have been a dominant concern ever since Betty Meggers, Clifford Evans, and Emilio Estrada (1965) claimed that Japanese-derived Valdivian pottery was the earliest in the New World. Since then, investigators have demonstrated the presence of even earlier ceramics (Hill 1972/4) and of pre-ceramic occupations on the Santa Elena Peninsula just northwest of the Chanduy Valley (Byrd 1976; Marcos 1986). The late preceramic period is known as the Late Las Vegas phase. Finding local antecedents to Valdivian practices and artifact types, especially ceramics, diffused the trans-Pacific argument but created others concerning local development. The chronology illustrated in figure 11.2 is the most current (see Marcos and Michczynski 1996; Zeidler 2003). The Valdivia tradition spanned three millennia segmented into eight phases and four developmental periods: Early (1a–2a), Middle (2b–3), Late (4–7), and Terminal
Valdivia (8a–8b) (Marcos 2003). The first two periods are germane to our discussion.

**Antecedents**

Thirty-one Archaic period sites have been identified for the western half of the Santa Elena peninsula; this compares to the one hundred known sites for the following Early Valdivia period for all of coastal Ecuador and Peru (Raymond 2003). Most Late Las Vegas sites are small scatters of stone and bone artifacts, but one site (Site 8o) covered 1.3 hectares and was occupied perhaps year-round (Stothert 1976:89, 1985; Stothert, Piperno, and Andres 2003). Site 8o lies on a small hill 33 meters above sea level and about 4 kilometers inland. Vegas peoples hunted, fished, gathered, and tended domestic plants, including corn (Piperno 2003; Stothert 1985). Many artifacts used by Vegas peoples (bone and shell tools, including fishhooks, and stone grinding, pounding, and cutting tools) predate those used by the later Valdivians (Stothert 1976), their presumed descendants.

Site 8o revealed evidence of Archaic dwellings and ritual burials practices dating from 6000 to 4600 BC. The floor of an ephemeral structure 1.8 meters in diameter was recovered, and a burial was found beneath its entrance (Stothert 1985:615). Of the 31 known Las Vegas sites, burials have only been found at Site 8o. Because of its size, depth, and the 192 burials found in its cemetery, Site 8o is interpreted as a “community center” with a “ceremonial focus” (Stothert 2003:344). The data from this site indicate that Vegas peoples may have “shared a sense of community . . . and a sense of belonging to a specific geographic location” (Raymond 2003:39); both concepts carried over into Real Alto and the beginning experiments in permanent village living.

**A Brief History of Real Alto**

Real Alto was occupied for nearly three thousand years, starting with Valdivia Phase 1a (ca. 4400 BC) and continuing uninterrupted through Valdivia 7 (1800 BC). The site started as a small village, developed into a town, and then became a local ceremonial center before being abandoned. The transition from small village to town occurred in Valdivia 2b–3 times. Changes in the scale and complexity of community organization are evident in site layout, domestic structures, public buildings, mortuary programs, and ceramic and stone artifacts.

Traces of buried Las Vegas components in sites just west of Real Alto indicate that this place was frequented in earlier times; no other Archaic occupations are known for the Chanduy Valley (Raymond 2003:41). In Phase 1, Real Alto was a circular to elliptical village about 150 meters in diameter, with domestic structures placed around a clean plaza that was open at one end. This village consisted of twelve to fifteen small, single-family huts housing about 50–60 people in total (Marcos 2003:17). The village more than doubled in size in Phase 2a and accommodated 150 to 250 people (Zeidler 1984:62). At this time, the village was horseshoe shaped, with the plaza opening toward the south. The Phase 2a village may have had an 8- by 6-meter ceremonial structure (men’s house) located at the open, southern end of its plaza (Marcos 2003:17). Circular villages of similar size and date are known for adjacent valleys. The regional distribution of Early Valdivia settlement shows a major shift from coastal locations frequented in Archaic times to inland locations along the valley bottom. Inland sites were at least 10 kilometers apart and in different valleys (Raymond 2003:42). Small circular villages persisted for 1,400 years, until the Valdivia 2b phase, at which time Real Alto began growing into a town.

The transformation into a town occurred from Phase 2b to Phase 3. Besides quadrupling in size, Real Alto changed shape and configuration (fig. 11.4). By Phase 3, the site had grown to 12.4 hectares and boasted a central ceremonial precinct with dual mound constructions surrounded by an open elongated plaza and an outer ring of domestic structures and flanking mounds. Two small mounds extended off the mounds on the northeast and southwest sectors of the plaza and may have served ceremonial functions for each half of town (Marcos 2003). The site plan and individual domestic and ceremonial structures exhibit a marked intercardinal orientation likely associated with celestial phenomena still found in the ethnoastronomies of lowland South Americans (Zeidler 1984, 1998). At the onset of Phase 2b, the town had about ninety to one hundred residential structures that housed 600 to 1,100 inhabitants in total (Marcos 2003). During Phase 3, the on-site population increased to about 1,800 people.

The two large platforms in the plaza are known as the Charnel and Fiesta mounds. The hourglass-shaped plaza is oriented roughly northwest–southeast, with the Charnel Mound located on the southwestern
for the Fiesta House is elliptical, measuring 50 by 36 meters, oriented northeast–southwest, and 1.4 meters high. This platform was enlarged at least four times anciently, and its perishable superstructures many times more. Investigators found evidence of rare food items and numerous fragments of ceramic bowls, possibly used for drinking corn beer (chicha). The entrance to the Fiesta House was on the southwest, facing the taller Charnel Mound across the plaza (Lathrap, Marcos, and Zeidler 1986:69).

A spectacular set of features, indicative of ritual functions involved with death, burial, and possible sacrifice, were found in the Charnel Mound.

The burial of a woman carefully placed inside a stone-lined tomb was uncovered underneath the threshold of the entrance. The floor of the tomb was paved with manos (grinding stones), the sides were lined with halved metates (querns), and the entire tomb was partially covered with metates. Immediately to the side of the tomb was the burial of a sturdy male who had been dismembered. . . . Around this sacrificial burial were seven chert knives which presumably had been used in dismembering the body. Just west of the grave were secondary burials of seven other males whose bones had been stacked in a common pit. . . . All these males have been sacrificed to the high-status female buried inside the stone-lined tomb. (Lathrap, Marcos, and Zeidler 1977:9–10)

With the expansion of the site in Phase 3, and the construction of the 1.05-hectare plaza, domestic space was modified from the circular arrangement of inward-facing houses to rows of densely packed clusters of houses. Each cluster consisted of about five to six houses squeezed into an area of 50 by 50 meters. In their current eroded state, the rows of houses look like long, parallel ridges flanking the plaza (fig. 11.4a).

Equally dramatic changes occurred in residences. Valdivia I houses were small (4.5 by 3.2 meters), elliptical constructions of bent flexible poles and thatch, each with a center post and many smaller, circumferential poles (Damp 1984a:578). Valdivia 3 houses were bigger, sturdy, elliptical buildings “with upright post walls, covered with daub, and topped by large thatched roofs” (Marcos 2003:17); some had central hearth areas and subfloor or subwall burials (Stahl and Zeidler 1990:166; Zeidler 1984). Valdivia 3 houses conform to a bimodal size distribution
indicative of status differences. The larger houses (65–70 square meters) represented a threefold increase in floor space from Valdivia 1 times and likely marked a shift to extended family dwellings.

This shift in residential practices indicates demographic and social changes at Real Alto. Analysis of life tables reconstructed from skeletal samples from Site 80 (Ubelaker 1980; n = 192) and from Phase 3 contexts at Real Alto (Klepinger 1979; n = 72) show the following trends in Middle Valdivia times: a slight increase in birth rate and family size, a decrease in life expectancy and mean age at death, and a dramatic increase in dependency ratios (i.e., ratio of juveniles and the elderly to productive population) (Zeidler 1994). Despite declining health and decreasing life expectancies due to agricultural lifeways (Ubelaker 2003), overall fertility increased in Valdivia times. These same data also provide compelling evidence for a Neolithic Demographic Transition (NDT) for coastal Ecuador similar to those proposed by Jean-Pierre Bocquet-Appel (2002; Bocquet-Appel and Naji 2006) for Europe, North Africa, and North America (see chapter 1, this volume). Using the ratio of immature skeletons (the 5–19 portion) to total skeletons (the +5 portion, which excludes individuals under 5 years of age), we can compare late pre-ceramic data from Site 80 (n = 192) with those for Real Alto, Valdivia Phase 3 (n = 72) and, more generally, for Valdivia Phases 1–7 (n = 100; Ubelaker 2003). For Vegas times, the 5–19/+5 ratio is .1586, indicating a relatively low fertility rate in line with those reported for Mesolithic populations in Europe/North Africa and for Archaic populations in North America. Early Formative life tables for Real Alto yield 5–19/+5 ratios of .4444 for Phase 3 and of .3165 for Valdivia Phases 1–7. Both values considerably exceed that for Vegas burials, and both accord well with those for Neolithic populations in Europe/North Africa and for settled horticulturalists in North America (Bocquet-Appel 2002; Bocquet-Appel and Naji 2006).

Artifact inventories provide additional evidence of the changing social conditions suggested by the NDT. Valdivian occupations are marked by dense middens with pottery, both thought to indicate sedentism. The earliest pots were thick, crudely finished red vessels limited to three forms. By Valdivia 3, over thirty vessel forms and several different wares were being made. The earliest ceramic human figurines date to Valdivia 2 (Di Capua 1994); earlier figurines were of stone (Hill 1972/4). Valdivia 3 saw a proliferation in the number of figurines; most represented women, but some male figurines are known. Broken figurines are found in most households and as occasional grave goods. The sexual differentiation of figurines during Valdivia 3 corresponds to the maximal growth of Real Alto and to the appearance of large, extended-family dwellings. The figurines may have symbolized fertility and segregation of male- and female-related rituals (Marcos, Alvarez P, and Spinolo 1999-99; Marcos and García de Manrique 1988). Other artifacts ubiquitous in Valdivian domestic contexts are ground stone tools. The abundance of large, well-made manos and metates from Phase 2a onward is testimony of the horticultural base of Valdivian society.

Evidence of regional and long-distance trade is less obvious, perhaps because mostly perishable items were involved. Valdivians had the capacity for sea travel by Phase 3. They colonized La Plata Island off the southern Manabi coast and Puná Island off the southern Guayas coast at this time. There is evidence of contact with northern Peru in Middle and Late Valdivia times involving the trafficking of spiny oyster shell (Spondylus princeps) found in the warm waters of coastal Ecuador. Other Valdivian influences on coastal Peruvian societies include Phase 3 designs on pyro-engraved gourds and weaving techniques probably learned from Valdivians (Zeidler 1991). The foreign products Valdivians received in return remain unidentified. The best evidence of long-distance trade dates to Late Valdivia times rather than to the pre-town era: in Phase 7, obsidian and ceramics from the Ecuadorian highlands appeared at Real Alto.

**Subsistence and Town Development**

Donald Lathrap and his coauthors (Lathrap, Marcos, and Zeidler 1977, 1986) interpreted Real Alto as an agricultural community advantageously situated between rivers to control the best agricultural land and any benefits accruing from growing and controlling corn surpluses. The necessity of agriculture for Valdivian lifeways was promoted from the start because scholars presumed that a site with 1,500 or more residents could only thus have been supported. Settlement pattern studies demonstrate a relationship between site locations and rainfall, "highly suggestive that sites were preferentially located for farming purposes. This, combined with the growing number of paleobotanical remains,
starch grain analysis of residues on ground stone tools recovered from Middle Valdivia domestic contexts. These same tools show that several root crops were also processed (Chandler-Ezell, Pearsall, and Zeidler 2006; Pearsall, Chandler-Ezell, and Zeidler 2004).

On the basis of available data, botanical remains, and skeletal indicators... it seems reasonable to propose that early Formative coastal subsistence depended on root crops (anchina, and arrowroot, and perhaps manioc, and sweet potato), tree fruits, jack bean, squash, and local wild foods, including both estuarine and terrestrial animals, with some input of corn, and that this constituted agriculture. There was no single dominant carbohydrate source; rather Valdivia agriculture fits the tropical forest pattern (Lathrap 1970), with a broad base of root crops, tree crops, and seed crops and continued use of a wide diversity of wild, tended, and weedy plants and animals. (Pearsall 2003:236)

Paso de la Amada and the Mokaya

Paso de la Amada in the Mazatan region of southern Mexico is the earliest village, town, and ceremonial center currently known in Middle America. Inhabitants of this community were also the first known to have developed rank society. The Mazatan region gained notoriety because of its earliest pottery. Gareth Lowe (1977) argued that ceramic technology and manioc agriculture were brought into Mazatan from tropical cultures of northern South America. Things probably did not happen this way.

Place, Time, and Space

Paso de la Amada is located on an alluvial plain fifteen meters above sea level and about five kilometers from an active mangrove estuary. The site lies in tropical forest between two entrenched rivers; the larger one empties into the Pacific Ocean and the smaller river feeds a marshy lagoon (fig. 11.3). Paso de la Amada occupies the dry outer strip of the coastal plain in an area of seasonal flooding and good soils. Rainfall averages about 1,500 millimeters per year. Fertile, well-drained soils make this region one of the most productive agricultural areas in Mexico today. The most ancient villagers of the Mazatan region, known as the Mokaya, were fisher-hunter-horticulturalists. Mazatan is an Aztec...
word meaning "place of deer," an apt description of the region's abundant game. Estuary and swamp resources were close at hand, and the local terrain had many relic channels, or bajos, that filled with river overflow each rainy season. Seasonal flooding charged these bajos with fish, turtles, and other waterborne creatures, which were easily gathered as these waters evaporated during the dry season. The standing water also killed the grass in the bajos as well as deposited a layer of fertile silt that could support a dry-season crop.

**Antecedents**

Paso de la Amada appeared about 1900 BC without local antecedents and was occupied for six centuries. Just forty kilometers up the coast, on the northwest edge of the large freshwater lagoon that borders the Mazatan region, there is ample evidence of Late Archaic shell middens. Toward the end of the Late Archaic period (3000–1800 BC), these manmade islands were used for rainy-season exploitation of fish, marsh clams, and shrimp. Phytolith evidence suggests that the areas around inland base-camps were cleared for cultivation and that cultivated plants included corn (Voorhies 2004).

Excavations at one shell mound found domestic structures on a specially prepared clay surface. Small postmolds for several partial structures and one complete oval-shaped structure measuring eight by four meters were found. The complete structure had two center poles and eleven perimeter poles. The poles likely supported a thatch roof, but the sides of the structure were probably open (Voorhies 2004). Subsequent Formative houses in the Mazatan region were also oval in plan and had center poles. The Early Formative witnessed the first use of ceramics and the creation of permanent villages, starting with Paso de la Amada. We consider only its early history.

**A Brief History of Paso de la Amada**

Evidence of houses and ceramics co-occur at Paso de la Amada by 1900 BC, the beginning of the Barra phase (see fig. 11.2). Pits, patches of floor, and postmolds have been found for this transitional period. The first ceramics are superellegant, polished wares and display no signs of technological experimentation or use in cooking fires. These vessels may have been used on festive occasions for drinking corn beer or chocolate.
The distribution of Barra sherds at Paso de la Amada indicates an extensive but dispersed village of about ten hectares that may have housed 250–400 people (Clark 2004a). Clay figurines date to late Barra times, but, as at Real Alto, they followed well after the appearance of ceramic vessels. Obsidian and stone for lapidary purposes were imported from distant regions.

The following Locona phase (1700–1500 BC) is of particular interest because dramatic shifts in village living occurred at Paso de la Amada and its region. Large residences were placed on elevated platforms by this time (Blake et al. 2006); the largest, Structure 4 of Mound 6, was an oval building with hearths at each end and with an interior space of about twenty by ten meters (fig. 11.6). Not all residences were elevated or of this size. Small houses (five by three meters) were also built at ground level. These were presumably pole-and-daub, oval structures. Unlike the situation at Real Alto, variations in residences clearly signaled status differences between platform houses and ground-level huts (Lesure and Blake 2002). Most houses would have been large enough only for a nuclear family; others could have housed extended or polygynous families.

Two centuries after its initial occupation, Paso de la Amada became a town reconfigured around a three-hectare square plaza at the southern end of the site (fig. 11.6). Two other plazas or sunken courts may have been built to the north on the same alignment (Clark 2004a). The south plaza and its flanking buildings were in place by 1650 BC. The total amount of moved earth involved in the construction of the bordering mounds may have exceeded 120,000 cubic meters; thus, this early plaza center required coordinated labor to build.

On the west edge of the plaza was a long, clay ballcourt, and to the south was Mound 6, the basal platform for a chiefly residence (Blake 1991; Hill and Clark 2001; Lesure and Blake 2002). This platform was enlarged at least ten times over a three-century period, with conservation in the orientation and form of its summit buildings indicating continuity of status of the household located there. The formalization of Paso de la Amada, with its monumental public and domestic structures, corresponded with the emergence of hereditary inequality and simple chieftain society. These were regional phenomena. Paso de la Amada was the largest community of its day in Middle America, covering

Figure 11.6. Paso de la Amada during Locona times: A, topographic map at 50-centimeter contour intervals; B, interpretive simplification of the site map showing the location of mounds and bajos (shown in gray).
140 hectares, with an estimated population of two thousand to three thousand people (Clark 2004a). This represented a tenfold increase in population from the preceding Barra phase. As the distribution of Locona phase settlements indicates (see fig. 11.5), this demographic surge characterized the region as a whole. In Matthew Bandy and Jake Fox’s definition (see chapter 1, this volume), Paso de la Amada at this time would no longer have been a village, because it was the center of a rank society.

During the Locona phase, and the two that followed, there was a clear site hierarchy in the Mazatan region of at least two levels, with Paso de la Amada being the principal site and center of its village cluster. Other large villages anchored neighboring settlement clusters. Centers were spaced about five kilometers apart. Arguments for the emergence of rank societies in Mazatan are based principally on changes in settlement patterns and residential architecture. Slim evidence from mortuary practices corroborates the presence of hereditary status distinctions. Locona phase burials are associated with residences, but most lack architectural associations.

**Subsistence and Town Development**

Paso de la Amada grew so fast that there is little chance of correlating its developmental era to changing subsistence practices. The scant information for the preceding Archaic period indicates that earlier peoples were seasonally mobile. Long-distance trade in obsidian began by the end of the Archaic period (Nelson and Voorhies 1980). These Archaic peoples hunted, gathered, and tended plants inland during most of the dry season and fished in the estuary and lagoons during part of the rainy season. The isotopic signatures of two supposed Archaic burials indicate possible high corn consumption (Blake, Chisholm et al. 1992; Smalley and Blake 2003), and this complicates the picture of early subsistence practices because analyses of Early Formative human skeletons indicate that corn was not a major part of the diet. A reevaluation of the Archaic burials suggests that the isotopic signature could signal consumption of shrimp rather than corn (Chisholm and Blake 2006:162, 167). Some Archaic food-preparation techniques involved cooking with hot rocks, either for boiling in gourds or in roasting pits (Voorhies and Gose 2007).

Information for subsistence practices at Paso de la Amada is limited. Horticulture, hunting, gathering, and fishing continued to be important. There is no definite evidence of storage pits, so if food storage occurred it was aboveground. A common presumption is that pottery and village life arose because of agriculture. At present, the Mazatan data do not allow us to press such a claim. The tending of corn and manioc long preceded the appearance of the first villages in Middle America, but the causal importance of these plants has not been demonstrated (Clark, Pye, and Goser 2007). Evidence from Paso de la Amada and other Mazatan villages indicates that the Mokaya maintained a mixed subsistence economy. Recovered macrobotanical remains show evidence of corn, beans, and avocados. Parallel evidence from isotope studies of human bone demonstrates, however, that corn was not a dietary staple until about 1000 BC (Chisholm and Blake 2006).

Animal bones provide ample evidence of exploitation of freshwater fish and turtles, alligators, and a variety of birds and mammals but no marine fish or sea turtles (Blake, Clark et al. 1992). Many dog burials have been recovered, but so far there is no evidence that dogs were eaten. Grinding stones were small and infrequent, and tooth wear and caries were minimal, both of which indicate that stone-ground starchy foods were not a major component of the diet (Clark, Pye, and Gose 2007). Only one adult female among fifteen burials for which there is good evidence showed significant caries (Ardern 2003). Of 420 available teeth from fifteen individuals, only 11 show obvious caries (2.6 percent); this is a much lower frequency than the 8.5 percent recorded for Real Alto (Ubelaker 2003:277), thus suggesting less reliance on sticky carbohydrates among the Mokaya. Finally, the frequency of fire-cracked rock per phase in the Mazatan region diminished slowly after the appearance of pottery. Coupled with evidence that the first ceramic vessels were not for cooking, we interpret the persistence of thermally shattered rock as a gradual replacement in Formative times of Archaic cooking techniques with pot boiling technology (Clark and Gose 1995). The earliest beans and cooking pots date to Locona times, so they may have been connected innovations.

Evidence currently at hand for Mazatan indicates a gradual transition in food-getting and cooking practices with the advent of village life. There is no evidence of a change in exploited species. Therefore, we doubt that a subsistence revolution caused sedentary life; if anything,
village living forced a shift in subsistence priorities. The corn story for Paso de la Amada is the now-familiar one being documented for all the Americas, with minor use of corn long preceding its role as a staple (Blake 2006; Smalley and Blake 2003). Root crops may have been the main concern of horticultural endeavors at Paso de la Amada, with corn becoming energetically predominant a thousand years later.

**Poverty Point and the Tamaroa**

Because of geographic accident, the Poverty Point site will forever be known as "Poverty Point," but this ironic moniker for North America’s earliest town is an inappropriate appellation for its ancient inhabitants. For descriptive convenience, analytical clarity, and ethical reasons, we will refer to the creators of Poverty Point and its diagnostic material culture as the “Tamaroa,” a dignified Tunican-derived name meaning “Mound Cave People,” a title with appropriate ethical and legendary allusions. Their story begins by 1700 BC (see fig. 11.2).

**Place, Time, and Space**

Poverty Point is located in the lower Mississippi valley of northeastern Louisiana, about 25 kilometers west of the current course of this great river (fig. 11.7). It occupies the eastern edge of the Maçon Ridge, a 210-kilometer-long sliver of high ground isolated between the Mississippi to the east and abandoned Arkansas River channels to the west. Just below the 8-10-meter-high bluff of the Maçon Ridge lies sluggish Bayou Maçon and the vast Tensas swamp (fig. 11.8). Poverty Point is thus perched on the edge of a major ecotone between well-drained upland oak and gum forests and bottomland hardwood forests. The climate is mild, with moderate winters and sweltering summers. About 1,300 millimeters of rain falls annually. The environmental situation shares similarities in vegetational complexity, weather, and rainfall with the Mazatan region of coastal Mexico. All the towns featured here were built on rock-free alluvium, and stone for basic tools had to be imported.

**Antecedents**

Mound building first occurred in the lower Mississippi valley around 5500 BC (Kuttruff et al. 2004), but the earliest mound-and-plaza centers date some fourteen centuries later. The largest centers were constructed about 3600 BC and deserted by 3300 BC (Gibson 2006). We consider these places as loci of aggregation for part of the year only, rather than permanent villages or towns.
Mound-labor expenditures at Archaic centers ranged from minuscule to modest. Frenchman’s Bend, for example, incorporated about 3,600 cubic meters of dirt in its five mounds, whereas Watson Brake contains 33,900 cubic meters in its eleven mounds and supporting oval ring (Saunders 2004:158; Saunders et al. 2005; Saunders et al. 1997). Generally, Middle Archaic mounds were raised in stages without long breaks between building episodes. All but the most voluminous stages in the largest mounds could have been emplaced by small groups during a six-month residential season. Constructions requiring more hands and back could have been put up by periodic aggregations of neighboring peoples.

Little evidence is available for identifying mound functions. Joe Saunders and associates (Saunders, Allen, and Saucier 1994) found inline postmolds and fired-clay layers beneath one of the larger mounds at Frenchman’s Bend. William Haag and James Ford discovered the outline of a 10-meter-square, wall-posted structure underneath the larger of the two mounds at Monte Sano, located 250 kilometers downriver from Poverty Point (Kuttruff et al. 2004). On an earthen dais built directly over the razed building, its users set a large fire, ostensibly a crematory pyre (the burned bones have not been definitively identified as human [see Saunders 1994]). Two more, secondary crematory deposits were placed over the burned dais (Kuttruff et al. 2004). So, at Frenchman’s Bend and Monte Sano, some mounds were placed directly over torn-down wooden structures of ritual significance. Extensive testing and coring in other Middle Archaic mounds (n = 18), however, has not turned up further evidence of cremation or other funerary rites. We suspect that mound use was a local affair.

A Brief History of Poverty Point

Terminal Archaic Poverty Point spread over 500 hectares and included a half-dozen mounds and platforms (one over 21 meters tall), six concentric half rings enclosing a 14-hectare semicircular plaza, and unbounded barrios just beyond the rings (fig. 11.9). The rings are 1–2 meters high and about 20 meters wide. Except for a 60-meter space between the interior pair of rings and the outer rings, they stand 45 meters apart from crest to crest and stretch for a combined length of 18–21 kilometers. Rings are partitioned into six precincts by bisecting aisles, which radiate from
Poverty Point was designed primarily as open spaces linked to elevated buildings in a precisely laid-out model of the cosmos and ritual time (Clark 2004b; Patten 2007; Sassaman and Heckenberger 2004). The radiocarbon record is too imprecise to reveal a detailed construction history (Connolly 2006; Kidder 2007), but building was steady and swift, beginning sometime after 1650 BC and concluding before 1300 BC. The same artifact assemblages and styles found in deposits below the rings are present in deposits on top of them. Ring construction started with the innermost ring and finished with the outermost ring abutting the foot of the cruciform mound.

Mound construction histories are obscure. Most were built in stages (Ford and Webb 1956:35–38; Gibson 1990:219; Kidder, Ortman, and Allen 2004:98, 106–7). The great cruciform Mound A contains 238,000 cubic meters of fill (Kidder 2007) but has a simple structure. The platform section was built in a single stage, and the stepped, steep-sided arm was raised in another (Ortman 2005). Motley Mound, the other giant platform at the site, was erected in a single stage (Saunders 2003:91). The principal alignments show that these towering mounds were oriented perpendicular to one another, thus constituting a complementary pair.

Mound use is poorly understood, but we do know that they were not facilities for interring the dead. Other functions cannot be discounted or confirmed, because the mounds are notoriously devoid of artifacts and features. Dunbar Mound is the sole exception. This low, two-tiered mound consists of a stratified series of organically enriched, artifact-strewn floors with pits and hearths and evidence of sturdy wall posts (Gibson 2000:88; Ortman 2005). Unusual amounts of body-paint materials found on several of the floors imply that the platform supported elite residences or sacred buildings where ritual materials were housed or used.

The rings, too, were formal architecture, but unlike the tall mounds, they furnished well-drained foundations for homes and domestic activities. Bisecting aisles facilitated pedestrian traffic. Though the rings were private and secular, we suspect that they were also tied to the same cosmological design that dictated mound layout. The shape, number, orientation, and arrangement of these rings instantiated concepts of magical protection and spirituality (Gibson 2000:185–86). The rings also marked and sorted social differences. The two innermost rings are

Figure 11.9. Greater Poverty Point.
higher than the outer four and are separated by a wider gap. They had pride of place and accommodated fewer people—dual indicators of privilege.

Intrasite artifactual differences do not suggest the presence of subsidized craft specialists. Unfinished stone beads and plummetts have essentially the same inter-ring distribution as their finished forms, indicating their manufacture in the same places they were used: producers were consumers. Differences in consumption involve artifact styles and raw materials rather than unequal access to kinds of goods. For example, there are more narrow-necked projectile points (of imported gray flint) in the northern ring segments and more broad-necked points (of local chert pebbles) in southern segments. Other artifacts mirror this pattern, thus suggesting some dualistic organization at Poverty Point, as postulated for Real Alto.

The number of items produced at Poverty Point was enormous, revealing that during the transition to town living the Tamaroa engaged in a host of new technological ventures and venues, both among themselves and with outsiders (Gibson 2007; cf. Sassaman 2005). Poverty Point material culture appears eminently practical and nonexclusive. Northern gray flint, a long-distance import, was used only to make hoes and narrow-necked projectile points, indicating that everyday utility had more to do with accessibility than it did with social status. The Tamaroa enjoyed equal access to imported rock, and such openness accords well with a group ethos.

The Tamaroa built and lived at Poverty Point and other villages and camps along the eastern edge of the Macon Ridge and adjoining Tensas swamp. At least four residential barrios lie immediately outside Poverty Point’s rings. In addition, there are seventeen known refuse concentrations and nine other spots with distinctive Poverty Point artifacts or exotic raw materials within 3.5 kilometers of the rings (see fig. 11.9). So far, only one refuse accumulation among them appears to mark a former field camp. We do not know whether all residential zones were occupied at the same time, but we suspect that they were.

Beyond this residential periphery were nearly three dozen additional components, including field camps and at least three villages. Camps were located along the edge of Macon Ridge, in the poorly drained uplands west of Poverty Point, and along Joes Bayou in the Tensas swamp (see fig. 11.8). Projectile points dominate camp assemblages, and baked clay briquettes (Poverty Point Objects, or PPOs) dominate residential contexts. All three known swamp villages are on Joes Bayou. Swamp camps and villages have relatively more plummetts, hoes, and hoe sharpening flakes than do their counterparts on Macon Ridge, while upland camps have more points, an indication of differing economic pursuits: fishing and digging roots in the swamps and hunting on Macon Ridge.

This upland versus lowland functional differentiation suggests that the domestic economy was logistically organized and that the dry woods, swamps, and lakes must have been teeming with folks coming and going between their homes and food patches. Outside of Greater Poverty Point’s core was a vacant zone two to three kilometers wide; it is devoid of artifacts. Next came a zone, dominated by field camps, which reached all the way to the outer edges of the community (see fig. 11.9). In other environments, food storage ordinarily accompanies logistical mobility, but at Poverty Point, storage was rendered unessential by an all-weather food-on-demand economy (Gibson 2006).

**Subsistence and Town Development**

The fossilized labor on display at Poverty Point has always been seen as an indicator of many mouths that had to be fed. As with Real Alto, scholars presumed that population imperatives implicated productive corn agriculture (Ford and Webb 1956). Decades of excavations have shown that the Tamaroa were fisher-hunter-gatherers, not corn farmers. They collected squash, but an inedible wild variety used only for containers (Ward 1998). Even starchy-oily seedings annuals, which were important in midwestern Archaic economies, appear to have been inconsequential. Depending on time and place, the food quest focused on fishing, digging aquatic roots, collecting nuts and acorns, and hunting (Cummings 2005; Gibson 2000; Jackson 1991; Ward 1998).

Residue analysis of a sample of PPOs from Poverty Point shows that starch from lotus (*Nelumbo sp.*) roots was prevalent on more than half the sample (n = 7/13), followed by starches from catail and other aquatic plants (Cummings 2005:183–84). Pollen taken from the same objects was from wetland plants but not culitgens.

The lack of a fine-grained chronology hinders our ability to monitor precise changes in subsistence practices at Poverty Point, but
intensification certainly occurred. It represented an involution of traditional practices rather than a shift in food targets or strategies. Intensification in food harvesting was driven by modifications of technology and labor organization. Older mobility-based technologies were retooled or replaced as the economy grew more logistical and less dependent on residential moves. All-weather fishing gear (plummets, lines on nets) and big durable hoes opened swamp exploitation as nothing had done before.

In summary, the Tamaroha accomplished their extraordinary engineering feats without the caloric benefits of corn. This finding is congruent with the pattern noted for the Valdivians and the Mokaya. Construction of their towns also had little to do with corn agriculture or surpluses. One must search for other conditions that enabled the rise of the first villages and towns. Wild or cultivated roots may have been significant in the evolution of all three towns, but this remains to be verified. The only common denominator of their subsistence economies that we see is reliance on aquatic resources.

Comparing First Towns

The first towns featured here share many formal and developmental similarities. The question is whether these were similar responses to common problems accompanying village living. The three towns were disproportionately large for their times and regions and allow us to address the village transition from the perspective of its most anomalous cases. Towns were architecturally and organizationally more complex than all other villages in their regions. Each town described here featured structural complementaries between pairs of major buildings, as evident in their forms, sizes, orientations, relative placements, and (presumably) the activities carried out in them. Each town was also the only one to develop in its macroregion. Why other villages did not become towns is a question deserving future study. In our analysis, we presume that each town developed without knowledge of the others.

Our comparison of towns is fundamentally a proxy measure of the peoples who built them—their practices, communal decisions, and histories. These original villagers possessed standard Neolithic technology of polished stone axes or hoes, ceramic vessels and human figurines, stone vessels, chipped stone tools, cordage and textiles, fire, pole-and-thatch houses, hunting dogs, and so forth. These basic tools and technologies were so widely shared across the Americas, however, that their presence in first towns lacks explanatory punch. Most villagers had access to these things. At best, Neolithic technology would have been a necessary but insufficient condition for village and town development. Significant innovations, such as the invention of plummets and improved fish nets at Poverty Point, are a different matter; they made a significant difference in its history. We currently do not know of any technological innovations of this magnitude for Real Alto or Paso de la Amada.

The three towns arose from small villages or seasonal camps in environments with disparate resource rosters and climates. Their builders practiced mixed subsistence economies keyed to the frequency and local periodicities of natural and/or tended resources. Valdivians resided at Real Alto for over a millennium as part-time farmers before they remade their village into a town. In contrast, the Mokaya and Tamaroha were Archaic collectors who barely had time to adopt village living before they started building their towns. As important as settling down may have been in these two cases, sedentism fails as a universal explanation for town development, as evident in Real Alto’s long windup and in the thousands of other early American villages that never became towns, as described in the other chapters of this volume.

One factor always to consider is that town development could relate to the diffusion of knowledge or from contact with previous town dwellers. This could have been a factor with the Mokaya and Tamaroha but not the Valdivians; they clearly started independently, or essentially so. However, all three peoples likely grew up hearing stories of ancient mound builders. The Tamaroha knew of nearby Middle Archaic mounds; the Valdivians knew of preceramic centers to the south in Peru; and the Mokaya would have remembered the large mounds built centuries earlier in the adjacent lagoon. Local knowledge and material memory of mound building were available for each group without recourse to foreign intervention, but these visual testimonies and lore had been around for generations before the three villages transformed themselves into towns. Traditional knowledge concerned mounds and villages, not towns, so even given some local precedents, novel elements
were involved in the development of the first towns. Why were they built when and where they were?

Traditional answers to this compound question proposed staple corn as a sufficient condition for town development. As the three reviewed cases demonstrate, however, corn was an unnecessary and insufficient condition. The same can be said of all candidate cultigens. The stunning fact that the Tamarah did not cultivate edible plants eliminates any variant of agriculture or horticulture as a universal cause for the evolution of first towns. On a case-by-case basis, however, agriculture remains in play as an idiosyncratic condition for explaining first towns as novel events rather than as consequences of human ecology. Agriculture of some sort, even corn agriculture, may very well have been a necessary but insufficient condition for the growth of Real Alto and Paso de la Amada.

Similarities among cases are as striking as their differences. The three towns developed along ecotones and in warm lowland environments adjacent to wetlands and swamp and/or estuarine resources. The Valdivians, Mokaya, and Tamarah both dined on deer, catfish, turtles, alligators, and probably local roots, nuts, and fruits. These were all canoe cultures reliant on net fishing. The Valdivians possessed watercraft capable of open sea travel. Rather than look to agriculture, we should weigh the benefits of efficient fishing as a proximate cause of town development.

One cannot contemplate the history of Poverty Point without considering long-distance exchange as a probable cause of its development (Gibson 2007; cf. Sassaman 2005). As with other possible causes, what may have been an enabling condition for one case was not for another. Extraregional exchange of valued stone and minerals predated the founding of Poverty Point and Paso de la Amada, and even livelier trade took place during the time of their greatest growth. Real Alto, in contrast, shows little evidence of significant long-distance trade until centuries after it had become a town. The same pattern holds for specially crafted items for exchange. Of course, many goods may have been perishables, so we cannot dismiss altogether the potential significance of trade in ephemeral valuables in town development.

We lack sufficient data to make credible comparisons of organizational features among townsfolk. The changes in houses and village households documented for Real Alto in its pre-town phase are remark-

able and show the promise of careful household archaeology. That Archaic dwellings were small and makeshift in each of the three regions, and later dwellings in towns larger and more substantial, comes as no revelation. But the fact that there is so little variation in dwelling sizes at Real Alto is. In contrast, houses at Paso de la Amada broadcast clear differences in size, elevation, position, and materials that related to rank differences. Both Real Alto and Poverty Point have been interpreted as more communal, with the absence of ostentatious differences among residences communicating a group ethos of household equality. An obvious caveat is appropriate in this regard. Both these towns had special-function buildings (the Fiesta House at Real Alto; Dunbar Mound and Sarah's Mount at Poverty Point) that are interpreted as ritual architecture, but in both cases a strong counterargument can be made that these buildings were elaborate dwellings of town leaders. If these were residences, then status differences would have been blatant in domestic architecture at both sites.

Whatever might prove to have been the case for these buildings, the organization and zoning of towns belies assumptions of parity among dwellers of same-size dwellings. First towns promoted centric notions of space, direction, and hallowed ground, all issues of real estate and value. Unlike the earlier villages from which they sprang, towns were about addresses. Some residents lived closer to important buildings and ceremonial grounds than did others. Surely, status differences were involved in such arrangements (see Heckenberger 2005). Who lived near (or on) the Charnel Mound or Fiesta Mound at Real Alto during Valdivia 3 times? Who lived next to Mound A or on the innermost ring of the plaza at Poverty Point? Construction of mounds and special buildings transformed the value and meaning of location and, consequently, the benefits of living in special places.

First towns were population sinks and population dependent, meaning that available resources (human and nonhuman) and their elasticity would have been critical factors in town emergence. We consider the periodicity and productivity of local environments (per available technology and subsistence practices) as necessary but insufficient conditions for town development. The diversity of productive but generally available resources was an enabling condition. Control of critical resources by a few at the expense of the many, however, was an unlikely factor given
the ecosystems involved. The sites in question do not exhibit extraordinary locational advantages as far as economic pursuits are concerned. Another three hundred meters or three kilometers one way or another in location would have made little difference to town residents in terms of subsistence targets and possibilities. But if places for future towns were chosen for their relation to landforms and celestial phenomena, precise locations could have been critical. The three towns show a concern for sitewide alignments of buildings and spaces, some even extending beyond town limits. Beyond the issue of place within a region is the question of the region itself. Why one region rather than another?

One shared attribute of first towns is so obvious as to be virtually invisible. Each began as a village or seasonal camp and became a town. In each case, building a town was a phenomenal event requiring decision making and consensual cooperation among participating agents. As new institutions, towns required lifestyle changes in daily practices and routines. As is especially clear at Real Alto and Poverty Point, towns consisted of more-permanent and more-proximate residences than had been known before, packed neighborhoods and watchful eyes, problems of garbage disposal (and perhaps annoying neighbors), formally and functionally differentiated space, and envalued space and hallowed ground. Different places around town must have been valued differently. Equally important would have been the distinctions between town and village, center and outskirts, boundaries and beyond. Towns were unique places where special events, rituals, and even entertainments took place. At their founding, towns would have been desirable places to live.

Their allure did not last. First towns were eventually abandoned or transformed back into villages. For Poverty Point, its demise around 1300 BC or slightly later was not followed by any comparable developments for a half millennium (see chapter 6, this volume). Real Alto outgrew its town era and became a small ceremonial center until eventually being vacated by 1800 BC. The Valdivians who walked away from this place built other chiefdom centers in regions to the north and south (Tykot and Staller 2002; Zeidler and Pearsall 1994), but these did not last long. For its part, Paso de la Amada diminished in size and regional dominance after its era of mound building. It was abandoned at 1300 BC, probably under duress (Clark 2007).

The size and magnificence of these first towns represented clear departures from previous settlements in their regions. More people filed into tighter spaces, ones designed and built to attract attention. Much of the explanatory frustration with Poverty Point and Real Alto is that they do not fit neatly into schemas of evolutionary development or organizational complexity. If towns were a developmental advance over villages, does this mean that they were seats of rank or chiefdom societies? Differential status and power were clearly important at all these towns. Paso de la Amada conforms to the expectations of chiefdom development, but we are unsure about the others. They may have been headed by groups of leaders rather than individual chiefs.

From Village to Town

The quest for universal evolutionary causes comes from the heyday of processualism when scholars explained sociopolitical evolution as a consequence of population pressure, warfare, trade, technological or climatic change, or some other prime mover. None of these potential prime movers explains first towns. They focus on the wrong scale. Causes strive for universality by excluding human agents, culture, and history, but these idiosyncratic particulars were all critical in the developments of concern here. Peoples living in real time and space built and occupied villages and towns but heretofore have not been part of their explanation.

If one conceives of towns as complex social entities with myriad agents having vested interests and differing levels of empowerment, rather than as monolithic, personified agents in and of themselves, then explanation becomes messy. Who made and carried out the pivotal decisions that transformed seminomadic groups into villagers and, later, some select villages into towns? What decisions were made, and how were they carried out? From the standpoints of history and culture, first towns resulted from actions of situated agents. Considering towns as outcomes of local history rather than as determined consequences of universal causes increases the likelihood of eventually understanding their origins. What actions, events, pressures, or natural forces caused, enabled, or hindered the development of towns from their parent villages?

Before addressing these questions, it is appropriate to call attention to other significant similarities of towns. Towns represented unprecedented
spatial, institutional, and cognitive arrangements; they were not just gussied-up villages. As emergent phenomena springing from familiar cultural constraints and village practices, towns were something new under the sun. They represented new places to live, new ways to live together, and visible symbols of novel physical and institutional arrangements. Thus far, we have represented towns as physical facilities rather than as social and political institutions. The people who constructed these towns presumably did so without a clear idea of attendant social consequences. They had never visited or heard of towns. It follows that first towns ensued from actions directed to other ends, goals that made sense in the life worlds of egalitarian villagers. The villagers involved were not trying to create a town—just a more magnificent sacred village, something they understood from the inside out. Why they were doing so, and when and how things got out of hand, are questions for history.

Parallels in developmental circumstances and novel characteristics of the three towns under scrutiny establish the likelihood of the following observations and inferences.

1. First towns were singular developments; nothing comparable in scale or grandeur had been known previously in their regions.
2. Prior to their transformation into towns, the settlements involved were similar to others in their regions in size and access to technology and local resources. Differences among settlements and groups were organic rather than hierarchical. Real Alto and Paso de la Amada both developed from villages, but no permanent village is known to have preceded Poverty Point.
3. First towns developed within productive lowland environments with diverse seasonal resources. Wild wetland resources were particularly important, and cultivated comestibles were significant to an unknown degree for Real Alto and Paso de la Amada, but not for Poverty Point.
4. First towns, as physical entities, were constructed through the planned, coordinated, and supervised labor of their inhabitants. This required engineering and social skills as well as foodstuffs commensurate with the size of the labor pool that had to be fed for the duration of the project.
5. Novel properties of planned towns included zoned and concentric spaces demarcated by the construction of plazas, mounds, special buildings, and residential neighborhoods.
6. Towns housed populations of about one thousand to two thousand souls, the equivalent of ten to forty villages. The nucleation of so many villagers in such tightly zoned space required institutional arrangements to preserve social harmony.
7. Towns arose in regional settings of dispersed population and low population densities. For the three cases considered, only Real Alto exhibits clear evidence of the Neolithic Demographic Transition (see chapters 1–3, this volume). That the town of Real Alto represents an NDT from its Vegas period antecedents may indicate that a premium was placed on settlement nucleation, fertility, and larger family and household sizes.
8. First towns grew at the expense of neighboring villages and populations; people who moved to town came from the surrounding countryside. Thus, town development was a consequence of social intercourse among peer villages in a zero-sum game. One's population gain was another's loss.
9. Regional interaction was consequential and possibly competitive, with first towns growing much larger than their neighbors. What probably began as co-participation among peers developed into disparities memorialized in special architecture and an aggregated population in town.
10. Distinctions between towns and villages would have been obvious. Modified perceptions and meanings of both village and town living must have accompanied the birth of towns. The new towns and their special features would have been objects of perception, conversation, and contemplation.
11. The first towns considered here lasted for three to five centuries, so institutional arrangements for promoting such large communities were effective for many generations.
12. Even after the demise of first towns, aspects of their form, functioning, and history would have been remembered and recounted in local lore.

The most obvious change in regional landscapes with the rise of first towns was the lopsided distribution of people. As a hypothesis for
future research, we propose that people were the desired resource and object of competition among early villages. We further propose that what was being contested was access to some intrinsic property of persons, such as labor power, reproductive power (future labor?), or other capacities of being.

Concerns for identifying credible agents and actions bring us to shared features of first towns that are not entailed in our definition of them: towns were planned spaces constructed over time by moving dirt for public works with subsidized, volunteer labor. Characteristics of first towns not embryonic in their antecedent villages include the scale and form of ordered space. Each town was a bit of heaven on earth, a constructed cosmogram of center and four quarters, of high and low spaces, of open and cloistered places. Earlier villages were similarly organized around sacred space but not at this scale or with unavoidable inequities in residential loci. In antecedent villages, as seen at Real Alto, households had a place on the plaza perimeter and faced each other across the way. In towns with row or ridge houses, such parity of position became impossible (for a related case, see chapter 12, this volume).

However common or well understood local cultural models of the cosmos may have been in early Real Alto, Paso de la Amada, or Poverty Point, we suspect that only agents with special knowledge and talents could have conceived the public works projects involved in magnifying these villages and also had the political prerogative and moxie to coax others to cooperate in such enterprises. Towns were built around and over earlier villages, so most adult villagers would have had to be on board for the envisioned modifications to their village. Basic principles of engineering, construction, and design were involved, as well as aspects of the sacred, such as ritual counts, direction, color, alignments to local and heavenly phenomena, connections to the ancestors, and so forth. The construction of town earthworks required imagination, planning, practical and esoteric knowledge, social connections, and management skills.

Town construction was labor dependent, and this means that it was ultimately resource dependent. Resource dependency was also time-sensitive because building would have been constrained by the availability of provisions for workers. The first step toward building a town may well have been the logistical necessity of enticing more laborers into villages undergoing makeovers. Additional labor would also have been needed to collect disposable surpluses to provision the builders. The degree to which this was necessary depended on the scale of the enterprise, with Poverty Point being the most labor consuming of the cases considered here. Labor requirements at Real Alto and Paso de la Amada were modest in comparison.

We propose that towns began as preconceived projects to enlarge and extend village sacred space, and this required volunteer labor. Each project took time and effort and became memorialized in monumental earthworks and summit buildings. Considerable satisfaction in the work of one's hands would have been involved as master plans began to take physical form. Town projects would have been sources of wonderment and pride. Perceptions of place would have deepened day to day as the plazas, mounds, and crowning buildings took final form. Also likely is that some of the temporary arrangements of work parties and allocations of work assignments among participating groups provided a basis for new institutional arrangements. The very acts of proposing new construction and undertaking it with temporary work crews would have led to changed perceptions and to modified social practices. Participants are likely to have gotten caught up in the event, such that the earthwork building "took on a life of its own." Not all activities and their consequences involved in building a town could have been foreseen, so there had to be accommodations to the unfolding activity along the way.

This raises a final point. We have discussed towns as consequences, but we need to see them also as means—cause rather than effect. Poverty Point is a case in point. Its year-to-year construction was the most singular building activity that had taken place in North America up to that time. The very activity of building earthen skyscrapers would have been an effective device for recruiting people to the place. These first towns went through critical periods of becoming in which perceptions and expectations for all involved changed. Town residents clearly derived benefits from living there, and they shared responsibilities for maintaining public spaces and structures. Plazas, mounds, and shrines were built for avowed purposes beneficial to groups—or, in a word, services. Promised services may have been critical for motivating workers to build their towns in the first instance and in maintaining them
for centuries afterwards. We presume that important ritual, public, and entertainment activities took place in towns and that these activities were critical in the creation, maintenance, and longevity of towns. Ritual appears to have been a common concern, as described for most villages featured in this book.

The continual upkeep of platforms, ritual structures, and plazas would also have been important for the long life of each town. As finished physical and social realities, first towns would have been their own best advertisements, standing for stability, power, growth, well-being, and possibly fecundity. Indeed, the recruiting prowess of their mere being may have been such that they ran the danger of attracting more residents than the local larder and rates of food spoilage could support. In this regard, it is interesting that in the two cases for which we have reasonable chronological control (Real Alto and Paso de la Amada), after completion of the physical constructions and the initial attraction of residents, town population waned over the next centuries until the town became just another regional center distinguished from others by its relic public works and glorious past. We suspect that Poverty Point followed a trajectory similar to that inferred for Real Alto, in which, after the town achieved final form, its novelty eventually faded and the place was abandoned. No other center replaced Poverty Point for centuries (see chapter 9, this volume).

The factors we have considered as possible enabling conditions for the emergence of first towns turn out to be generic, insufficient conditions that may have functioned as developmental thresholds rather than as catalysts. None of the proposed causes for the emergence of individual towns explains all three cases. Although different kinds of information are available for each town, data are sufficiently robust to indicate that corn agriculture, trade, warfare, and population pressure were neither necessary nor sufficient for town evolution. It may well be that the towns considered here shared no common cause or determinant conditions. First towns were created at times and in places where there were few people around, so population pressure and warfare were not factors in their development. But low population densities may have been a pressing concern that led some people to persuade others to move into their communities—for all the well-worn reasons of finding marriage mates, cooperative work possibilities, labor sharing, and general conviviality. The initial, dispersed population needed to exceed an interactional minimum to make congregation even feasible. Of course, the local environment had to be such that incoming people could be fed over the long haul. These are what Barbara Price (1984:225) calls "intensifiable habitats."

Our comparative study was meant to test proposed explanations of early town development in the Americas. We have found all explanations deficient, but we have also found something else. The developmental histories of the three towns indicate that they arose in somewhat similar environments under analogous technological and demographic conditions. We argue that certain kinds of agents familiar with village living were also another necessary and shared feature. The three towns described here were also the earliest villages in their regions in their millennium, so some founder effect could also have been involved in their rise to prominence. Our essay has been a running commentary against corn agriculture and population pressure as catalysts. It may well be that first towns arose when and where they did only because corn agriculture was not yet significant and because there were not enough people in these regions when the first villages were created.

To conclude, we see the following shared initial conditions in the histories of America's pristine towns:

1. Sedentary or semisedentary settlements;
2. Neolithic technology;
3. Mixed economies of hunting, fishing, gathering, and sometimes horticulture;
4. Access to wetland resources throughout the year, especially fish and probably tubers;
5. Absence of productive corn agriculture;
6. Goldilock's population densities, neither too high nor too low but "just right";
7. Leaders with a plan to rebuild their village; and
8. Actual construction of monumental plaza centers.

This last condition may appear circular. Of course, towns result from building towns. What we propose implicates the dual meaning of town as place and as institution. The physical act of mound and plaza construction led to new institutions for promoting and maintaining social
harmony and a new sense of being in the world. In short, the construction of towns was a process of becoming.

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Notes

1. We propose to name the people of Poverty Point the Tamaroh to liberate them from the burden of an ignominious label derived from a moment of historical levity. Poverty Point plantation, from which the fabulous site got its name, seems to have gotten caught up in a playful game of denigrating nominalism among planters; neighboring plantations were called Hard Luck and No Luck. In the 1970s, when Poverty Point was being commissioned a state historic site and commemorative area, Louisiana legislators toyed with changing its name to something more appealing to tourists and more uplifting to the state's image. The notion never made it out of committee because of unified resistance from local residents and archaeologists who had always known Poverty Point by its antebellum label. Besides, fixing Louisiana's image required more than name substitution. Here we propose to do, in part, what the state's legislative body could not by providing a name for the site's ancient inhabitants that is separate from the locale name. Space limitations here preclude discussion of the analytical reasons for changing the name. Rather, we put on record our reasons for the particular name.

Choosing a name proved as difficult as christening a new grandson. We followed several simple steps so that the label would be analytically and descriptively useful and worthy of the peoples it identifies. Tunican is thought to have been the language of Poverty Point's inhabitants (Gibson 2000a; Granberry 1999), so we deemed it appropriate to derive our name from this language. Gibson proposed possible names based on archaeological attributes of these peoples, such as "People altogether Red," "People with Rocks," "People of the Swamp," and "People of the Mound": linguist Julian Granberry (personal communication, 2003), who was fundamental in this effort, translated these phrases into Tunican. All proposed names turned out in translation either too long, too hard to pronounce, or too reminiscent of Kathleen O'Neal Gear and W. Michael Gear's popular novels (e.g., Gear and Gear 2003). Clark proposed that the people be named after "water-mountain," a term Mesoamericans used for their cities. The Aztecs considered their pyramids as mountains and believed that there was a cave with sacred water beneath them; the first people emerged from this cave to populate the earth. This belief conforms to a widespread Muskogean origin myth (Halbert 1899). We passed the proposal of "People of Cave Mountain" to Granberry, and he explained that the Tunican word for mountain, *tama*, also meant mound and that rohu meant cave, but only when used in conjunction with *tama*, as in the word *Tamarohu*. Thus we had our name—one that makes obvious reference to these peoples as sophisticated mound builders and first inhabitants. The name is culturally, archaeologically, and poetically appropriate and liberates rather than knots the tongue.

2. Many large, preceramic centers are known for Peru (see Donnan 1985; Quilter 1991); they date to the last part of the Valdivia sequence (2600-2000 BC), after the emergence of Real Alto as a town. Possible relationships among these early towns and Real Alto have not been determined. The earliest mounds known for South America are just over five hundred kilometers down the coast from Real Alto in the Zaña Valley of northern Peru. A pair of low mounds dating to 5700-4700 BC have been reported for the Cementerio de Nanchoc (Dillehay and Netherly 1983; Dillehay, Netherly, and Rossen 1989; Dillehay, Rossen, and Netherly 1997), so the concept of building paired mounds was known for coastal societies long before the founding of Real Alto. To our knowledge, however, Real Alto was the first center with mounds associated with a formal plaza. The large sites with stone-faced mounds of the Peruvian preceramic followed several centuries later. The earliest and largest are known for the Supe Valley of the central Peruvian coast. Among these, the largest and earliest is Caral-Supe; the formal mound center is over 65 hectares and dates to 2600 BC. Its largest mound is 18 meters tall, measures 160 by 150 meters at the base, and has an exterior of cut stone (see Shady and Leyva 2003; Shady, Haas, and Creamer 2001). Caral-Supe is a good candidate for an early town, but it may have been more than that: a center of a nascent state (Shady 2002).