

THE URBAN TRADITION AMONG NATIVE AMERICANS

by
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Urbanization is an extremely important concept because virtually all European writers imagine that "civilization" arises only with cities and, indeed, the very word "civilization" is derived from the Latin civitat and civitas, citizenship, state, and, in particular, the City of Rome, which in turn is from civis, a citizen. The word "city" as well as Castellano ciudad is derived similarly.

A people who do not have cities or urban centers will ordinarily not be viewed as being "civilized" by eurocentric writers and, indeed, the dualistic split between "nature" and "culture" in much of eurocentric thinking is also a "country" versus "city" split as I discuss in another article.¹

Most European writers picture Native Americans as peoples living in the countryside, in jungles, forests, the plains/pampas, or in small villages surrounded by mountains as in the Andes. Naturally then it becomes problematic for them when they discover that huge numbers of First Nations People reside today in cities such as Buenos Aires, Lima, La Paz, Quito, Guatemala City, Mexico City, Toronto, Denver, Chicago, Los Angeles, San Francisco-Oakland, and so on. What many non-Native writers do not realize is that the First Americans have, in fact, gone through periods of de-urbanization and re-urbanization on various occasions in their history and that urban life has long been a major aspect of American life from ancient times.

In fact, it may well be that the Americas witnessed a greater process of urban development in pre-1500 CE times than did any other continent, with the growth of the most elaborate planned cities found anywhere. In fact, the evidence seems to indicate that from about 1600-1700 BC. until the 1519-1520 CE

¹I am completing an article on nature and culture at the present time.

period the largest cities in the world were often located in the Americas rather than in Asia, Africa, or Europe.

Before discussing ancient urbanization, however, we should say something about what constitutes an urb (Latino for city) or odena (Otchipwe for town or city; otana in Powhatan). The archaeologist John H. Rowe, in discussing ancient urbanization in Peru, states that

...an urban settlement is an area of human habitation in which dwellings are grouped closely together. The dwellings must be close enough to leave insufficient space between them for subsistence farming, although... gardens may be present.

Rowe distinguishes several kinds of urban settlements, including the pueblo where all of the residents are engaged in subsistence activities at least part of the time and the city where some residents are engaged in other activities such as manufacturing, trade, service, administration, defense, crafts, etc. He also differentiates between cities and pueblos where all of the people are gathered in the settlement and the surrounding countryside is basically empty, and cities or pueblos with a scattered rural population around them (somewhat like ceremonial or market centers can exist with rural settlements scattered around them).

Rowe proposes to refer to urban settlements with less than 2,000 inhabitants as "small" and to those with more than 2,000 as "large." (The U.S. census regards any place with 2,500 or more persons as being urban).² Of course, I would add that the density of surrounding areas must be considered also, since one might have a series of hamlets separated by fields or forest but which together form a close-knit economic and social unity. In any case, American cities quite frequently far exceed the number of 2,000 persons, and metropolitan areas (such as around Goleta in Santa Barbara County, California) could have many pueblos of 1,000 each in a rather small area.

We can also analyze urbs in other ways. Let us note the following kinds: (1) multi-ethnic (multi-tribal, multi-lingual, multi-racial) urbs contrasted with single-ethnic urbs; (2) urbs organized in calpulli-style kinship neighborhoods contrasted with cities with dispersed kinship; (3) metropolitan areas which

² John H. Rowe, "Urban Settlements in Ancient Peru" in Daniel R. Gross, ed., Peoples and Cultures of Native South America (New York: Doubleday, 1973), 51-4.

include areas of countryside and villages or barrios associated intimately with a ceremonial or market center (to be discussed below) as contrasted with distinctly separated urban-rural zones; (4) mega-cities such as Chan Chan or Tenochtitlan as contrasted with smaller cities.

It is very possible that many ancient American cities were organized into calpulli-like kinship-based divisions. Calpulli is the Nahuatl word for a semi-self-governing neighborhood or unit comprised of related persons, i.e., a tribe, band or other kinship group. It also would appear that many of the greatest urbs in America were multi-lingual, that is, that they included a very diverse and heterogeneous population. Even in areas where one language family predominated over a wide area we can readily imagine that many different dialects would be spoken in the urbs as well as occasional unrelated tongues (such as Nahuatl in the Maya area). This is made very clear by the urban traditions of Mexico and Guatemala, where groups speaking various Maya, Mixe-Zoque, Nahuatl, and other languages are frequently mentioned as living in the same city or region or as migrating together into some other group's territory, as in the Gulf of Mexico coastal region known anciently as Tollan or Tulapan (Place of Reeds). Incidentally, it is in this region of Olmeca-Tulapan that the oldest date of the Mesoamerican calendar seems to be grounded, a date of -3113 BC. or 3114 BC. (August 11, 13, or 20 or September 8 according to the anthropological interpretation of the long count found on Maya monuments or March 20 as found in the Tepixic Annals). This date, incidentally, is probably related to the process of urbanization in the Tulapan region, perhaps marking the founding of a complex or community there or at the very least marking the period when maize agriculture provided the dietary basis for intensive population concentrations. On the other hand, a great astronomical event could be referred to.

But before discussing the period of year 1 AC (American Calendar), let me return for a moment to the classification of urban areas. One of the special characteristics of American life in such diverse regions as Peru, Mesoamerica, and the Mississippi Valley is the very early development of ceremonial centers, usually featuring mounds or pyramid-like structures. I interpret these mounds as being symbolical breasts of Mother Earth, especially when a structure is placed on top of the mound, as was usually the case. Such breasts would serve to link Americans spiritually with the nurturing power of Gahesina Haki (Mother Earth).

Many of these mounds become huge (as at Cahokia, Teotihuacan, Cholula, and Moche), rivaling the largest pyramids of the ancient Kemi (Egyptian) people. In any case, these ceremonial structures are not always surrounded by a dense civilian settlement (a city) but are often surrounded by farmlands, and unpopulated areas, in which small to medium towns or hamlets are located. It would appear that the ceremonial center and the dispersed settlements together form a unity, that is, that they are part of a single social unit which can be seen as being urban without being concentrated. Is that possible? Can we conceive of a large area with many small towns or hamlets working together to support a market center/ceremonial center/educational center ? Indeed we must, because otherwise we cannot explain the erection of such centers (with all of the immense amounts of labor involved) or their enlargement and management over hundreds of years.

We also must come up with a new term for that type of urban development, one which resembles some modern "garden cities" but which has at its hub a communal center with spiritual as well as secular purposes. I propose that we speak of a "heart network" or "heart circle" to describe a region where one finds a long-enduring association between many small communities and a spiritual "heart." Such a circle has many urban characteristics but it is what we might refer to as an ecological urbanism in which the productivity of the landscape is not marred by the intensive and continuous erection of streets and structures. Such heart circles may, indeed, reflect a profound wisdom and a benign socialist democracy designed to ensure an adequate protein base for all persons in the region, with so-called "wild" animals and "wild" trees and plants being preserved and protected from over-exploitation, while at the same time being harvested on a regular but respectful basis.

One of the problems for all early urbs is to insure that large concentrations of people can indeed obtain a balanced diet. Some scholars believe that some American cities collapsed because their populations became too large and concentrated to allow for an adequate food supply, and, in particular, a balanced one with sufficient non-maize sources of protein.

In any event, not all American urbs evolved as heart circles. In fact, there is an immense variety among early American towns, in part, because of a great variety of geographical settings. Great cities sometimes developed without horticulture and some developed in pre-ceramic times, but a prior necessity is the development of a high population density made possible by an adequate

food supply as well as historical factors. Marine environments sometimes provided sufficient food for population growth without horticulture, as among the Calusa of Florida, the Chumash of the Santa Barbara Channel, and some Pacific Northwest nations. Likewise the careful management of non-domesticated animals, plants and trees, as found with the eco-managing peoples of California, can lead to substantial population growth. Nonetheless, the evolution of agriculture was a major step towards urbanization in many regions from the Mississippi Valley southwards.

Seeds of cultivated squash found in a Oaxaca cave have been dated at 9,975 b.p. (before the present). By 8,000 b.p. the squash rind had the orange color of modern pumpkins (*cucurbita pepo*). In any case, American horticultural science has been pushed back to almost 10,000 years ago, a date comparable to the origins of domestication in Africa and Asia.³ In the eastern area of the United States the domestication of cucurbits, sunflowers and other plants (except maize) goes back to about 4,500 BC. Maize was domesticated in Mexico by about 5,000 BC. and spread into the southwest U.S. by 2,000-1,500 BC. By 700-900 CE the widespread production of maize began to revolutionize Mississippi Valley life-ways.⁴ In coastal Peru the cultivation of cotton and other crops may have begun as early as 3,500 BC., contributing along with marine resources to urban developments after 2,000 BC. when maize culture becomes evident.⁵ The continued study of plants by Native People illustrates their intellectual vitality during these many millennia, since at least some 150 plants were adapted to horticulture in the Americas, in addition to the management and/or regular use of hundreds of unaltered species.

It is interesting that weaving with cotton seems to develop about the same time as ceramic manufacturing, but apparently in different regions. The earliest ceramics (thus far) are from the mouth of the Amazon, along the north coast of

³David Perlman, "Mexican Cave's 10,000 Year-Old Surprise," San Francisco Chronicle, May 9, 1997, A2. See also Michael Coe, Dean Snow and Elizabeth Benson, Atlas of Ancient America (New York: Facts On File, 1989) 89-90.

⁴James B. Griffin, "Comments on the Late Prehistoric Societies of the Southeast," in David H. Dye and Cheryl Anne Cox, eds., Towns and Temples Along the Mississippi (Tuscaloosa: Univ. of Alabama Press, 1990) 5-7.

⁵Peveril Meigs, "Peru's Coastal Deserts," Unesco Courier, March 1966, 14; Coe, Snow and Benson, op. cit., 178; Brian Fagan, "Maize, the Staff of Life," American Archaeology, 1(2) Summer 1997, 10-11.

Colombia, and from Valdivia, Ecuador, dating between 3,600 and 3,000 B. C. (and about the same time as fired clay objects were being produced in Louisiana). In Mexico bowls and jars of stone appear by 3,400-2,300 BC. and ceramics by 2,300-1,500 BC. A soapstone bowl industry developed in the southeast U.S. in the 3,000-1,000 BC. period, preceding ceramic bowls. Specialized manufacturing seems to have existed at Huaca (Waka) Prieta in Peru after 3,000 BC., where thousands of fabrics of cotton and other fibers have been found. ⁶

One thing that is really fascinating about America are the many shared developments from 4,000 BC. onward. For example, recent work has demonstrated that Louisiana is home to the earliest dated human-built mounds in the hemisphere, one complex (Watson Brake) being dated at 5400-5000 years ago with other sites yielding dates in the 3,500-4,000 BC. range. The Monte Sano mounds near Baton Rouge had a permanent structure and charcoal dating to c.3,500 BC. The Watson Brake complex forms a series of linked mounds, shaped like a donut around a central area. The people of these early mounds were fisher-folk as well as eco-managers of game, trees, and plants (or what some writers like to call "hunter-gatherers"). To the east are another complicated series of mounds (Poverty Point) dated to c.1,700 BC. or 1,500 BC., depending on the source. All of these mounds were pre-ceramic except for the numerous fired clay blocks noted above.⁷

The American determination to construct mounds or raised platforms and other ceremonial structures can also be seen in Mesoamerica and the Andean region, with mounds appearing along the Peruvian coast after 2,600 BC. and especially after 2,000 BC. Callejon de Huaylas near Huaricoto begins about 2,800 BC. and has thirteen ceremonial hearths of a type subsequently found elsewhere in the highlands of Peru. Aspero, a huge preceramic center by about 2,000 BC. has seven known mounds and six other structures. Work began there by 2,600 BC. and continued on for several hundreds of years.⁸

⁶Coe, Snow and Benson, *op. cit.*, 90, 177-8; "Atlanta's Earliest Industry," American Archaeology 1(2) Summer 1997, 24-5.

⁷The Archaeological Conservancy Newsletter, Fall 1996, 4-5. See also Martha Ann Rolingson, "The Toltec Mounds Site," in Bruce D. Smith, ed., The Mississippian Emergence (Washington: Smithsonian, 1990) 45.

⁸Coe, Snow and Benson, *op. cit.*, 173, 175, 177; Rowe, *op. cit.*, 54-5, 72.

In Mexico earthen constructions appear in the 1,200-900 BC. period in Olmeca-Tulapan (southern Vera Cruz-Tabasco) at San Lorenzo, a major ceremonial center located near the Rio Coatzacoalcos. There a mesa was artificially altered with large amounts of fill and ridges were constructed outward on three sides. But the major feature of this site are the huge basalt heads, eight of them, the largest weighing some twenty tons. The site is also very rich in Olmeca-type art works and figurines whose style has led to wild speculation on the part of European-American scholars. It is thought that San Lorenzo was destroyed in 900 BC. but the cultural tradition continued on at La Venta (below). Mounds or pyramids as such seem to appear after 900 BC., as at Cuicuilco near Mexico City where a circular pyramid was erected, 60 feet high and 370 feet in diameter, with four tiers, with four other structures nearby (all buried beneath a lava flow prior to discovery). About the same time the people called the Olmeca erected pyramids of clay in the region of Tollan or Tulapan, as at La Venta. There the Americans, in the 900-400 BC. period, built a giant pyramid which stood some 30 meters high, containing perhaps more than 200,000 cubic meters of fill. Estimates indicate that its construction required 800,000 man-days and a supporting population of at least 18,000⁹. In Oaxaca also the Zapotec (Binizá) people (People of the Clouds) began the construction of their great centers of Monte Alban and Mitla (c.800-500 BC.), while great Kaminaljuyú near Guatemala City evolved after 1,700 BC. eventually with several hundred great temple mounds and with some large clay temple mounds by 500 BC. at least. On the Pacific Coast at Izapa large numbers of earthen mounds were also built. This site was occupied from the 2,000-1,000 BC. period and reached its peak after 500 BC. Izapa is interesting because of its connections with the Olmeca area and also because, being on the Pacific, it could have had connections with South America.¹⁰

The eagerness of many Americans to devote huge amounts of labor to building "breasts" soon spread, after 800-500 BC., northward to the so-called Adena peoples of the Ohio Valley and vicinity. There immense numbers of

⁹Michael D. Coe, The Maya (New York: Praeger, 1966) 46; Frederick A. Peterson, Ancient Mexico (New York: Capricorn, 1962) 33; Coe, Snow and Benson, op. cit., 94-102.

¹⁰Howard La Fay, "The Maya, Children of Time," National Geographic 148 (6), Dec.1975, 733.; The Archaeological Conservancy Newsletter, Spring 1992, 6; Coe, The Maya, 47-8; Coe, Snow and Benson, op. cit., 100,102, 114.

mounds were constructed which were also used for burial purposes and thus they are known often as burial mounds. (A mound of this kind was excavated in Virginia, incidentally, by Thomas Jefferson). During this same period the earliest large Maya cities (Nakbe, 600-400 BC. and Tikal, a bit later) were the sites of platform and higher mounds. And far to the south at Qaluyu near Pucara in the Lake Titicaca region of Peru-Bolivia Americans were building a low mound several acres in size (1,000-500 BC.) with a later one reportedly shaped like a catfish, after 700 BC.¹¹

John Rowe would probably not regard the mound complexes or heart circles as being urban unless they were surrounded by a certain number of dense structures leaving no room for farming in between. But is this structural density really the key to urbanness? I must argue that the key to "urbanity" is not the presence of closely-spaced structures but rather the intimate interaction of substantial numbers of people in a given geographical space. In other words, urbanity is a form of associating (society or together-living) where communication and networking, as opposed to isolation, is the norm. I will also argue that mounds (as well as trading of goods, diffusion of art styles, spreading of technical knowledge) are strong evidence for communication and social interaction.

In any event, the early period of medium-size or small villages, coupled with common public works projects in the areas mentioned above (such as the mounds) , signified the gradual development of greater population densities and the concomitant expansion of agriculture and led to the development of cities along the lines envisioned by Rowe (but often of much greater size). Many European archaeologists also imagine that this period was accompanied by the development of non-democratic political systems (command systems) and by hierarchical social structures. They often use terms such as "chiefdom" to refer to political units and they see social hierarchy in every grave with gift offerings, just as every executed person becomes a human sacrifice, and so on. Basically, these are all projections from their own European and Middle Eastern historical experiences, projections which may have no validity at all for Americans.

¹¹Rowe, *op. cit.*, 56; *The Archaeological Conservancy Newsletter*, Winter 96/97, 3; C.W. Ceram, *The First American* (New York: Harcourt, Brace, Jovanovich, 1971) 212-219; Thomas H. Maugh, Jr., "New-Found Site in Jungle May Be First Maya City," *Los Angeles Times*, Nov. 14, 1989, A3I.

Knowing something about contemporary indigenous Americans would lead me to suspect that the mounds and other great works were constructed voluntarily by devoted persons whose spiritual values took precedence over other considerations. I would imagine the republics which constructed these ceremonial (and perhaps educational) centers as being large cooperative systems of together-living persons. But, of course, this is not the perspective of most of my colleagues of European background, who see incipient kingdoms, tribute-states, and empires in the heart circles, and who regard the development of hierarchy and oppression as necessary steps in the long bloody trail of becoming "civilized".

In any case, we can turn to the area of the Andes for the earliest large cities in the Americas, and especially to the coast where rich maritime resources coupled with trade led to population concentrations in narrow river valleys. After 3,000 BC. small urban settlements became very common, as at Huaca Prieta (cited above) in Chicama, where what are assumed to be "public buildings" have been identified. Rio Seco has two mounds about 4 meters high to create a raised substructure for an important building. By about 2,500 BC. there were towns with permanent buildings both along the coast and in the highlands, many of which have monumental architecture. The early structures were small, but by the 2,000-1,500 BC. period "some were enormous."

The site of Aspero is described as a "huge preceramic center by about 2,000 BC...." with seven mounds, as noted above. No population estimates are given for Aspero, but Las Haldas, north of Lima along the coast, is described as a very large city with perhaps 10,000 or more people. Its area covers a site of 2 kilometers by 1 kilometer and it features a complex and imposing temple structure with sunken circular courts. A date of 1,631 BC. has been obtained for Las Haldas. It was probably the largest city in the Americas at that time (1,700-1,400 BC.) and very possibly one of the largest in the world, outside of Kem (Egypt) or Mesopotamia.¹²

Another early waka (sacred site) was Chiquitanta (El Paraiso) at the mouth of the Chillan River, Peru. dating from 1,600 BC. It "is the largest preceramic complex of monumental architecture yet known in South America, with at least six mounds...." The two largest mounds are over 300 meters long, being built of cut stone, plastered over with clay. In between is a patio with a

¹²Rowe, *op. cit.*, 54-5; Coe, Snow and Benson, *op. cit.*, 173,175,177.

temple structure at one end. Clearly, such a center required a large population nearby to construct and maintain it.¹³ Other urban developments continue to appear thereafter along the Peruvian coast, as at a site in Acarí, dated about 1,297-997 BC. The site may include public buildings and could be a city according to Rowe. By 1,000 BC. the Americans there were cultivating cotton, gourds, lima beans, squash, guava, and peanuts. During this same era, from about 1,200 BC. on for about one thousand years a cultural tradition known as "Chavín" spread to many centers throughout a great part of Peru. The site after which the culture was named, Chavín de Huantar, is dated from 850-200 BC., but the tradition itself is worth commenting upon here because of the cat (jaguar/puma/wildcat) motifs which remind one of similar themes in Olmeca art of the same period. It strongly suggests ideological contact between Mesoamerica and the Andean region, but also contact with Amazonia. Scholars have suggested that Chavín iconography shows an Amazonian tropical forest influence, which is quite understandable since the city is located on a branch of the far-flung Amazon River system.¹⁴

At this point, it is wise to note that ancient urbanization along the alluvial plains of the Amazon, as well as on the eastern slopes of the Andes, is very likely, but data seems hard to come by. This may, however, ultimately prove to be a key area for American cultural evolution because of the nature of the environment along the rich rivers. In any case, cities of 2,000 persons are quite possible along the Amazon and one Apinayé village had 1,400 persons as late as 1824, even after the effects of disease, slave raids etc. Robert L. Carneiro has calculated that tropical forest agriculture, centered on manioc, can be extremely productive in the alluvial areas. He states that the Kuikuru, with whom he studied, have an agriculture which is "more productive than horticulture as practiced by the Inca." The average Kuikuru gardener spends only about two hours per day in manioc cultivation, leaving quite a lot of leisure time, and making possible food surpluses.¹⁵ Thus, there are many areas of the Americas where we cannot, as of yet, make any certain statements about urban experiences in ancient times.

¹³Coe, Snow and Benson, *op.cit.*,175.

¹⁴Rowe, *op. cit.*, 55-6, 61, 72-3; Coe, Snow and Benson, *op. cit.*, 178-181.

¹⁵Robert L. Carneiro, "Slash and Burn Cultivation Among the Kuikuru and Its Implications..." in Daniel R. Gross, Peoples and Cultures of Native South America (New York:Doubleday, 1973) 104-8, 122n.

The next place where urban developments seem to begin is in the Tollan region of Mexico, along the Gulf Coast but in reach of the Pacific Coast via the Strait of Tehuantepec. The center of San Lorenzo has already been described (1,200-900 BC.) as a major ceremonial and artistic place. But it also required a large adjacent population to aid in all of the earthwork and artistic productions, which included such architectural innovations as u-shaped basalt storm drains, with the individual pieces laid end-to-end. (It is noteworthy that a somewhat analogous drain system existed at Chavín in Peru). About 200 house mounds at San Lorenzo have been located, which could mean a resident population of some size. ¹⁶If this was one of our early American universities, then, of course, these houses could have been for students and faculty.

The period beginning about 900-800 BC. is fascinating because urban developments and mound building moved forward in many parts of the Americas, from the Andean region north to the Ohio Valley. Is this because there was regular communication, perhaps by maritime and river routes? No one has adequately studied, to my knowledge, the tendency of many Native Americans to travel vast distances both for trading purposes (the pochteca of Mesoamerica are well known as traders) and for such purposes as learning about new things, seeing new places, and studying under new teachers. Until such a study is carried out we cannot know much about American ancient travelers, but we do know that navigation, both in the Caribbean-Atlantic and the Pacific Coast sectors was extremely well-developed before 1492 CE.

About 850 BC. Chavín in Peru evolved into a major city and center, with an occupation area of about one kilometer by one-half kilometer. Its ruins include "a great temple which is one of the most remarkable surviving monuments of American antiquity." As noted, the city has cat motifs and a great pyramid, a north pyramid, a great plaza and the temple site. Canals were created to run fresh water through the temple. Chavín seems to have reached its peak in 400-200 BC. Later it survived as a ceremonial center, with habitation areas abandoned.¹⁷

Farther north, urban developments also occurred in the regions of Guatemala (at Izapa and Kaminaljuyú, for example) and Tollan or Great Tula on the Gulf. Gordon Brotherston tells us that in ancient Mesoamerican texts Tula "is

¹⁶Coe, Snow, and Benson, op.cit., 100.

¹⁷Rowe, op. cit., 61, 72-3; and Coe, Snow and Benson, op. cit., 178-81.

most often presented as the city with which recorded political history itself begins." On the other hand, it is also described as having four parts with twenty towns, which leads me to believe that Tula, Tollan or Tulapan was a region (as I have described it above) and not a single city. This is, I believe, borne out by the introduction of Adrian Recinos to the Popol Vuh in which he identifies many cities in Tula including Zuiva and Nonohualco. In any case, Tollan plays a major role in the later history of peoples speaking many different languages (Mayan languages along with Nahuatl and others) who trace their origins, at least in part, to the many cities of the region.¹⁸ The people of the region are called Olmeca but they probably were not a single group at all, but rather a cultural tradition. Some archaeologists believe that an Olmeca state or empire existed, but there is no evidence to support any particular theory about social structure. European scholars often regard the huge basalt heads as being portraits of specific rulers, and other statues are also supposed to be kings or leaders, but numerous other interpretations are possible. For example, if it is true that the American calendar, a writing system, and written mathematics evolved here (which is not certain), then why not imagine that the heads and statues are of great thinkers, inventors of the new tools for recording events and for calculating solar movements etc.?

As noted earlier, La Venta (900-400 BC.) was one major Olmeca site, among many which have still not been studied or located. A large population was doubtless living in the region, judging from the public works constructed. About the time of La Venta's decline, the urb of Tres Zapotes, farther north, became significant and maintained cultural connections with Izapa along the Guatemalan Pacific Coast. But also much urbanization was taking place in interior Mexico, as at Cholula where, around 500 B. C., people are said to have arrived from the Olmeca region. The pyramid constructed at Cholula possesses a greater volume than the Cheops pyramid in Kem (Egypt). Its base was 440 meters long and it was formerly higher than 210 feet. It "became one of the largest solid single structures in the world." Interestingly, the later great pyramid at Cahokia is 1,080 feet long, compared with 1,440 for Cholula, and 100 feet (plus)

¹⁸Gordon Brotherston, "Tula: Touchstone of the Mesoamerican Era," New Scholar, 10, 1986, 21-4, 26, 28; Adrian Recinos,, Popol Vuh, tr. by Delia Goetz and Sylvanus G. Morley (Norman: Univ. of Oklahoma Press 1950) 62-5.

high, about half as high. But both possess a greater mass than the Cheops pyramid.¹⁹

At about the same time as the growth of Cholula, the Binizá (Zapotec) people began to quicken the pace of urbanization at Monte Alban in Oaxaca. The early period saw the construction of a temple platform with drawings of the "dancers," figures thought by some to portray conquered enemies (but which, of course, could represent a great many other things). The most significant aspect, however, is the presence of hieroglyphs associated with each of the figures. Current knowledge regards this as "the earliest body of writing in Mesoamerica..." leading to the idea that "it may be that it was the Zapotec who invented writing and the Mesoamerican calendar...." On the other hand, it is quite arguable that Monte Alban was one of the great centers of learning of its day and that scholars of many nations resided there in order to study calendrics and associated disciplines. Eventually, Monte Alban became "a truly urban civilization..." with an estimated population of 20,000 to 40,000 residents. Its ruins cover about 19 square miles, an area comparable to Thebes in Kem and larger than Rome at its peak.²⁰

During this same period trends towards urbanity accelerated to the south in the Peten region of Guatemala and adjacent areas of Mexico and Belize. The people living in this area are largely Maya-speakers today, but in earlier times there may have been other languages spoken also. Many smaller towns developed, along with great population density, after about 2,000 BC. Some of these towns may not have ever come to exceed 1,000 residents, but people from surrounding hamlets seem to form part of their together-living circles.

On the other hand, large cities and ceremonial centers also appear, somewhat later than Izapa and Kaminaljuyú. The latter is described as "one of the greatest of all archaeological sites..." in the Americas, with a sophisticated culture by 800 BC. It must have been an extremely large city but sadly it has been largely destroyed by the growth of modern Guatemala City.²¹

¹⁹Brotherston, "Tula," 22, 25; Peterson, Ancient Mexico, 48, 56-7 63; Coe, The Maya, 46; Ceram, The First American, 216; Coe, Snow and Benson, op. cit., 94-101.

²⁰Coe, Snow and Benson, op. cit., 102, 113; The Archaeology Conservancy Newsletter, Spring 1992, 6.

²¹Coe, The Maya, 47-8; La Fay, "The Maya, Children of Time," 733; Norman Hammond, "Unearthing the Oldest Known Maya," National Geographic, 162(1) July 1982, 128-130, 133.

Farther north cities such as Nakbe and Tikal, to name but two, grow great beginning in the 600-500 BC. period. One archaeologist claims that Nakbe is the "first Maya city" but Tikal seems to have exceeded it in importance. The latter was built in the midst of a heavily populated countryside covering an area of fifty square miles. In this region "family compounds" are said to be seldom farther than 500 yards apart. Estimates of Tikal's population range from 20,000 to 80,000 without a doubt making it one of the world's largest cities prior to its abandonment soon after 889 CE.²²

During roughly the same period (600-150 BC.) the Valley of Mexico was becoming ever more densely populated with many urban settlements such as Cuicuilco, however, it was lacking in major cities in comparison to areas in the south. But another wave of great city making was soon to begin, preceded slightly by a similar surge in southern Peru and Bolivia.

Rowe tells us that many Andean towns qualify as urban in the period after 700 BC. but all appear to have been deserted by 3,100 AC (BC/AD 1), with people spreading out in farming communities in fertile river valleys. The one exception was Tiahuanaco (Paypicala) at Lake Titicaca which may have already been a city in Early Horizon times. Dates indicate its existence from c.239 BC. to at least c.800 CE, about 1,100 years. Tiahuanaco became a great city, with a core area of at least one and one-half by one and one-quarter kilometers. One author states that the Aymara (Colla) people believed that Paypicala (their name for the city) was the middle of the world. In any event, Tiahuanacan cultural influences gradually spread over a vast area.

Another important city was Pucara, "a very large urban settlement with imposing public buildings" located in the Titicaca basin. In the region were several other Pucara-like cities as well. In the Ica Valley along the coast a few "very large urban settlements" also appeared at about the same time (c.100 BC.). The Callango (Media Luna) site is one kilometer across with 15 small adobe mounds (probably public buildings or temples). Later, irrigation canals were built to serve the agricultural needs of the area.²³

²²William R. Coe, "The Maya, Resurrecting the Grandeur of Tikal," National Geographic, 148(6) December 1975, 793, 795; Maugh II, op. cit., A2, A31.

²³Rowe, op. cit., 56-7, 59-61, 64, 69, 74; Cottie Burland, Irene Nicholson, Harold Osborne, Mythology of the Americas (London: Hamlyn, 1970) 326.

To put things in perspective, we can regard Tiahuanaco, Tikal, Monte Alban, and Cholula as being among the great "new" cities of the post-500 BC period. They also were contemporaries of Teotihuacan, Taxim (El Tajin), El Pital, Huari, and other cities which began perhaps slightly later (150 BC. to 100 CE). Interestingly, many of these great cities declined or were abandoned after about 800 CE. This issue of abandonment is extremely significant, and quite clearly must be examined from a hemispheric perspective. Some scholars focus only upon abandonment in the Valley of Mexico, or in the Peten, or in Peru and Bolivia, when, in fact, the issue is perhaps a continental one.

In any case, from about 3100 AC (BC/CE 1) until about 3900 AC (800 CE) America was home to an incredibly large number of great cities and urban regions, including many which I have not mentioned or which have not even been described yet by scholars. There is no doubt but what America was far more urbanized than was Europe in this era, especially since Rome and Athens had become much reduced in size after the German invasions.

Far to the north population densities were increasing in all of the river valleys of Sinaloa, Sonora and Arizona. An example of gradual urban development is Skoaquik (Snaketown), a Hohokam town along the Gila River. Skoaquik commenced in about 400 BC. and lasted until 1100-1200 CE. It went through many phases, often reflecting influences from Mesoamerica including ball courts, irrigation canals, and the construction of a platform mound in c. 500 CE. It seems to have had about 100 houses at any given time, thus yielding an in-town population of 1,000 or more.²⁴ The construction of at least three miles of hand-dug canals by 300 BC. (or earlier) would indicate a large, supportive population in the area as well as direct contact with Mesoamerica.

About 150 BC (or later). major urban development commenced in the Valley of Mexico with carefully planned designs featuring avenues and plazas arranged in a systematic manner totally unknown in most European cities of the time. Teotihuacan, soon to be the largest city in the world, came to possess a ceremonial area of seven square miles. It eventually had a population between 125,000 and 250,000 persons. The total urbanized zone covers over 20 square kilometers (five times larger than Rome within its walls) but evidence indicates

²⁴Emil W. Haury, "The Hohokam," National Geographic, May 1967, 674, 676-7, 682, 685, 690-91, 695.

that the entire valley was utilized as a food-producing area for the city, with highly efficient chinampa horticulture around the great lake in the center.

Teotihuacan commenced cityhood with about 7,500 people but by 150 CE it had become much larger (45,000 or more) and impressive public monuments such as the gigantic Pyramid of the Sun had been completed along with the complex of major north-south and east-west avenues. The discovery that there are seven caves or caverns under the Pyramid suggests that Teotihuacan was connected with the ancient city of Seven Caves in Tabasco (Tulapan). Recinos mentions Vucub-Pec (Seven Caves, in Maya) along with Tulan-Zuiva and Vucub-Zivan (Seven Ravines) as being places visited by the Quiché and the Yaqui (a Nahuatl-speaking group) in their migrations. A tradition relating to the origin of the people who established themselves in Anahuac (central Mexico) has them coming from Chicomoztoc, which is said to mean seven caves or ravines also. Thus Teotihuacan was perhaps selected as a sacred site from early times.

Clearly, Teotihuacan became a major spiritual and educational center for Mesoamerica as well as a center for trade and manufacturing. In addition to pilgrims and students who were probably attracted from great distances, large numbers of the local people of the Valley of Mexico came to be housed there, in some 4,000 apartment-like dwellings, perhaps exchanging farming for craft activities as the food production system in the countryside became ever more efficient.

Teotihuacan was a multi-lingual city, with a barrio of Oaxacan (Zapotec) people, a barrio of people using Early Classic Maya pottery from the Peten, and probably people of Mixtec and Nonohualco languages, the latter from Tabasco. The dominant language of this fantastic City of the Great Spirit (Deity) was perhaps Nahuatl but this is not certain. Teotihuacan "outposts" existed as far away as Matacapán on the Vera Cruz coast and at Kaminaljuyú in Guatemala. The influence of the city's lifeways reached virtually throughout Mesoamerica.²⁵

Some archaeologists speak of a Teotihuacan "empire" but evidence for such a command state is lacking or ambiguous. Europeans seem to love to discover empires, perhaps because Euro-Asian history is so replete with an emphasis on one great command society after another. The fact that cities come

²⁵Recinos, *Popol Vuh*, 62; Peterson, *Ancient Mexico*, 51,61; Coe, Snow and Benson, *op. cit.*, 104-106, 109, 112; Thomas C. Patterson, *America's Past*, (Glenview: Scott, Foresman, 1973) 76, 78, 86, 88-9.

to share certain physical similarities is insufficient to establish the existence of a common command state, as one can readily see by comparing Shanghai, Singapore, New York and Toronto. The appearance of similar features in New York and London, such as subways and tall buildings, does not prove that both belong to the same empire although clearly there are shared material traits.

The period of about 3,100 AC (BC./CE 1) to 3,200 AC is remarkable for the evolution of several extremely significant cities in both Mesoamerica and South America. It is almost as if the two areas were following the same rhythm of growth. In the coastal region of Vera Cruz the great centers of Taxim (El Tajin) and El Pital developed. The latter is located on the Nautla River, accessible by small boat from the Gulf of Mexico. It is 40 miles south of Taxim and features some 200 structures including earthen pyramids more than 80 feet high, most of them covered with stucco formed from seashells. The city center covers almost 1 mile square but is surrounded by about 40 square miles of outlying settlements with raised fields and sophisticated irrigation systems. The population must have been as dense as that of Taxim (which had tens of thousands of residents). Little is known about El Pital because the area was still unrestored or studied as of three years ago.²⁶

Taxim may have evolved slightly later, but it certainly became a uniquely beautiful center with a remarkable style of architecture, related to that of Maya country in certain respects. It is located on the Tecolutla River, near sites going back to 2,900 BC. Taxim covers 2,550 acres (about 4 square miles) and seems to have become a major "administrative and religious complex." The city had at least ten ball courts with large-scale irrigation projects and terraced hillside agriculture in the vicinity. Taxim endured until about 1100 CE.²⁷

Along the coast of the Andean region many cities developed or grew during the period after 3200 AC (100 CE). There were "large urban sites" in the southern valleys of Pisco, Ica, Nasca, and Acari. Tambo Viejo was the largest urban site in the latter valley, with an area of about one kilometer by one-half kilometer. The greatest city in the southern region was Huari, located 25 kilometers to the north of present-day Ayacucho. "The site of Huari is

²⁶John Rice, "Ancient Ruins Discovered on Coast of Mexico," Yakama Nation Review, Feb. 11, 1994, 4.

²⁷S. Jeffrey K. Wilkerson, "Man's Eighty Centuries in Vera Cruz," National Geographic, 158 (2), August 1980, 204, 213-20; Peterson, Ancient Mexico, 59.

enormous," according to Rowe. The Huari culture included the "construction of very large building complexes consisting of plazas, corridors, and...rooms laid out according to a formal plan." Rowe believes that Huari was an imperial city. "It represents the formation of an imperial state with a well organized administration." Regions which came under Huari influence tended to have a large part of the population concentrated "in large cities." This is similar to what was happening at Teotihuacan at the same time.

After about 800 CE both Huari and Tiahuanaco were abandoned, although their cultural influences continued to exist until c.1100 in northern Peru. In any case, "in a large part of southern Peru and Bolivia the abandonment of cities was general...." Virtually no new cities were established in the region and "the entire pattern of settlement in large cities was eliminated...." Nonetheless, the Ica Valley continued to have imposing ceremonial centers after 800, but settlements were small. Apparently, heart circles had replaced concentrated urban centers.²⁸

Farther north, however, cities such as Pachacamac continued to thrive until gradually declining in the period between 1100 and the Inca conquest (15th century). Pachacamac was "a very large city" in c. 800, with a beginning in the 3200 AC era. It and Cajamarquilla were already large urbs in the 100-800 CE period.²⁹

Along the north coast of Peru the early pattern had been heart circles, i.e., ceremonial centers rather than concentrated cities. This pattern continued, for the most part, during the Moche or Mochica period (about 100 to 750-800 CE). The Moche lifeways (named after a single settlement and also known as "Early Chimú") involved advanced irrigation systems, heavy use of crops such as maize, beans, avocados, squash, chili peppers, manioc, potatoes, coca and peanuts, heavy reliance on seafood, and the use of tamed llamas, guinea pigs, and muscovy ducks. The people built huge pyramids, including the famous Huaca (waka) del Sol, a massive adobe brick structure with 50 to 140 million bricks used in the construction. The mound is 135 feet high and covers about 12.5 acres (450 feet wide by 1200 feet long). It is comparable to those at Cholula and Cahokia.

²⁸Rowe, *op. cit.*, 62-4, 67-70.

²⁹Rowe, *op. cit.*, 65, 68, 71.

The Mochica peoples were sophisticated metal-workers and wonderful artists, producing unique portrait-like ceramics of the finest possible quality. They traded in all directions. The population was very dense, in spite of the absence of large cities. One place, Pampa Grande in the Lambayeque Valley had pyramids surrounded by "a sprawling urban center that apparently supported 10,000 people." Some scholars think that the Mochica were highly warlike, since armed men are often illustrated in their art. Interestingly, the archaeologists seldom comment upon the highly erotic nature of Mochica art.

In any event, the Mochica lifeways were modified in the 750-900 period when influences from the south, called "Tiahuanacoid" by some and Huari by others, became dominant. The southern ways included the introduction of cities, and Rowe notes that there were "many large cities of imposing size" as a result. But by 1100 CE local lifeways began to revive, leading into the Chimu culture (to be discussed).³⁰

During this general period, the Calusa people (or their predecessors) in southern Florida were constructing mounds along the coast. One was first inhabited in 50 CE while others were built in stages between 600 and 1400. Significantly, these mounds have yielded papaya seeds and chili pepper seeds, the first in the U.S. (dated about 3100 AC). This illustrates direct contact with the Caribbean and via the Caribbean with South America perhaps.³¹

The region of northern Central America and southern Mexico, similar to Peru, Bolivia and central Mexico, was going through a great period of urban development in the period of 250-900 (3350-4000 AC), so much so that this has been referred to for years as the "Classic Period." There were numerous great cities in addition to Nakbe and Tikal, cities such as Copan, Palenque, Becan, and

³⁰Rowe, *op. cit.*, 65, 68, 71; Richard P. Schaedel, "Mochica Murals At Pañamarca," in John Rowe and Dorothy Menzel, *Peruvian Archaeology* (Palo Alto: Peck, 1967) 105-6, 108, 110-12; Gerdt Kutscher, "Iconographic Studies As An Aid in the Reconstruction of Early Chimu Civilization," in Rowe and Menzel, *op. cit.*, 115-16, 118-19; Burland, *op. cit.*, 297, 342; Walter Alva, "New Tomb of Royal Splendor," *National Geographic* 177 (6) June 1990, 2, 6; Christopher B. Donnan "Masterworks of Art Reveal a Remarkable Pre-Inca World," *National Geographic* 177 (6) June 1990, 17-33, 41; Michael E. Moseley and Carol J. Mackey, "Chan Chan, Peru's Ancient City of Kings," *National Geographic* 143 (3) March 1973, 332-3, 336.

³¹Arden Arrington, "Learning From the Fierce People," *American Archaeology* 1 (2) Summer 1997, 21-2; *The Archaeology Conservation Newsletter*, Fall 1996, 3,5.

Dzibilchaltun, to name but a few. The latter is said to have had 40,000 people at its peak, while Tikal may have had up to 125,000 (at a high estimate). Perhaps some 3,000,000 persons were living in the lowlands of Peten, Yukal-Peten (Yucatan), and adjacent areas. The entire region can almost be said to have been urbanized or, at least, all areas were urban-linked. Cobá, an important city in Yucatan, with a twelve-tiered pyramid, has a dated monument of November 30, 780, which also counts back 1,422,000 days to the date of August 11, 3114 BC. or what I am calling year 1 AC. In any case, the great cities in much of the area were abandoned around 900 (4000 AC) just as in southern Peru and Bolivia. No one knows why such abandonment's occurred in either region, although many theories exist including one focused on revolts by the macewalob (the macehuales, or common people).³²

Some of the Maya-like people seem to have moved north for a time into central Mexico. The city of Cacaxtla, near Cholula and Tlaxcala, is thought to have been founded by "Olmeca-Xicalanca" from the Gulf Coast, perhaps being the Xicalanca capital after 650. The city features elaborate murals of a Maya type (but, of course, art knows no ethnic boundaries and always transcends language distinctions). In any case, Cacaxtla seems to have very carefully abandoned in c. 900 (4000 AC).³³ Various chronicles of Maya peoples, such as the Popol Vuh, indicate many migrations during this era, primarily from Tulapan (Tabasco) into Yucatan, Peten, and into highland Guatemala perhaps. Some of the migrants were possibly non-Maya in origin, such as Ah Zuytok Tutul Xiu (987-1007) who took up residence at Uxmal and whose group remained dominant there until the Spanish invasion. The Tutul Xius were said to be from Nonoual(co) in Tulapan by one chronicle.

At about this time, a group of Toltecas (people from Tollan or Tulapan) migrated into the Valley of Mexico it would seem. There they joined forces with some Chichimec people led by Mixcoatl (Cloud Serpent) and founded the new city of Tula to the north. The spiritual figure of Quetzalcoatl is intimately connected with this new Tula and, indeed, with old Tollan as well. One source tells us that Quetzalcoatl was associated with the Nonoalco people of Tabasco,

³²La Fay, op. cit., 729, 732-3, 760, 762; Coe, Snow and Benson, op. cit., 124, 127; George E. Stuart, "The Maya, Riddle of the Glyphs," National Geographic 148 (6) Dec. 1975, 773, 785; Peterson, Ancient Mexico, 52-3.

³³George E. Stuart, "Mural Masterpieces of Ancient Cacaxtla," National Geographic 182 (3) Sept. 1992, 123, 134, 136.

and, as we shall see, that is where Topiltzin Quetzalcoatl returned after the fall of this new Tula (in 1064 according to the Cuauhtitlan Annals, but perhaps later according to some scholars). Tula became a very impressive city, with an art style which later influenced Chichén Itzá. Some scholars believe that Tula was the capital of a kingdom or empire and that the Toltecas were quite warlike, but other evidence argues for exactly the opposite type of culture. In any case, Topiltzin Quetzalcoatl was forced eventually to flee to the Gulf coast and from thence to Tabasco and Yucatan.³⁴

Significantly, during the period in which the new Tula existed and when many cities were being abandoned in Mesoamerica there was a quickening of the pace of urbanization in the north. In southern Arizona the Hohokam entered into the so-called "colonial" period from 500 to 900 CE, during which their area of cultural influence expanded and the Mesoamerican ball courts were being played upon, using a rubber ball (showing direct trade with the rubber-producing regions of the Mesoamerican tropical lowlands). Between 900 and 1100 the Hohokam culture reached its peak, with villages concentrated near the Gila and Salt rivers. More irrigation canals were dug and pottery manufacturing reached the stage where 30 gallon jars could be produced. Pottery was traded widely and copper balls from Mexico were being obtained. At the same time, the size of towns in northern Arizona, New Mexico and Sonora was increasing while a similar process was occurring in the Mississippi Valley and its tributaries. This stage was probably due to increased mastery and/or adoption of maize horticulture, along with resultant population increases and perhaps the acceptance of an urban way of living.³⁵

The origins of what is known as Mississippian Culture are not entirely clear, but by the period of 700-1000 the major elements of the way of life seem to have emerged. Typically, social units seem to have included a major town and ceremonial center with a number of outlying hamlets, a still larger number of "farmsteads" and resource gathering locations, such as quarries, fishing locations, etcetera. The larger towns had platform mounds around an open plaza, with structures located on top of the mounds, in the southern Mesoamerican style.

³⁴Coe, Snow and Benson, *op. cit.*, 134; La Fay, *op. cit.*, 763; Brotherston, "Tula," 21; Recinos, *op. cit.*, 63-5.

³⁵Paul S. Martin, George I. Quimby, and Donald Collier, Indians Before Columbus (Chicago: Univ. of Chicago Press, 1947) 174, 182.

The larger mounds were built over a period of 300 years or more, thus indicating stability as well as devotion. According to James B. Griffin:

Towns vary in size, but a population of 300-500 would probably be the norm. A population of over 1,000 would have indicated a major town, while sites like Cahokia, Moundville (Alabama), or Angel in southwestern Indiana are unusual with populations of 2,000-5,000 or perhaps even 10,000 for the central Cahokia area at its peak.³⁶

In the Ohio Valley region a tradition known as Hopewell preceded Mississippian influence and spread outward between 900 and 1300. This tradition featured large communal projects such as burial mounds and great earthworks. One site has an elevated circular platform 500 feet in diameter, reached by a graded 600 foot long road. At the other end of the road is an oval area enclosed by a low earthen rampart 20 feet wide. Inside were burial mounds. The Hopewell people are said to have been the finest metal-workers in pre-European North America. They traded very widely, with a network covering all of eastern North America and extending as far west as the Rocky Mountains.³⁷

In the Southwest and northwest Mexico urbanization increased rapidly after about 900 (4000 AC), with the construction of large towns which are often in the form of row houses or apartments arranged in an arc or in a rectangle, or in the shape of an "E." Generally, most towns at this time were compact masses of contiguous rooms (from 20 to about 1,000). During this period many of the great pueblos of Arizona and New Mexico were built including Pueblo Bonito (919-1130), Aztec (1110-1121), Mesa Verde area (1073-1262), White House (1060-1275), Showlow (1174-1393), and Yellowjacket (southwest Colorado, 950-1300). Yellowjacket was the largest city in Colorado and it contained "the highest density of ceremonial structures ever found in the Southwest, including 182 kivas, a great kiva, 17 towers, and a great tower." Some room blocks were three stories high. About 30,000 persons may have resided at Yellowjacket and in the adjacent fertile Montezuma Valley at the peak in the mid-1200's, whereas about 4,000 persons are estimated to have been living in the nearby Mesa Verde cliff dwellings at about the same time.

³⁶James B. Griffin, "Comments on the Late Prehistoric Societies in the Southeast," in Dye and Cox, *op. cit.*, 5,7-8. See also Rolingson, *op. cit.*, 45.

³⁷Ceram, *The First American*, 222; Martin, *op. cit.*, 267, 272, 277.

It is clear that many of the pueblos of the Southwest were ceremonial centers in the same sense as were the centers of the Mississippi, Mesoamerica and Andean regions. The difference seems to be the use of kivas going down into the earth rather than breasts going up into the sky. But both made use of plazas, apparently, for ceremonial activity even as they do today. One also should not overlook the educational functions of such large centers. Recently, scholars have begun to examine the elaborate system of trails leading in virtually all directions from the great Chaco Canyon centers and have also begun to question whether some of these towns were not primarily religious or educational centers.

Pueblo Bonito, built in an arc shape, had at least 800 rooms and many stories. Aztec, also related to the Chacoan tradition, had at least three stories with 221 rooms in the lower story, 119 in the second, and 12 in the third, but much had been destroyed over the years. Strangely, Aztec was abandoned about 1130 and then reoccupied in 1220-1260, perhaps in response to environmental factors. In 1276-1299 tree-rings indicate a severe drought in the region and at about that time most of the large cities were abandoned.³⁸

New towns began to be established in the Rio Grande Valley as well as to the south of the Chaco region. An example is San Marcos (1100-1680), south of Santa Fe. Immigrants, perhaps from the Four Corners, swelled its population along with other pueblos in the vicinity. San Marcos had 2 and 3 or more stories, with 22 room blocks surrounding five large plaza areas. It had about 2,000 ground-floor rooms, with perhaps 5,000 rooms in all (although not necessarily occupied at the same time). Clearly, the population was very substantial. In 1680, after Spanish oppression and diseases had taken a toll, 600 persons were still residing there.³⁹

Many of the new towns established after 1300 (some went back to 1150 and just grew after 1300) were (and are) quite large. They frequently were multi-storied, some going up to four stories in height. These cities had streets and plazas and good-sized populations, with many exceeding 1,000 persons. Pecos, a very large pueblo, had perhaps 2,000 persons and was four stories high in 1590. In modern times such survivors as Isleta, Laguna, Santo Domingo, and Zuni have all exceeded 1,000 while many others have been close to that figure. Among

³⁸"Saving the Anasazi Heartland," American Archaeology 1(2) Summer 1997, 23; Martin op. cit., 124, 129; Ceram, The First American, 83-7, 132.

³⁹The Archaeological Conservancy Newsletter, Fall 1996, 1-2.

these are our oldest continually-occupied cities, including such places as Acoma, Oraibi, and Taos.⁴⁰

During the same era, peoples of the Mogollon-Mimbres tradition inhabited many pueblos in Arizona and vicinity, eventually building Casa Grande and Pueblo Grande near Phoenix. Casas Grandes, Chihuahua, and Sahuaripa, Sonora, were large pueblos in north Mexico.⁴¹ Most of the towns were abandoned after 1400-1450, in a trend similar to what happened in many parts of the Mississippi Valley.

Turning to South America, the period of 1200-1400 witnessed the growth of the great city of Chan Chan whose ruins still cover an area of up to 11 square miles and whose population is estimated at from 50,000 to 200,000 persons (probably making it larger than any other city in the world, outside perhaps of eastern or south Asia, until the rise of Tenochtitlan). Chan Chan had a harbor at its west wall, with docks which could be closed with gates. It had a well laid out plan with residential districts with gardens, pyramids, and extensive irrigation canals (one with a length of 73 miles). The Chimu culture possessed great engineers, indicating an advanced educational system. They were able, for example, to construct a "huge dam" in the Nepeña Valley. Chan Chan is said to have been the largest pre-modern city in South America, but the great metropolis declined before the rise of the Inca State.⁴² The latter's culture did not favor large cities, organizing the people instead into smaller cities with granaries and intensive agricultural zones. The major exception was Cuzco, the capital, which was a carefully planned city laid out in the form of a puma. Cuzco in the early 1500's had some 4,000 residential buildings, along with neighborhoods serving particular social functions in keeping with the Incan "welfare state" system of production and rational planning.

Farther north, large cities continued to exist in Mexico, as at Mayapan in Yucatan (1250-1350) where 11,000-12,000 people lived, and at Dzibilchaltun with

⁴⁰Ceram, The First American, 52, 71; Martin, op. cit., 149-150, 162.

⁴¹Martin, op. cit., 188, 196. Francisco de Ibarra was impressed by Sahuaripa in 1565.

⁴²Pál Kelemen, Art of the Americas (New York: Crowell, 1969) 38; Meigs, op. cit., 14-15; Michael E. Moseley and Carol J. Mackey, "Chan Chan, Peru's Ancient City of Kings," National Geographic 143 (3) March 1973, 318, 320-22, 324, 328; Patterson, America's Past, 74-5.

even a larger population, as noted.⁴³ Many cities had disappeared throughout Mexico but in the central area Cholula, Atzacotalco of the Tepanecas, Culhuacan, and Texcoco (and others) remained fairly large. In 1325 the people known as the Aztecs or Mexicas founded Tenochtitlan on an island in the Lake of Texcoco and during the 1400's it became, with its close neighbor Tlaltelolco, the greatest city in the world, perhaps the greatest city ever created by human beings anywhere.

Much can be written about Tenochtitlan, but I will be very brief. It's population is variously estimated at from 100,000 to 200,000 (or much more), but all agree on the incredible beauty and "modernity" of the city, with a geometrical arrangement of both streets and canals, with causeways and freshwater aqueduct to the mainland, and with perhaps some 200,000 canoes operating on the lake and along the canals. It was a thoroughly planned city with public health concerns of a startlingly advanced nature. The removal of hazardous trash and feces, and the provision of fresh water and plentiful food supplies, made Tenochtitlan a model city (however, we should note that it was probably patterned in this respect after earlier cities in the Americas). All of this was destroyed by the invading Spaniards.⁴⁴

In many parts of America large settlements were in existence. Unfortunately, time and space does not allow for a careful documentation of cities in the Caribbean or in many other areas. One example will suffice to show, however, that many Americans were town-dwellers, even in regions we might normally think of as being "rural." Scholars have found that a Mandan town in North Dakota in the 1550-1675 period covered 3.43 hectares and had 103 dwellings, surrounded by a ditch and palisaded earthwork on three sides (and the river on the fourth). Long rectangular houses were aligned in rows with an open plaza in the center, with a large rectangular structure located therein, probably a ceremonial building. Ethnographic data supports a population of some 10 to 15 persons per dwelling, and so the town very much resembles many small cities located in other regions, such as the Mississippi and Ohio valleys. After European contact the size of northern plains towns declined greatly.⁴⁵

⁴³Coe, Snow and Benson, *op. cit.*, 136.

⁴⁴Patterson, *America's Past*, 74; Coe, Snow and Benson, *op. cit.*, 145, 150.

⁴⁵James Brooks, "Household Archaeology on the Middle Missouri," ms. 1989, 2.

Meanwhile, in the Mississippi Valley and throughout much of the southeastern U.S. the Mississippian tradition reached its peak of development after 1100-1200. Many large and impressive ceremonial centers and associated cities typify the period, represented especially by huge centers in such places as Moundville (Alabama), Angel (Indiana) and Cahokia (Illinois). Probably the greatest was Cahokia, a city which not only featured its own group of impressive mounds but which stands at the center of hundreds of other mounds within a radius of seven miles. Cahokia is the "largest precolumbian site within...the United States." One of its early visitors compared its population with that of Philadelphia in 1811 (a city of 50,000). But it was more than simply a residential, commercial, and ceremonial metropolis. It appears also to have been a major calendric and astronomical center with many "circles" designed to record solar movements precisely. A beaker found in an offeratory pit near a winter solstice sunrise position has on it a cross symbol remarkably like the Maya symbol for sun and time. Cahokia is also thought to have been a political center, controlled by a ranked, hierarchical society, but such opinions simply do not jibe with the political behavior of the people who are descended from the Cahokians, namely many Siouan-speakers (and perhaps others, including Iroquoians and Algonkians).

In any case, a decline seems to have occurred after 1300-1400 for many of the large cities, especially north of about Memphis. The end is said to be "abrupt" in southeastern Missouri (c.1350) but perhaps a bit later elsewhere. To the south, however, some areas showed new growth and large towns still existed in 1541 when the Spaniards invaded the southeast and caused a massive decline in population. For example, the city of Etowah in Georgia, founded in c.1200, reached its peak of about 3,000 persons just before 1500. Some mounds and associated villages continued in use until the eighteenth-century in the lower Mississippi Valley, as among the Natchez and Choctaw.⁴⁶

⁴⁶Melvin L. Fowler, "Mound 72 and early Mississippian at Cahokia," in James B. Stoltman, New Perspectives on Cahokia, Views From the Periphery (Madison: Prehistory Press, 1991) 1, 3, 8-9; Ceram, The First American, 216; Martin, op. cit., 283, 353-4, 409, 411; and then Griffin, op. cit., 14-15; George J. Armelagos and M. Cassandra Hill, "An Evaluation of the Biocultural Consequences of the Mississippian Transformation," 27-8; James E. Price and Cynthia R. Price, "Protohistoric/Early Historic Manifestations in Southeastern Missouri," 59; Dan F. Morse, "The Nodena Phase," 76,94-6; R. Barry Lewis, "The Late Prehistory of

Over vast areas of America the Native Peoples lived highly urbanized lives for many millenia. Other Americans lived in sizable towns of a permanent character, usually with many other nearby towns in the region. Often ceremonial centers and heart circles were associated with these cities and towns. Much of this was destroyed by the European invasions and by the resulting population declines and dislocations. But we need to be able to study the earlier centuries if we are to fully comprehend our aboriginal American heritage. Our concepts should not be formed wholly by the period of European intrusion.

the Ohio-Mississippi Confluence Region...," 54-5; Stephen Williams, "The Vacant Quarter," 173-7, 179; Gerald P. Smith, "The Walls Phase," 167-8; David H. Dye and Cheryl Anne Cox, "Introduction," i; all in Dye and Cox, *op. cit.*; George E. Stuart, "Etowah: A Southeast Village in 1491," National Geographic 180 (4) Oct. 1991, 61.