Ancient Cahokia

Metropolitan Life on the Mississippi

By Nathan Seppa
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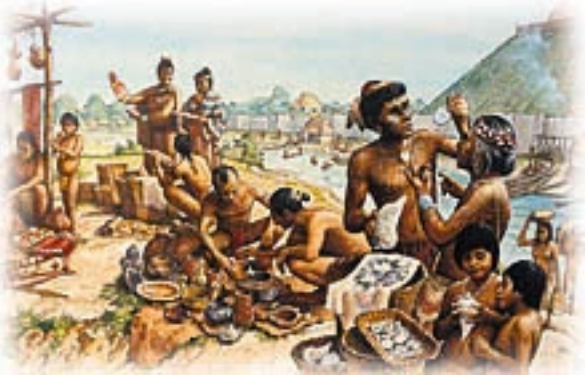
Imagine an ancient Native American settlement where people built pyramids, designed solar observatories and, we must report, practiced human sacrifice.

These weren't the Maya or Aztecs of Mexico. This culture arose in the Mississippi Valley, in what is now Illinois, about 700 A.D. and withered away about a century before Columbus reached America. The ancient civilization's massive remains stand as one of the best-kept archaeological secrets in the country.



Welcome to the city of Cahokia, population 15,000.

North America was dotted in those days with villages, strung together by a loose web of commerce. An Indian trader paddling down the Mississippi River during the city's heyday between 1000 and 1150 couldn't have missed it.

Cahokia was the largest city ever built north of Mexico before Columbus and boasted 120 earthen mounds. Many were massive, square-bottomed, flat-topped pyramids -- great pedestals atop which civic leaders lived. At the vast plaza in the city's center rose the largest earthwork in the Americas, the 100-foot Monks Mound.

Around the great urban center, farmers grew crops to feed the city-dwellers, who included not only government officials and religious leaders but also skilled tradesworkers, artisans and even astronomers. The city was the center of a trading network linked to other societies over much of North America. Cahokia was, in short, one of the most advanced civilizations in ancient America.

Nature dictated that the settlement rise near the confluence of the Missouri, Illinois and Mississippi rivers. Geographers affectionately call the lowlands that hug the eastern bank of the Mississippi there the "American Bottom." This fertile strip was carved and flooded summer after summer by torrents of glacial melt-off 10,000 years ago at the end of the last Ice Age.

As the glaciers receded and rivers shrank to their current size, the 80-mile-wide bottom was exposed. Native Americans who settled there after 700 A.D. considered this easy-to-till land prime real estate for growing corn, since they lacked the steel plows and oxen needed to penetrate the thick sod blanketing the surrounding prairie.

Cahokia arose from this mini-breadbasket as its people hunted less and took up farming with gusto. By all evidence, they ate well.

"Some people have referred to it as a Garden of Eden," says archaeologist John E. Kelly, who has researched the area for 26 years. But like other Cahokia scholars, Kelly hesitates to call it that because he knows the city's dark side.

Despite their town's size, Cahokians seemed to live in fear, building a high stockade around it to keep out the world. Also, the culture suffered an environmental debacle that probably spelled doom: It was utterly abandoned before Columbus ever set sail for the Americas.

The earliest written records of Cahokia refer to the site after it had been vacant for 300 years. French explorers Jacques Marquette and Louis Joliet missed the mounds in 1673 and reported finding no Indians in the area. French monks found Cahokia's mounds in the mid-1700s and later named the biggest one after themselves. But mystery still shrouded the site.

The Illini Indians in the region told Europeans that they did not know who had built the mounds. As late as this century, experts debated whether the mounds were the product of people or nature. In 1921, archaeologists erased all doubt, but learned little about who had built them.

To this day, no one knows the Cahokians' ethnicity, what language they spoke, what songs they sang or even what they called themselves. The name "Cahokia" is a misnomer. It comes from the name of a sub-tribe of the Illini who didn't reach the area until the 1600s, coming from the East.

Although Cahokia must have had a complex culture to maintain a sizable city and raise monuments that stand a millenium later, no one knows whether the mystery people's culture influenced surrounding cultures or simply stood alone.

The causes of the culture's demise are better understood, although researchers argue where its people went.

First, some context. Before Cahokia's rise, people had been living in many parts of North America for thousands of years, making a living as gatherers of edible wild plants and hunters of animal meat. More than 4,000 years ago, Indians in much of the current United States cultivated squash, sunflower and other plants to supplement wild foods. Between 1,000 and 2,000 years ago, corn cultivation spread northward from Mexico, where the plant was domesticated.

As a corn-based economy grew in the fertile Mississippi Valley, providing a reliable food source all year, populations rose and villages grew. About 1000 A.D., Cahokia underwent a population explosion.

Along with corn, Cahokians cultivated goosefoot, amaranth, canary grass and other starchy seeds. Preserved seeds of these species have been found in excavations at Cahokia. Although the people farmed without the wheel or draft animals, corn production soared and surpluses may have been stored in communal granaries on the mounds.

To keep the growing populace orderly and, perhaps more important, to manage corn surpluses, Cahokia developed a

ranked society with a chief and elite class controlling workers in lower classes. By the 1000s and 1100s, when mound-building began in earnest, Cahokia was a beehive of activity.

"It became this political vortex, sucking people in," says Timothy Pauketat, an anthropologist and Cahokia specialist at the State University of New York at Buffalo.

The rulers lived atop the mounds in wooden houses and literally looked down on others. They almost surely consolidated power the way leaders of many early societies did, not by hoarding but by giving away goods. Since there was no money, commerce was by barter.

Cahokians had an affinity for ornamentation, favoring beads made from sea shells collected more than a thousand miles away. These were traded extensively and probably exchanged to cement allegiances and to pacify outlying groups, several of which lived downriver. Gift-giving could have quelled tension between tribes and kept the peace, says George Milner, a Pennsylvania State University anthropologist.

Generosity also boosted status. Within Cahokia, such trading and gift-giving probably bought fealty. Ornamental items were passed from generation to generation. In the long run, people in and around the urban center grew up having a stake in perpetuating the hierarchy. Once the first few generations were in place, children grew up knowing nothing else.

"Social systems became entrenched," says William Iseminger, archaeologist and curator at Cahokia Mounds State Historic Site, which includes the main plaza and 65 of the remaining 80 mounds.

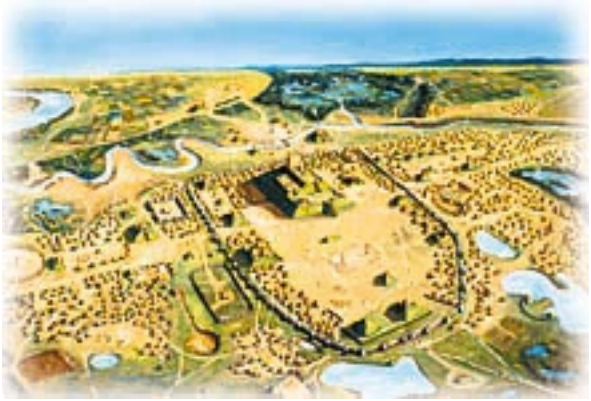
Power and position were passed by birthright. The local caste system was similar to social arrangements seen later in other Native American groups along the Mississippi and to the southeast, generally called Mississippian cultures. It was even in evidence hundreds of years later when Spaniard Hernando de Soto led an army along the Gulf Coast in the 1540s. Indians in Mexico had such social systems, too, although no direct connections have been found between them and any Mississippians.

Meanwhile, Cahokia sat conveniently at the center of the trade network. It harbored a minor hardware industry, manufacturing hoes with flint blades and axes with shaped stone heads. Trade was extensive, but it's not as though armadas of canoes were streaming into and out of Cahokia.

Excavations at surrounding sites shows that the amount of Cahokian hardware dwindles steadily as one moves farther from the city, suggesting a fairly small radius of trade and few large trade missions to faraway places, Milner says. Still, Cahokia attracted copper from mines near Lake Superior; salt from nearby mines; shells from the Gulf of Mexico; chert, a flintlike rock, from quarries as far as Oklahoma, and mica, a sparkling mineral, from the Carolinas.

Not all strangers were friendly traders, it seems. In the early 1100s, Cahokians built a two-mile stockade around their city, with guard towers every 70 feet. The first was double-walled. Three times over the centuries, it was rebuilt in single-walled fashion.

The mounds within probably were erected gradually at ceremonial gatherings over centuries. Cahokian pyramids contain various types of soil, some traceable to locations nearby. "It's like a layer cake with 30 or 40 layers," Pauketat says. Even though some years only a few centimeters were added, the final product was impressive.



Monks Mound required more than 14 million baskets of soil, all hauled by human workers. Its base covers 14 acres.

Many of Cahokia's original mounds were destroyed by modern farming, road building and housing developments. The remaining 80 mounds still hold many ancient secrets because archaeologists have dug into fewer than two dozen. Among these, Mound 72 stands as one of the grisliest archaeological finds in North America.

Under it were found the remains of a tall man buried about the year 1050. He died in his early 40s and was laid to rest on about 20,000 shell ornaments and more than 800 apparently unused arrows with finely made heads. Also in the grave were a staff and 15 shaped stones of the kind used for games.

"Clearly, some really important leader is buried in there," Pauketat says. Interred with him were four men with their heads and hands cut off and 53 young women apparently strangled. Their youth, 15 to 25 years, and the fact that they were all women, suggests human sacrifice. People that young did not die of natural causes in such numbers.

Nearby, researchers found more burials and evidence of a charnel house. In all, 280 skeletons were found. About 50 lay haphazardly in a single deep pit, as if tossed in without honor. Some have arrowheads in the back or were beheaded, evidence of warfare or perhaps a crushed rebellion.

"I would guess there were people around who weren't too loyal," Pauketat says.

Mound 72 has provoked considerable debate among anthropologists. Some say the four men without hands or heads represent the four cardinal directions on a compass. To others, the sacrifices evoke comparisons to Mayan and Aztec cultures. Some suspect that those thrown in a pit were objecting to the sacrifices.

No one knows. Mound 72 is the only Cahokian burial site excavated with modern archaeological care. About 20 other mounds were dug up in the 1920s, using careless methods and leaving few notes.

In any case, the huge number of people sacrificed to accompany a leader on his way to the afterlife is unparalleled north of Mexico. No other site even comes close.

To be fair, however, Cahokians didn't spend all of their time building mounds, adorning themselves or sacrificing their neighbors. The digs that have taken place every summer since 1960 -- into garbage pits, along the stockade or at housing sites -- have revealed much else.

One of the most dramatic finds is that some Cahokians were astronomers. Outside the stockade, they built a ring of posts that, when aligned with an outer post, pointed toward the horizon at the exact spot on which the sun rises on the spring and fall equinoxes. Archaeologists dubbed this "Woodhenge," in deference to England's Stonehenge, also a solar calendar.

Instead of stone, Cahokians used red cedar posts 15 to 20 inches in diameter and about 20 feet long. Several woodhenges were built over the centuries, and the third 48-post ring has been reconstructed.

Aligned with the key post, the equinox sun appears to rise directly out of Monks Mound. Other posts aligned with sunrise on the summer and winter solstices. Why it was rebuilt several times is unclear. "Perhaps as Monks Mound got bigger, they had to build updated woodhenges," Iseminger speculates.

The leaders may have used Woodhenge to demonstrate their connection with the sun or some other mystic unknown, says Bruce Smith, director of the archaeobiology program and a curator at the Smithsonian Institution. "Through Woodhenge, and dealing with the sun, they could solidify their position as middlemen or arbiters and show the general populace how the sun moved, and predict it," he says.

That the Cahokians had time enough to build many mounds and several woodhenges comes as no shock to anthropologists. "You'd be surprised how much free time people had before industrialization," says Robert Hall, archaeologist at the University of Illinois-Chicago.

Unfortunately, Cahokians' clever ways did not extend to wise environmental management.

As population grew, the ratio of people to arable land also rose. In the American Bottom, a small increase in water levels could have rendered much farmland useless. Wanton tree cutting along nearby bluffs caused unchecked erosion, making cropland too marshy for corn, Milner says. Worse, a global cooling trend about 1250, called the "Little Ice Age," may have hurt the growing season.

Deforestation required longer walks for firewood. Charred remains show that Cahokians burned oak and hickory in the early years but used energy-poorer soft woods later, a sign of problems, Iseminger says. The stockade alone required as many as 20,000 poles. Tree cutting certainly destroyed wildlife habitat. And how many deer would live near a concentration of 15,000 people, many armed with bows and arrows?

Quite possibly, dysentery and tuberculosis rose to epidemic proportions, since Cahokians apparently had no sanitary systems for disposing of garbage and human waste, Peter Nabokov and Dean Snow suggest in their book, America in 1492.

Meanwhile, city life could have grown tiresome, archaeologists say. People resent having their lives managed by others. Other Mississippian cultures developed ranked societies similar to that of Cahokia. None stayed together more than 150 years, Pauketat says.

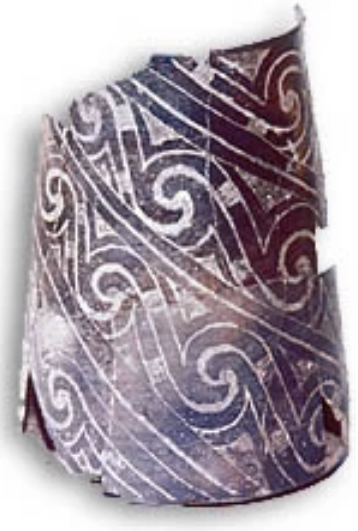
For Cahokians, the grass evidently looked greener elsewhere. Buffalo, arriving from the West, reached areas just across the Mississippi in the 1200s and 1300s, Hall says. The choice may have been to compete with thousands of neighbors for firewood and eat corn and fish or to live differently, following the migratory buffalo and eating red meat.

All of these "centrifugal forces," in whatever combination, grew strong enough to fling people away from Cahokia over time, Smith concludes. Their society "devolved" and gradually returned to small-village life, becoming archaeologically invisible because they left too little evidence to be traced 700 years later.

By the 1200s, as the city's population and influence dwindled, chiefdoms downriver began to grow. Their threat may have been what spurred Cahokians to build the stockade, and they may have competed for trade goods that had been flowing into Cahokia.

A larger question lingers: What is Cahokia's rightful place in the history of North America? Two theories emerge, illustrated in part by the mounds.

Many Native American cultures built mounds. Until 1000, earthworks typically were burial or effigy mounds. Flat-topped temple mounds, with buildings on them, came into vogue with Cahokia. Mounds often were the village centerpiece and have become their builders' signature across time. Cahokia's mounds were bigger than the rest, but did this make them greater people?



Some argue that Cahokians are like John Hancock, whose moment of glory came 600 years after theirs. To them, the Cahokian signature was, like Hancock's, simply bigger than the rest, but not representative of anything more advanced or creative. "I don't think Cahokia was qualitatively different" from these other settlements," Smith says. "It was the same framework of organization, writ large."

Others, including Hall, suspect that Cahokia practiced a "cultural hegemony," meaning that it had a cultural influence beyond areas it could control militarily. It likely had profound impacts on people up and down the river.

"It challenged the world view of people in the boonies," Pauketat says. "They'd come to Cahokia and . . . wow."

For Native Americans, none of whom can claim Cahokia as their own tribe, the site needs no interpretation or explanation, says Evelyne Voelker, a Comanche and executive director of the American Indian Center of Mid-America in St. Louis. "We've never questioned that somehow there is ancestry there," she says.

Voelker performs purification blessings at Cahokia when archaeologists begin a dig. She takes cedar incense -- cedar mixed with pine sap and sage -- and sprinkles it on a fire before spreading the sweet smoke with an eagle feather. "It's a prayer to beg pardon for things being disturbed," she says.

Every September, Native Americans have a celebration at Cahokia featuring intertribal dance and music. They treat the site with considerable pride and reverence.

Voelker is not big on archaeologists, saying, "I don't particularly like their line of work." But she and they share an awe of the place that once was one of the greatest cities in North America.

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*All Images courtesy of Cahokia Mounds State Historic Site