

# *Urbanization in prehistoric North America: a summary*

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## **Introduction**

Few archaeologists question that urban complexes existed in Mesoamerica or that they were various in their forms. The vast city complexes of Teotihuacan and Tenochtitlan with populations probably in excess of one hundred thousand and activity areas ranging from residences to markets to ceremonial places are well documented archaeologically. The substantial ceremonial complexes of the Maya and their adjacent residential zones certainly are likewise well known. Debates about them have turned from description and explanation of material remains to studies of power relations and state formation and their role in models of centre and periphery in a 'world system' (see papers in Patterson & Gailey 1987; de Lameiras 1988; Fox 1988; Champion 1989).

In North America, however, debates still rage over exactly what level of urbanization was present or what its origins might be. Complexes like that of the Mississippian tradition from the tenth century AD to the time of European contact would seem to be lesser reflections of their Mesoamerican counterparts, representing at least small-scale chiefdoms. Earlier complexes such as Adena (*c.* 1000 BC) and Hopewell (*c.* 200 BC) show a level of cultural complexity suggestive of incipient urban culture (Fig. 1). The Hopewell Interaction Sphere, a vast trade network, certainly suggests vast cultural influence, although nowhere near that of the later Mesoamerican or Mississippian cultures.

This chapter does not intend to enter the debates over levels of complexity, state formation, or power relations in North American prehistory. Fundamentally, the chapter is a brief summary of the culture history of North American urbanization with the intent of apprising the reader of developments and the existence of major complexes. Beyond this, the chapter raises the question of what forces move groups, especially those on the periphery, toward population aggregations that are prerequisites of urban life. Research seems to suggest that North American urbanization was the result of long-term indigenous developments beginning with the first habitation of the continent.

## **Toward fully sedentary life: Archaic tradition foundations**

At the end of the Wisconsin Glaciation, *c.* 10,000 years ago, the nomadic hunters of the megafauna of the Pleistocene began to 'settle in' to more local environments, limiting their nomadic existence to exploitation of river drainage systems rather than the vaster regions they once covered. This is an appealing hypothetical scenario of a shift from big-game exploitation to a more generalized foraging (Fagan 1991, p. 307). Archaic tradition foraging provided a vastly broader food-base over the entire continent, and in some regions, especially in the eastern Woodlands, it was a profoundly successful and stable subsistence strategy.

In some areas, it was so successful as to allow an almost fully sedentary village life and substantial populations (perhaps as many as 1000 people) without the use of cultigens. This so-called Primary Forest Efficiency (Caldwell 1958) did not comprise a dramatic shift and large villages were limited in number. Actually, in all likelihood, a central-based wandering existence with shifting base camps was the norm. Groups may have developed fixed territories, and in some areas, especially in the central Mississippi river drainage, permanent cemeteries and artificial burial mounds began to mark territorial boundaries (Charles & Buikstra 1983). By 4000 BC, the foraging populations of the eastern Woodlands were living in their own territories with relatively closed social conditions and interactions with neighbors more rigidly defined. There is a substantial variation in artifacts and stylistic traditions and, as Fagan (1991, p. 348) notes,

relations with neighbors assumed much greater importance ... As time went on, the manipulation of social alliances, and the barter and exchange that went with them, led to enhanced concerns with prestige and social distinction, to more complex social orders.

Important to note here is that this increasing complexity is not a dramatic shift. Rather, it is something of an outgrowth of social contacts and fluidity of nomadism in the Paleoindian big game hunting tradition. There is a tendency to see groups as 'social isolates' with few external contacts, a view that is substantially in error.

Most of the developments in the Archaic were incremental, but one complex stands in marked contrast. Along the Lower Mississippi river drainage and along the Gulf coast, the Poverty Point culture contains more than 100 sites in ten discrete regional clusters grouped around a regional centre (Walthall 1980). Dated from *c.* 1700–700 BC, the Poverty Point site itself is located at a major confluence of rivers at a key point for facilitating trade. The site is a great earthwork covering about 256 ha with six concentric semi-circular earthen ridges. Another large mound to the west is aligned with the semi-circles to sight the equinoxes. Nearby is a habitation site with high estimates of 600 dwellings for as many as 4–5000 people (some estimate only a third this number, Fagan 1991, p. 352). Originally the complex was seen to have been the result of influence from the Mesoamerican lowlands and the Olmec (Fagan 1991), but these are now

discounted and the developments are believed to be local. The origin of the complex is unclear, but foretells later developments in the region during the Woodland tradition.

## **Cultigens and increasing material and social complexity: the Woodland tradition**

In no other cultures are the courses toward urbanization more evident than the Adena and Hopewell, but generally the Woodland tradition marks a substantial shift in cultural complexity throughout eastern North America. The Woodland tradition has three major cultural markers: the manufacture of pottery, the cultivation of native plants and burial in funerary mounds.

(Zimmerman 1985, pp. 62–3)

The first ceramics were developed during the Archaic with crude vessels appearing in South Carolina by 2500 BC (Stoltman 1966) and thick fiber-tempered vessels appearing in imitation of ground stone bowls along the Lower Mississippi drainage as early as 1300 BC (Jenkins 1982). Hand modelled grit tempered vessels with conoidal form and decorated with cord roughening appear soon thereafter and along with the spread of gourds grow into what Smith (1986) has called the ‘container revolution’. Vessels went hand-in-hand with the domestication and use of native cultigens. Sunflower, chenopodium and marsh elder may have been domesticated during the Archaic as early as 2000–1000 BC, but were not relied upon as a dietary staple. The scarcity of seeds before 500 BC suggests that they were used to buffer temporary shortages (Price & Feinman 1993, p. 250). The causes and processes of plant domestication remain a topic of research and debate.

This gradual shift toward use of cultigens suggests that in many ways the lifestyle of the peoples of the Woodland tradition was still much like that of the Archaic. Burial complexes begun in the Archaic expanded. The earliest of the Woodland complexes, Adena, is not as much a culture as it is a ceremonial complex. Adena sites have been identified throughout much of midwestern North America, especially in the Ohio river drainage. Most of the 300–500 identified Adena sites are burial mounds. At first, burial customs were simple, but by late Adena about 2000 years ago, the complex underwent a major change with bodies buried in large burial chambers or enclosures accompanied by offerings of food and valuable funerary artifacts. Artifact materials suggest a wide-ranging trading network, probably a major system of inter-regional exchange. There is also some suggestion that the mound ceremonialism represents a nascent social stratification. Brose (1979) hypothesizes that the system contains mechanisms for promoting inter-group relationships and adjusting to food shortages. This increases social stability and reinforces sedentism, social stratification, specialized use of resources and probably, population growth. Brose sees the structure as part of a long-term cultural trajectory.

These developments lead to the Hopewell, a complex extant from 200 BC to AD 400 primarily in the Ohio river valley but spread as far west as the eastern Great Plains and east all the way to the coast. The burial mound complex continues but is elaborated dramatically with intricately carved mica sheets, native copper ornaments, clay figurines, stone pipes, specialized ceramic vessels and a variety of other stunning grave goods. In addition to the burial mounds were other spectacular earthworks enclosing ceremonial, political and economic complexes ranging from ten acres to more than 100 ha.

These sites concentrate on two 'core' areas around the Mississippi and Illinois rivers in the state of Illinois and around the Scioto and Miami rivers in southern Ohio (Braun 1986). The so-called Hopewell Interaction Sphere (Caldwell 1958) was a far-flung exchange system with materials such as obsidian and grizzly bear teeth from the Rocky Mountains, large marine shells from the Gulf coast, and silver and copper from the Great Lakes reaching the core areas. Smith (1986) believes these networks were centred on local leaders who negotiated reciprocal exchanges and maintained contacts, building a power base similar to that of 'Big Men'.

Outside the major zone of Hopewellian influence (though few groups were probably not somehow linked to it), there appears to be a gradual growth in population, continued inter-community exchange, and increasing reliance on cultivation of native plants. These adaptations set the stage for the Mississippian tradition, the primary cultural complex that most consider to be urban.

### **Urban culture in North America: the Mississippian climax**

The Mississippian tradition is essentially an achievement of the Archaic and Woodland cultures that preceded it, but was boosted by a heavy reliance on maize horticulture. Between AD 800–1000, intensive maize horticulture spread from the southwest to the Plains and into the southeast by AD 800. Combined with the beans, which spread into the area somewhat later, *c.* AD 1250, maize horticulture fostered larger food surpluses, higher population densities and more complex political and social organization (see Steponaitis 1986 for a more complete discussion).

The Mississippian appears more or less simultaneously across the southeast by AD 900 (Smith 1986). Primary site locations were on river flood plains where cultivation of crops was feasible and where there was greater access to riverine resources. Fertile soils provided bountiful crops. Surpluses may well have been part of a redistributive system controlled by a local 'chief'. These elites developed from earlier 'Big Men' and mitigated risks to households and villages owing to crop failure (Muller 1987).

Most Mississippian communities were actually small, but there were important and large centres. The best known of these is Cahokia, on the so-called American Bottom near the

confluence of the Illinois river with the Mississippi near the present day city of St. Louis. Cahokia was the location of the largest prehistoric population concentration in North America (Fowler 1978). Cahokia reached its peak between AD 1050 and 1250, covering an area of more than five square miles (*c.* 13 km<sup>2</sup>). About 3 square miles (*c.* 7.8 km<sup>2</sup>) were covered with dwellings housing as many as 30,000 people. Inhabitants lived in pole-and-thatch houses that varied greatly in size, probably based on social status of the residents. Beyond the residences were more than 100 mounds of various sizes, shapes and functions within what appears to be a well-planned layout, many grouped around central plazas. Of these Monk's Mound is the largest with four terraces rising to a height of 100 feet (*c.* 30 m), the base being 1037 by 790 feet (*c.* 316 by 241 m) containing more than 21,000,000 cubic feet (*c.* 2,000,000 m<sup>3</sup>) of earth. The core area of the mounds was palisaded with watchtowers and gates and may have been used for either defensive purposes or to separate high status people from commoners.

It would be erroneous to consider Cahokia the only important centre. Others include Angel site in Indiana, Kincaid in Illinois, Aztalan in Wisconsin, Spiro in Oklahoma and Moundville in Alabama (Fig. 1). These sites had similar arrangements to that of Cahokia but were certainly not as large. Debates over what the sites represent continue. Are they spin-offs from larger villages, perhaps even colonies? Steponaitis (1978) has called them complex chiefdoms by which he means that they had as many as two or three levels of political hierarchy. Ranking chiefs had control over those of lesser rank who controlled specific territorial or social units.

Another question of concern is the origin of the complex. Platform mounds with temples atop and standard community layouts with plazas as well as certain artifacts and decorative motifs have caused scholars over several decades to speculate about connections to Mesoamerica ranging from outright colonization from Mesoamerica to influences of trade, religious missionizing and the like. There are connections of objects and even maize, but most scholars argue today that links to Mesoamerica were limited with everything from architecture to cosmology deriving from indigenous sources (Fagan 1991, p. 406). It should be noted that these debates are similar for the North American Southwest where the influences of Mesoamerica seem more clear, but may not be (McGuire 1989). Arguments are surprisingly similar.

Cahokia had been abandoned by AD 1500, but the Mississippian base was still present at the time of the first European exploration. Moundville, Etowah (Georgia) and Natchez (Fig. 1) were still important and it is from the first contact with these chiefdoms that we have our only ethnographic information about some of the complexes.

Clearly, the Mississippian tradition contained the bulk (except perhaps, for writing) of cultural traits that are often considered crucial in definitions of urban culture. It is becoming increasingly clear that these developments are indigenous to North America with only limited influences from Mesoamerica.

## **A view from the edge: the peripheries**

These indigenous changes occurred more rapidly in some areas than others and certainly urbanization is more apparent in the eastern Woodlands and the southeast than elsewhere. Relatively peripheral and even remote, areas felt the impact of the process. Dincauze and Hasenstab (1989), consider these impacts on the development of the Iroquois in northeastern North America. Iroquois responses to Cahokia might have been variable, at times acting as suppliers, or at times refusing to participate, either militantly or defensively. Dincauze and Hasenstab (1989, p. 75) suggest that the system may be thought of as a pump, drawing energy (foodstuffs and captives), possibly additional population, commodities (hides, furs, shells, and minerals, and probably information) into the heartland from a large region around it. The heartland, in turn, sent out manufactured goods (hoes, beads, possibly cloth, other precious items), ceremonial information (probably related to calendrical rites and scheduling) and some degree of political control.

This 'pump' seems to work as an explanatory model for the Iroquois, but is less obvious in other areas such as for the village cultures of the Great Plains (see Zimmerman 1985 for a summary). One might question how the Mississippian tradition affected the region. Certain connections are apparent, but others are not so clear and questions remain.

The village cultures of the northern Plains developed in an environmentally less productive climate than that of the eastern Woodlands. Culturally the ancestors of the village dwellers reflect the same sorts of cultural traits as their eastern counterparts and at about the same time: ceramics, cultigens, and burial mounds. Village locations were also similar, that is, on flood plains of rivers such as the Big Sioux, James and, most importantly, the Missouri. They were involved in the vast trade networks of the eastern cultures, and we see trade goods such as Gulf coast shells in village middens.

Timing of the developments was also similar, with only a slight temporal lag in the appearance of mounds and ceramics. There is even some suggestion that maize arrived earlier in the region than it did in the East. Population aggregations of a few hundred people develop out of a Woodland base almost simultaneously across the region shortly after AD 800, and fluoresce into fortified villages with as many as a thousand people by AD 1250 in the Initial Coalescent complex along the Missouri river.

The apparent reason the groups did not develop like those in the eastern Woodlands seems to be environmental (Zimmerman 1976). Climatically the region was unstable and the crops simply could not be grown in areas away from the relatively narrow river flood plains. Population aggregations of a size like those in East simply could not be supported. Why then did the Plains' cultures show any tendencies toward urbanization at all? Why did people even live in villages

when the more dispersed settlements of the Archaic and early Woodland were an effective response to Plains environmental conditions and stresses? Why rely on domesticated plants when hunting the large herds of bison might provide more than adequate protein resources (as it did for the later Plains nomadic groups like the Lakota)? In addition, although trade goods and influences of the Mississippian chiefdoms are present, there seems to be no analog to the Iroquoian situation in that the quantity of manufactured goods in the sites is minimal.

The 'pump' as it relates to commodities does not seem to work, but I think the answer may lie with transfer of information, not commodities, and it may simply be a thirst for information about the outside world. We have a tendency to assume that somehow the groups on the periphery are 'unsophisticated' but it is useful to remember that peoples of North America had been involved in both nomadism and trade systems for millennia before the development of the Mississippian. When there is contact with the 'outside', and especially if the outsider is seen as being technologically superior, there seems to be a desire for the technologies, though not necessarily the accompanying social and ideological structures.

Accordingly, in many Plains village sites, we see relatively few actual trade items from the Mississippian. Rather, we observe many products made in imitation of Mississippian items. For example, in a Middle Missouri site from the Mill Creek culture of Iowa (Fig. 1), we find a ceramic vessel made entirely with local paste with incised rattle snakes circling the shoulder of the vessel. Rattlesnakes are extremely rare in the area, but the rattlesnake was a common motif for the Mississippian. We see the same in other sites, where ceramic motifs from the eastern cultures appear on locally made vessels. Imitation in other industries is not so clear, but probably occurred. What we see, in other words, is rampant stimulus diffusion. (Diffusion is a matter of great concern for those scholars studying centre and periphery. See Champion's, 1989, p. 9, cautions.)

Intriguing as well is the observation that relatively few items or imitations from the Plains appear in Mississippian sites. Certainly there might have been trade in perishables such as bison hides but even quantities of non-perishables like stone from the Knife river quarries in North Dakota are rare in core Mississippian sites (Fig. 1). It would appear that both commodity and information flow was largely one-sided.

Certainly, these observations are simplistic and largely intuitive notions are presented here, but the precise impacts and relationships between the northwestern periphery and the Mississippian have not been well defined.

## **Conclusions**

As current knowledge and opinion now stand, urban life in North America seems to have developed out of indigenous practices set in motion at the end of the Pleistocene starting with a

process of settling in to local environments. Nomadic lifestyles were simply replaced by involvement in substantial interaction networks. Reliance on cultigens, but especially maize, drove the process by providing surpluses that allowed increased population and specialization of labor. Accompanying developments of elites, especially 'Big Men' or local chiefs, helped define systems of exchange crucial to the interaction network. At some sites, construction of monumental architecture completes the picture of an urban culture. Hinterlands were connected to the urban centres through a variety of means, but information acquisition was a key to urban tendencies in the peripheral areas. The origins of urban cultures in prehistoric North America are not particularly unique in their relation to the overall pattern of urban developments world-wide. Certainly, the summary presented here is simplistic and does not reflect anything close to the actuality of urban origins in North America. Geography, population movements, and climatic changes all played important roles and created a vastly complex cultural mosaic that archaeologists do not yet fully understand. Still, the general processes of urbanization seem to mirror those elsewhere in the world.

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