

Mound building and summit architecture at the Carson site, a Mississippian mound center in the southeastern United States

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journals.sagepub.com/home/naa**Jayur M Mehta**Department of Anthropology, Florida State University,
Tallahassee, FL, USA**Abstract**

Significant scholarly attention has been paid to monument construction, craft production, and leadership strategies in the Mississippian world (A.D. 1000 to A.D. 1540) of the Southeastern and Midcontinental United States. As new sites are discovered and new data brought into consideration, greater consideration can be made linking the building of large earthen mounds to social and political relationships. This article presents an archaeological and ethnohistoric consideration of mound building and mound summit use at Mound D at the Carson site, located in northwest Mississippi. Data from earthen mound excavation, mound summit architecture, material culture, and optically stimulated luminescence and radiocarbon (accelerator mass spectrometry) dating are used to discuss the formation of the monumental landscape beginning in the early 13th century. Several postulates are offered for the interpretation of mound construction and mound summit use.

Keywords

Mississippian, monumental architecture, ethnohistory, social organization

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Introduction

This article investigates the relationship between leadership, monumentality, and craft production at the Carson site, a large Native American mound center located in the Yazoo Basin of northwestern Mississippi (Figure 1). From the earliest Archaic period earthworks (ca. 5400 BP; Saunders et al., 2005) and Archaic period shell mounds (ca. 8000 BP–6500 BP; Claassen, 2008, 2010: 11), to the development of Woodland period platform mounds (after A.D. 700–800; Kidder, 1992), and to the rapid and explosive development of mound-and-plaza villages during the Mississippi period (A.D. 1000/1200–1600; Brain, 1978), the anthropogenic landscapes of the indigenous Southeast were defined by earthen and shell monuments. Earthen mounds and mound building are not *necessarily* proxies for hierarchy (Burger and Rosenswig, 2012; Gibson, 2004). However, during the early second millennium in the Eastern Woodlands of the United States, it is generally accepted that agricultural societies with varying degrees of hierarchy and achieved/ascribed status

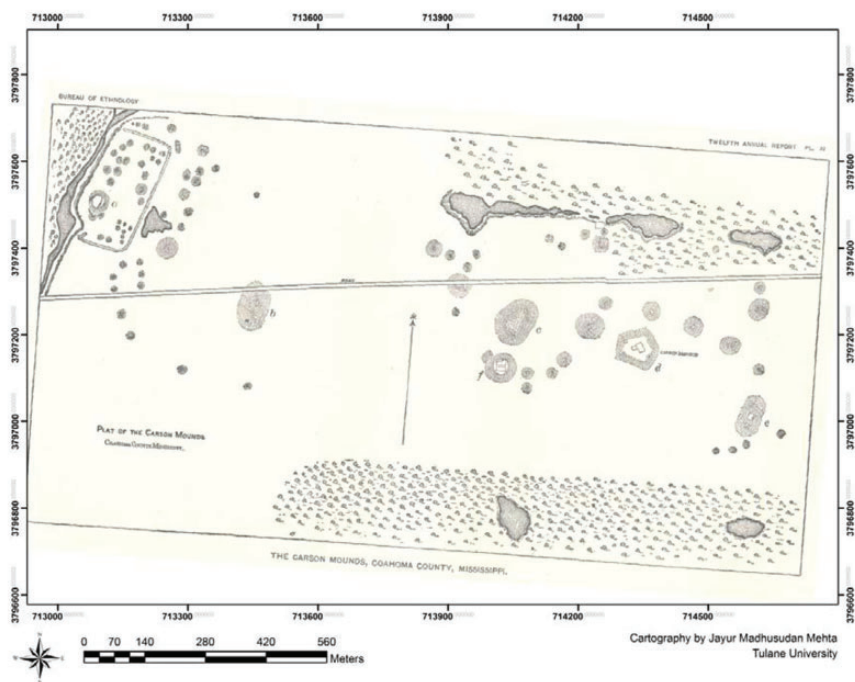


Figure 1. Georectified historic map of the Carson mounds site in UTM coordinate system, Zone 15N, datum WGS 1984. Mounds labeled A to F are still mostly visible today; the remainder of the smaller mounds have mostly been plowed away, although some low rises are still evident on the landscape today (Thomas, 1985: Plate XI).

built large earthen mounds in densely settled, fortified villages (Beck, 2003; Smith, 1990a, 1990b; Trigger, 1990). These Mississippian peoples were an interconnected set of communities with shared histories, practices, beliefs, and values (Marcoux and Wilson, 2010; Steponaitis, 1991).

While earthen monuments are critical to understanding Mississippian social organization (King, 2001; Mehta, 2013; Mehta et al., 2012: 5; Payne, 1994; Trigger, 1990), hierarchy and monumentality are not directly correlated. Globally, monuments are salient aspects of emergent nonhierarchical, nonagricultural, and/or nonsedentary societies (Bradley, 1998; Burger and Rosenswig, 2012; Gibson, 2004; Heckenberger, 2005; Kolb, 1994, 2006; Pluckhahn and Thompson, 2018; Saunders et al., 2005; Schaan, 2008; Smith, 2003; Thompson and Andrus, 2011; Thompson and Pluckhahn, 2011). With this in mind, this article recognizes the need for detailed, historically minded archaeological research that provides rich descriptions of past cultures, peoples, and processes (Pauketat, 2001; Pluckhahn and Thompson, 2018). Using data from earthen mound excavations, studies of mound summit architecture, material culture analyses, and optically stimulated luminescence (OSL) and radiocarbon (accelerator mass spectrometry) dating, as well as the ethnohistoric record, this article outlines the pace at which Mound D was built and interprets the significance of monument construction at Carson. By the mid-14th century, Mound D is complete, and several structures, rebuilt in place, were emplaced on the summit. Based on recovered artifacts and thin-section analyses of the structure floor, several interpretations of mound construction and mound summit activities are offered.

Studies of Mississippian leadership and social organization

Cahokia, Moundville, and Etowah are three well-known Mississippian Period (A.D. 1000/1200–1540) mounded settlements in the Eastern Woodlands. They are political centers of regional Mississippian societies that share specific traits like maize agriculture, flat-topped earthen monuments, wall-trench architecture, shell-tempered ceramics, and iconographic complexes in common (Beck, 2013; Blitz, 2010; Kelly, 1990; Kidder, 1998; King, 2003a; Knight, 1998; Lewis and Stout, 1998; Livingood, 2008; Pauketat, 2003; Rogers, 1995; Smith, 1978, 1990a, 1990b; Steponaitis, 1983). In general, anthropological archaeology of Mississippian societies has traditionally focused on economy (Meyers, 2006, 2015, 2016; Muller, 1997; Peebles and Kus, 1977; Steponaitis, 1983; Welch, 1991) and ideology (King, 2007; Knight, 1986, 1998; Reilly and Garber, 2007; Wilson, 2007) as a means to explain the rapid florescence of large-scale mound building, agriculture, and a ubiquitous symbolic religious system (Galloway and Griffin, 1989; Knight, 2006; Waring and Holder, 1945) at around A.D. 1000.

Evidence for the cultural influence of Mississippian peoples in the Yazoo Basin and from the Cahokian homeland is evident through paleobotanical

remains, ceramics, nonlocal lithic materials, finished lithic artifacts, domestic architecture, and objects with Mississippian iconography. Recently recovered Powell Plain pottery and semisubterranean houses have highlighted a Cahokian presence at Carson as early as the 11th century Lohmann phase (Mehta et al., 2017a). Nevertheless, in situ sociocultural developments in the lowest reaches of the Lower Mississippi Valley also influenced local cultural trajectories, namely with the development of nonagricultural, monumental building Coles Creek and Plaquemine societies (Kidder, 2002; O'Hear et al., 2009; Rees and Livingood, 2007; Roe and Schilling, 2010).

Robin Beck has suggested that studies of Mississippian leadership and social organization typically focus on nested scales of administrative control and that complex chiefdoms are simply composed of smaller, more simple chiefdoms (Beck, 2003: 647; Steponaitis, 1978). Consequently, simple or complex chiefdoms can be characterized by defining site hierarchies within a region. Beck's apical-constituent model qualitatively defines scalar hierarchies between local and regional leaders based upon how, and for what reasons, authority is ceded toward regional leaders (Beck, 2003: 645). Chiefdom cycling (Anderson, 1994) and fission-fusion (Blitz, 1999) models also describe how authority is distributed within regions but, like the simple-complex model, rely on quantitative assessments of settlement hierarchies.

Adam King's work at Etowah, however, focuses more on internal processes of how leadership changes, relying upon corporate-network models of leadership that fit well with Beck's apical-constituent model and group/individualizing strategies described herein (Blanton et al., 1996; King, 2003a). Leaders at Etowah initially emphasized group-oriented strategies of power by sponsoring mound building, but by A.D. 1300, late in the site's history, elites refocused strategies on the acquisition of prestige goods with significant social value, items such as copper from the southern Appalachians, and shell from the Gulf or Atlantic coasts. Through the importation of shell from the Gulf Coast, Etowah was able to act as a redistribution point for shell across the Southeast, thereby reinforcing the power of elites at the site through trade (King, 2001: 7). A similar form of group oriented to individualizing power strategies is seen at Moundville, where "platform mounds were particularly important symbols often associated with the forging of group identity, and thus with strategies of persuasive aggregation" (Beck, 2003: 652; Knight, 1986). As at Etowah, leaders at Moundville eventually deemphasized monument construction, favoring instead a mortuary program emphasizing prestige-goods items and ritual paraphernalia accessible to only a select few individuals. At both sites, strategies for garnering power changed over time, the value of authority and the role of the leader changed, and neither site remained resilient for long after shifting to individualizing power strategies emphasizing a prestige-goods economy. Moundville was transformed into a necropolis, a site with only an elite residential population and where a dispersed populace returned to inter their dead. At Etowah,

militarism and warfare led to the site's demise. While the transition to a prestige-goods system at Moundville and Etowah may initially have been founded in an ideological and ritual sphere where the entire community could participate (Knight, 1986), the new systems of leadership did not survive without the willing participation of all those involved (Beck, 2003: 644, 2013: 31).

While the size and numbers of mounds have often been used to create site and settlement hierarchies, mound volumes and the stages of monument construction have been interpreted in two different ways (Anderson, 1994; Beck, 2013; Blitz and Livingood, 2004; Brain, 1978; Galloway, 1995; Hally, 1993, 1996; Williams, 1956). Corporate groups at smaller mound centers may have been able to build lesser mounds quite easily, but at large and exceptional Mississippian centers, numerous corporate groups likely came together to rapidly build monuments. Blitz and Livingood (2004: 299) suggest powerful leaders brought together multiple corporate groups to build large earthen mounds and that "the timing of mound-construction episodes at the largest sites may have been dictated more by unpredictable or volatile sociopolitical events directed by powerful chiefs and less by regular or predictable social rules such as periodic renewal ceremonies." Therefore, at the largest settlements and for the largest mounds, the social rules for mound construction were quite different than at most smaller mounded settlements (Blitz and Livingood, 2004: 292, 298).

Following work by Blitz and Livingood, this article uses the construction of Mound D, the largest monument by volume at Carson (Figure 2, Figure 10,

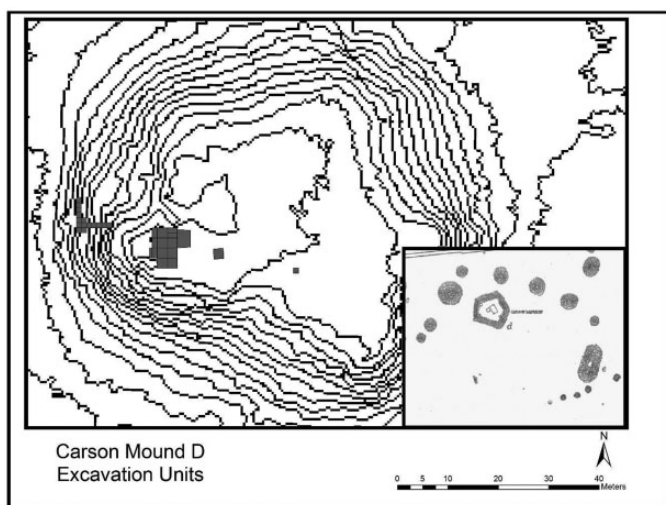


Figure 2. LiDAR-derived map of Mound D at the Carson site, with contour interval of 50 cm. Gray shading denotes excavation units. Inset at lower right shows the portion of the 1894 Thomas map including Mound D, a pentagonal pyramidal platform mound.

Table 2) as means to describe how social and political leaders might have sponsored its construction. Monumental earthen mounds that “sanctify chiefly authority” (Knight, 1986: 675) were likely built quickly and in a minimal number of mound stages. Archaeological correlates are large mound building events requiring multiple corporate groups (Blitz and Livingood, 2004: 299). The archaeological correlates of mounds representing community cohesion are smaller mounds that were constructed in numerous, small stages. Stratigraphic, sedimentary, and radiometric data from Mound D suggest it was built rapidly. Later, several mound summit structures were built on Mound D, potentially for the purposes of craft production (Mehta et al., 2016). In this article, I investigate how Mound D was built, what activities took place on the mound summit, and whether my findings conform to broader expectations for Mississippian societies in the Yazoo Basin, and more broadly, across the Midwest and Southeast?

Regional culture history

Archaeology

The Yazoo Basin (Figure 3) is an ovoid floodplain in northwestern Mississippi that is dense with archaeological sites bearing monumental architecture (Brain, 1989; McNutt, 1996; Phillips, 1970; Phillips et al., 1951; Williams and Brain, 1983). While the majority of earthen mounds were constructed during the Mississippi period (A.D. 1200–1540), mound building in the region extends as far back as the Archaic period (5000 BC–3000 BC), as discovered at the Denton site (Connaway, 1977). Poverty Point culture (A.D. 1700–700 BC) and earthworks are found at the Jaketown site (Ford et al., 1955), Teoc Creek (Connaway et al., 1977), and at Slate (Lauro and Lehman, 1982). Woodland period (300 BC–A.D. 1200) mounds near Carson are the Batesville, Thornton, and Rufus Davis mounds (Johnson et al., 2002; Phillips, 1970: 597–598).

The Mississippi period (A.D. 1200–1540) in the northern Yazoo Basin is conventionally divided into three phases—Hushpuckena (A.D. 1200–1350; Brain, 1988), Parchman (ca. A.D. 1550–1650; Brain, 1988: 272–277), and Oliver (A.D. 1650–1730; Brain, 1989: 280, 393). The material correlates of the middle Mississippi Period (from A.D. 1350–1550) are poorly understood (Lansdell, 2009: 151). Large-scale monument construction in the Yazoo Basin begins during the Late Woodland Peabody phase (A.D. 1000–1100; Phillips, 1970: 917–918) and continues into Mississippi Period phases at so expansive a rate that it has been called “megalomoundia” (Brain, 1978). It is generally thought that maize, beans, and squash agriculture, shell-tempered ceramics, nucleated settlement around a monumental site center, and hierarchical forms of social organization have their genesis in the American Bottom and



Figure 3. Provinces visited by the Hernando de Soto expedition (1539–1543) and important archaeological sites mentioned in the text. Dashed line denotes Yazoo Basin.

that they became more common after A.D. 1200 (Belmont, 1961; Brain, 1989: 119; Brooks, 1980; Connaway, 1981; Stevens, 2006).

At settlements near Carson, mound building reaches an apogee at sites like Winterville and Lake George (Figure 3; see also Brain, 1989). Jeffrey P. Brain has suggested this may be due to Mississippian elites taking over the local Plaquemine cultural system. At Winterville, a large Mississippian center approximately 150 km to the south, 23 mounds were built around A.D. 1200 (Brain, 1989). The site was abandoned in the mid-14th century due to a significant fire across the site. The Lake George site, another monumental center, was finalized at around A.D. 1200, and it featured mounds, berms, and ditches as part of its monumental landscape.

Carson's monumental and domestic architecture was initially documented by the Bureau of American Ethnology (BAE; Thomas, 1894; Figure 1). The Carson map is attributed to William Henry Holmes, and it shows over the expanse of

one mile, six large mounds labeled A to F, and over 80 smaller mounds. In the BAE report, Thomas described the surface of the site as covered with burned clay beds, which I interpret as daub concentrations from burned Mississippian structures. Located along an abandoned Mississippi River channel that was likely active early in the second millennium A.D., Carson at least partially matches the physiography of historically known Indian towns like Quiz Quiz, and if not one of its towns, was at least an important place during the Soto timeline.

Early surveys at Carson identified the monumental architecture; later surveys documented concentrations of lithic artifacts near the mounds and along the outskirts of the site (Brown, 1978) that were later reclassified as Burlington chert microliths, a nonlocal lithic technology similar to assemblages found in the American Bottom (Brown, 1978; Johnson, 1987). Recent salvage work directed by John Connaway, Jay Johnson, and a litany of students has led to numerous discoveries, including a village and mortuary complex containing over 70 structures, a thrice-rebuilt palisade, and dozens of bundle burials (Butz, 2015; James, 2010; Lansdell, 2009; McLeod, 2015; Settle, 2012). Most notably, Lohmann phase (A.D. 1050–1100) pithouses that resemble Cahokian pithouses and that contain Burlington chert and Powell Plain pottery and that date to the 11th century have been identified at the village component (Mehta et al., 2017a,b). From a chronological perspective, Mississippian domestic architecture in the village component dates from the 11th century A.D. to the 15th century A.D., and most bundle burials postdate the architecture (yielding ages from A.D. 1520 to A.D. 1640; McLeod, 2015: 77), indicating that the village was abandoned and reused as a necropolis (James, 2010), much like at Moundville.

The Carson Mounds Archaeological Project (CMAP) conducted excavations at Carson from 2012 to 2015 (Mehta et al., 2012, 2016, 2017a, 2017b). Over 80 sediment cores were taken across the Carson landscape, three trenches were excavated in Mound D, 12 horizontal excavation blocks were opened on the Mound D summit, several excavation blocks opened in the village, and numerous radiocarbon dates and one OSL date were processed.

Ethnohistory

The indigenous landscapes of the Yazoo Basin, once deforested by maize agriculturalists, had already become wild and untended by the time Smithsonian archaeologists entered the region in the late 19th century (Thomas, 1985). Recent European migrants to the region quickly learned that to effectively farm the Delta, the mounds would need to be plowed down and levees built to hold back the Mississippi River (Brain, 1989: 18). Documents from the Hernando de Soto entrada give us accounts of what the region might have looked like before major historic-period disturbances irrevocably altered

Native landscapes and Native cultures (Clayton et al., 1995; Hudson, 1997; Smith and Hally, 1992). Unfortunately, while other provinces visited by Soto and his men have been identified archaeologically (Figure 3), as at Parkin, Little Egypt, and at the Berry site (Beck and Moore, 2002: 201; Hudson et al., 1985: 732; Morse and Morse, 1983), their passage through the Yazoo Basin has not yet been identified on the ground. Nevertheless, I would claim that broad-scale patterns in the ethnohistoric literature from the Soto accounts in the Yazoo Basin provide an interpretive framework for archaeological signatures in the region, even if specific sites have not yet been found.

Hernando de Soto and his men traveled through the Yazoo Basin in A.D. 1541 after epic battles at Mabila in Alabama and after wintering in the Chicaza province in northeastern Mississippi (Brain et al., 1974; Ethridge, 2010). Chicaza lands are described as grassy plains surrounded by cultivated fields, similar to what was seen at Ocale, Anhayca, and near Cofitachequi (Hudson, 1997: 102, 123, 153). In traveling westward toward the Yazoo Basin and the provinces of Quiz Quiz, Casqui, Pacaha, and Quigualtam, Soto and his men traveled for seven to nine days through an unoccupied province, described as a “watery wilderness” (Weddle, 1997: 228), likely a buffer zone between Chicaza and westward polities (Hally, 1993). The following descriptions come from the accounts of Biedma, Rangel, Elvas, and Vega (Clayton et al., 1995; Galloway, 1997; Hudson, 1997), and they are ordered from most to least reliable.

The province of Quiz Quiz is described as treeless prairie comprised of three towns within 5.5 km (one league) of each other (Brown, 2008: 376; Swanton, 1985: 228). Each village was well supplied with maize, surrounded by fields of corn, and thick with men, women, and children. One of the Quiz Quiz villages was close to the Mississippi River; it has been suggested that Carson’s Mound A and its rectangular enclosure could be one of the Quiz Quiz towns (Brain et al., 1974), although numerous other crossing sites have been proposed (see Dye, 1999: 37–48; Hudson, 1997: 277). Salient points from the Soto expedition are thus (a) the land around Quiz Quiz was prepared for agriculture, (b) one town was located near the active Mississippi River channel, (c) Quiz Quiz had storehouses of maize, and (d) was well populated.

While building barges on the east bank of the Mississippi River, Soto and his men were harassed daily by legions of warrior boatmen from Pacaha. Encounters with these warriors ultimately led Soto to the town of Casqui, where he entered into formal arrangements with the cacique, to lead attacks with Casqui’s warriors on the principal town of Pacaha. Most famously, Soto had his ship’s carpenter build a cross on the main mound at Casqui, today known as the Parkin site (Hudson, 1997: 291; Mitchem, 1996: 1–2). At Pacaha, Soto’s men sacked a temple on a mound summit, tossing the bones of venerated ancestors down the mound flanks (Hudson, 1997: 292, 294). From

these accounts, we learn that (a) polities had longstanding enmities with one another, (b) mounds were the places for temples and chiefly housing, (c) villages were fortified, and (d) intergroup violence was common.

Finally, enter Quigualtam, a province potentially located in southwestern Mississippi (Swanton, 1985: 272), and feared so deeply, that the Spaniards attempted to walk westward back to Mexico City rather than attempt navigating the river past their territories. While Hernando de Soto was dying of disease on the west bank of the Mississippi, the lords of Quigualtam beckoned Soto to their town, claiming their chief, or cacique, traveled for no man. Soto died at a mounded village called Guachoya, and Moscoso and his men fled west. They failed to return to Mexico City via an overland route and returned to Huhasene, located at the confluence of the Arkansas and Mississippi rivers. Luis Moscoso and his men were pursued, harassed, and attacked for days on the river until they pass Quigualtam's territories (Barnett, 2007: 6; Ethridge, 2010: 120; Swanton, 1985: 272). Accounts from Quigualtam demonstrate that (a) massive polities existed in the Lower Mississippi Valley (LMV) that transgressed rivers and natural boundaries, (b) armadas of warrior boatmen patrolled the Mississippi River, and (c) coordinated attacks of Moscoso's men presupposes sophisticated means of communication and clear political alliances.

Documents from the Hernando de Soto entrada paint a picture of the Yazoo Basin that features monumental earthworks at large towns surrounded by periodically flooded but typically productive fields, of chiefdoms separated by buffer zones, and of provinces occasionally united or divided by social relationships and obligations that spread across the Mississippi River. Quiz Quiz was ostensibly vassal to Pacaha, and Casqui was at war with Pacaha. These contentious relationships might point to an inherent fragility of native political entities in the LMV.¹ Within the *longue durée* of Lower Mississippi Valley prehistory, complex societies periodically developed and collapsed, as evident from the continuity of monumental earthworks starting in the Archaic period and continuing through the Woodland and Mississippi periods (Kidder, 2002; Saunders et al., 2005). Not only do earthen monuments persist through time, they persist even after the practice was abandoned during the Early Woodland period and then resumed by Marksville culture peoples in the Middle Woodland period (Kidder, 2004). Monuments marked the landscape visited by Soto, and it was the events precipitated by his arrival that led to the social and cultural landscape witnessed by later French visitors.

Hernando de Soto and his entrada's arrival in the LMV was surely significant and extraordinary, leading to many unpredictable outcomes. Subsequent to the Hernando de Soto encounter, other processes such as chiefly cycling, immigration of different ethnic groups, shock waves emanating from cultural and political disruptions caused by British and Spanish colonies on the East Coast, and, on a lesser scale, epidemic diseases, all precipitated the demise of expansive and powerful native polities and chiefdoms (Ethridge, 2010; Mehta, 2013).

Monumentality and mound summit activities at Carson

The construction of Mound D

Before Mound D was built, the ancient ground surface was prepared for mound building (Figure 4) by removing surface vegetation and the first 5 to 10 cm of surface soils; these practices have been observed at other monumental sites (Sherwood and Kidder, 2011: 74). At numerous sites across the southeast, scholars have documented strategies of removing and adding soils to create ideal surfaces for mound-and-plaza building (Dalan et al., 2003; Kidder, 2004; Lacquement, 2009: 49). The interface between the prepared surface, the premound foundation, and the beginnings of Mound Stage I were identified in sediment cores and in Excavation Trenches 1 and 2. The soils comprising the premound foundation were classified as 10YR 3/1 very dark gray and had a silt loam texture. Overtop the prepared surface of the premound foundation, Mound Stage I soils were a multicolored, basket-loaded array of clay loam and silty clay loams soils, ranging in color from 10YR 5/2 grayish brown to 7.5YR 4/6

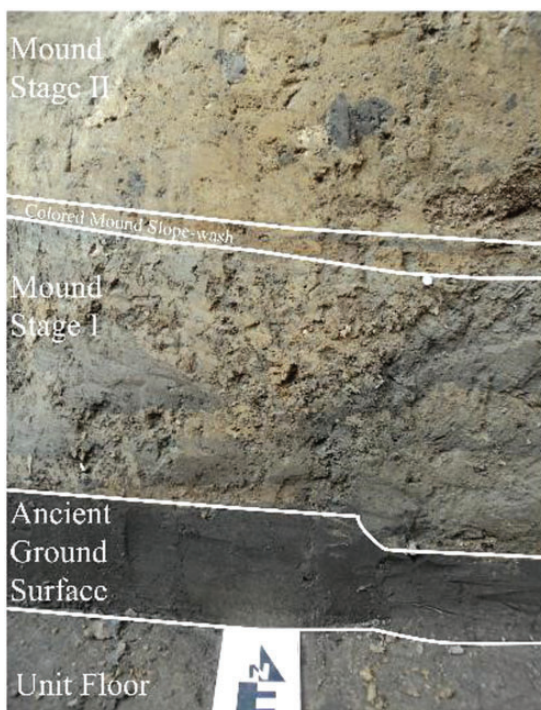


Figure 4. Photograph showing the relationship between the ancient ground surface, Mound Stage I, colored mound slope-wash, and Mound Stage II.

strong brown to 2.5Y 4/3 olive brown. In between the premound foundation and Mound Stage I, I encountered a thin, 2- to 5-mm lens of 10YR 7/4 very pale brown very fine sand (1–2 mm). Mound Stage I was built directly over this sand lens, and it was heterogeneously colored, as one would expect of basket-loaded clayey soils.

The ancient ground surface was prepared for mound construction through the removal of a humic horizon. There was no evidence for any decayed organic material, root casts, and/or worm casts (indicative of natural or undisturbed A-horizon topsoil) in the premound foundation profile. Consequently, this soil horizon was modified through the removal of humus and vegetation, likely in preparation for the construction of a mound (see also Lacquement, 2009 for discussion of site preparation at Moundville).

The ancient ground surface under Mound D was deposited by the Mississippi River around 2490 BP \pm 230 (708–248 BC; 68%; Tulane EENS; Table 1), based on the unbleached grains from an OSL sample taken from the contact between the ancient ground surface and Mound Stage I. The Carson landform was first formed during the Tchula period, just after the cultural florescence of the Late Archaic period and the Poverty Point culture. The landscape itself was first

Table 1. Radiocarbon dates from Carson.

RC #	Lab #	Context	Notes	years B.P.	\pm	cal A.D.	cal A.D.	%
14	NSFX27668	Paleosol	Submound D	1635	34	340	538	95.4
5	UGAMS16322	Tu3L3	Mound D fill F1	960	25	1021	1155	95.4
6	UGAMS16323	Tu5L3	Mound D fill F1	930	20	1036	1157	95.4
4	UGAMS16321	Tu2L3	Mound D fill	920	20	1039	1161	95.4
13	UGAMS18360-r	HS31	Central Post— Structure 31	820	22	1170	1263	95.4
12	UGAMS18360	Pottery deposit # 2	Pottery Deposit— Structure 31	720	20	1263	1292	95.4
7	UGAMS18493	Tu12	PM23—under Structure 1	638	24	1285	1395	95.4
3	UGAMS16320	Tu9L2	Structure 1—daub	600	50	1288	1417	95.4
10	UGAMS18358	Hs31-DR7	PM4823—Structure 31	490	20	1412	1444	95.4
2	UGAMS16319	Tu8L1	Structure 1—daub	420	20	1435	1487	95.4
9	UGAMS18495	Tu9L2	PM—Structure 1	404	24	1438	1618	95.4
11	UGAMS18359	Core41	Mound D Stage III	380	20	1446	1624	95.4
8	UGAMS18494	Tu12	PM24—Structure 1	341	24	1471	1637	95.4
1	UGAMS16318	Tu10L2	Structure 1—daub	200	20	1652	1684	35
OSL1	OSL1	Paleosol	Submound D	758	100	1092	1292	68

RC: radiocarbon sample; UGA: University of Georgia, Center for Applied Isotope Studies; NSF: National Science Foundation, University of Arizona, Accelerator Mass Spectrometry Laboratory; OSL: optically stimulated luminescence.

occupied by humans as early as 1635 BP ± 34 (A.D. 348–530; 95.4%; NSFAXZ27668; Table 1) as defined from radiocarbon dating of an organic bulk soil sample from the ancient ground surface. The sufficiently bleached particles in the OSL sample produced a date of 758 ybp ± 100 (A.D. 1092–1292; 68%; Tulane EENS; Table 1). The OSL sample gives a *terminus post quem* for the beginnings of Mound D at somewhere between the 11th and 13th centuries (the Late Woodland or Early Mississippi period).

Mound D at Carson was primarily constructed in three stages, with a final capping event representing Stage IV; Mound Stages II and III were the most significant in both size and volume and led to the shaping of the mound into its current pentagonal form (Figure 5, see also Figure 2). Figure 5 delineates mound building as identified through trench excavation along the flank and does not show the final Stage IV cap, as it was eroded along the talus. Mound Stage IV was evident on the summit and in sediment cores excavated from the summit through the base of the mound (Figure 6).

Stage I of Mound D was composed of dense, heavy clay materials and was built over the ancient ground surface. Trenches excavated into the flank of Mound D suggest Mound Stage I was quite small, with a small clay platform or patio that flanked the mound. No dates were recovered from Stage I, but its construction must postdate the age of the OSL sample.

Stage II of Mound D was double conical in form, a Middle Woodland mound shape not commonly found during the Mississippi period (Mainfort, 1999). A double conical mound form is currently present on the Carson landscape, in the form of Mound E. Mound B could potentially be called a double conical mound, although at times it also appears more ridge-shaped (Butz, 2015). Conical mounds generally predate platform mounds and are typically thought of as “tombs or monuments of uncertain function” (Lindauer and

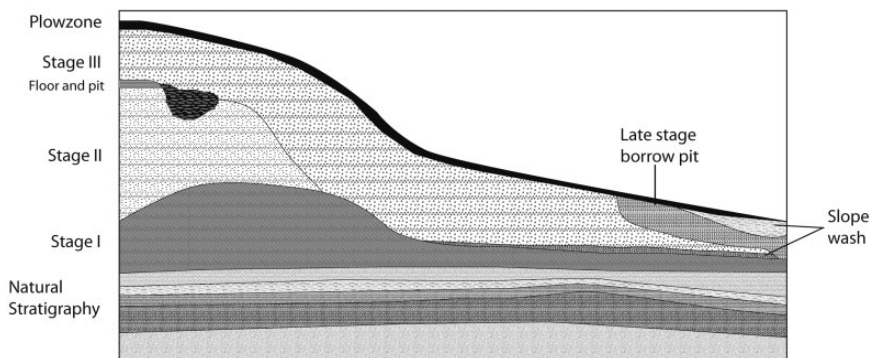


Figure 5. Schematic profile of Mound D based on north profiles from Excavation Trenches I to 3.

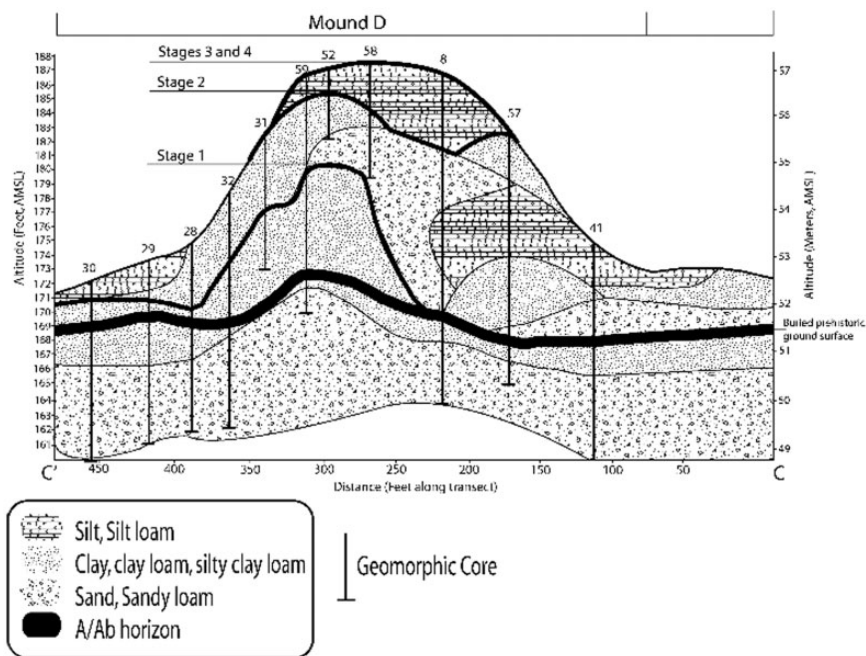


Figure 6. Mound D construction defined through sediment coring. Stages II and III are the largest in volume. Stage IV is a minor mantle on the summit over Stage III and not evident on the flanks due to modern erosion (Mehta et al., 2017b: 4).

Blitz, 1997: 171; Russo, 1994). Conical mounds, ridge-shaped mounds, and platform mounds are commonly found at Mississippian sites; however, the platform mound is most prevalent.

Charcoal samples from Stage II of Mound D all date to the Late Woodland period (RC Sample Nos. 4, 5, and 6; Table 1). Modeled dates for the start of Stage II range from 1058 to 800 cal BP. These early, pre-Mississippian ages suggest that materials used for dating Stage II came from earlier cultural contexts, likely Late Woodland components that were incorporated into fill dirt used to build Stage II. Using the latest timing for the construction of Stage II, 800 cal BP, it is possible to suggest that Stage II was started soon after Stage I was built, since we have a TPQ for Stage I of A.D. 1092–1292 based on OSL dating. Modeled dates for the end of Stage II are 904 to 688 cal BP.

Stage III is identified through trench excavation and coring and radiocarbon dates come from Structure 1 on the Stage III summit. Wood charcoal from Structure 1 postmolds and from under Structure 1 range from the 13th to 17th centuries (RC Sample Nos. 7, 3, 10, and 8; Table 1). Using a Bayesian

model, Stage III has a well-defined beginning range of 754 to 741 cal BP or 739 to 559 cal BP and ending range of 481 to 365 cal BP; Figure 7 shows that the highest probability distribution for the construction of Stage III was 150 years.

The timing of construction at Mound D permits us to understand scale and organization of construction. The volume of all of Mound D is 18,405.9 m³, and a large proportion of this volume comes from Stages II and III, as appears evident in the trench excavations and sediment cores (Table 2; Figure 8). The volume of sediment that can be directly attributed to Stage III fill was estimated to be 12,129.9 m³. Based on the generally homogenous sedimentary deposits comprising Stages II and III mound fill, uniform light brown silt loams and the absence of artifacts in the fill or any evidence of rain-sorted lenses in the trench excavations, I suggest that these two mound stages were built quickly using sediments from a part of the site that did not have a significant contemporary occupation. These kinds of rapidly built mound stages with uniform soils and few artifacts have been documented previously, like at Mound A at the Late Woodland-period Coles Creek culture Feltus site (Kassabaum, 2014) and at the Caddo Valley mound in Arkansas (Trubitt, 2009: 242).

Ortmann and Kidder (2013: 77) outline energetic calculations in detail for the construction of Mound A at Poverty Point. Their calculations derive from well-known and well-cited energetic studies of earth moving (Erasmus, 1965). Utilizing Erasmus' calculation, that one person can move 2.6 m³ per day, working 5 hours a day, building all of Mound D by one person would take 7,079.2 person-days. If all of Mound D was made in 30 days, a labor pool of 236

Table 2. Mound volume calculations.

Mound	BL/P method ^a (m ³)	Truncated cone/square ^b (m ³)	ArcGIS 9.2—Spatial analyst ^c (m ³)
A	14,507.14	8328.8	5124.621
B	18,139.68	10,630.6	4571.869
C	16,661.57	11,435.7	4036.763
D	32,021.64	18,405.9	11,665.218
E	9100.032	4444.5	1937.307
F	886.13	851.4	644.005
		Stage volumes (m ²)	
D S-1		973	
D S-2		6276	
D S-3		18,405.9	

^aBL/P: Blitz and Livingood 2004 and Payne 1994.

^bVolume of a truncated square pyramid = 1/3(length 2 + length × width + width 2) × height; Volume of a circular truncated cone = 1/3π(r 1 2 + r 1 r 2 + r 2 2) × height.

^cDEM derived from LiDAR data and surface raster calculation.

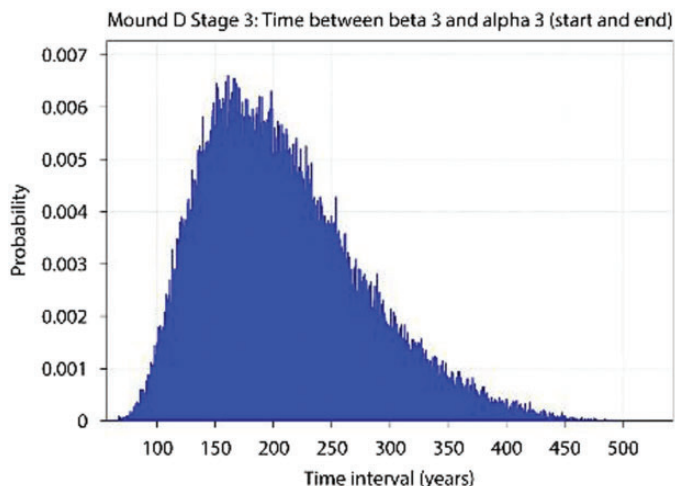


Figure 7. Probability distribution for time to build Stage III at Mound D. Distribution is based on Bayesian modeling of radiocarbon dates from Mound D Stage III and shows the greatest likelihood for the amount of time necessary to build Mound D Stage III.

individuals would have been required. If it was made in 60 days, 118 workers would have been needed. If it was made in 90 days, 79 workers would have been needed. Unfortunately, we only know that Mound D was first started at the end of the Woodland period and that its construction was completed sometime between the 15th and 16th centuries. Therefore, we cannot use radiocarbon estimates from Mound D to extrapolate a potential size for the mound builder population. Therefore, we can stipulate the following: given uniform and homogenous soils were used to build Stages II and III, we can postulate that these stages were built rapidly, with a workforce ranging from 236 workers to 79 workers, in as little as 30 days or as many as 90, respectively.

As Blitz and Livingood (2004) stipulate in their mound volume study, the rapid construction of mound stages at monumental sites indicates that the social rules for mound building were different than for the construction of smaller mounds in numerous stages. Anywhere between 236 and 79 individuals would have been necessary to move dirt uniformly from a single deposit and to build a mound stage without any evidence of basketloading, sheet washes, and rain-sorted silts, evidence typically indicative of rapid mound construction (see also Ortmann and Kidder, 2013). Stages II and III were rapidly constructed and only thin lenses of soil between them suggest a break in mound building. The final stage of Mound D, Stage IV, was quite small and was a small capping event that did not effectively change the contours of the mound. Rather, it appears the mound summit stabilized and became the locus of activities, including the building and rebuild of structures, and perhaps craft production.

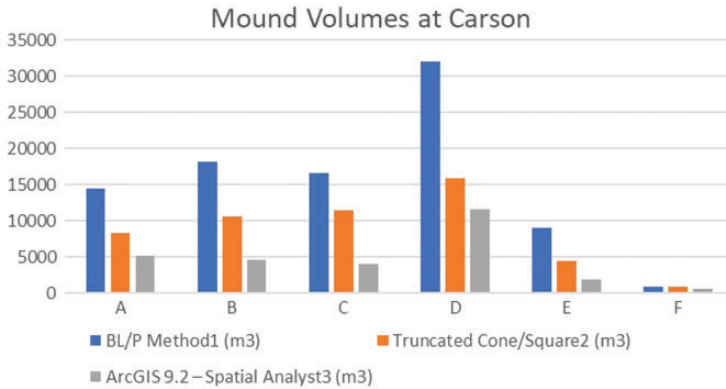


Figure 8. Histogram of volume measurements of mounds at the Carson site.

Mound summit structures and mound summit activities

Based on descriptions of mound summits in the chronicles of the Soto expedition, we learn that mound summits are the locations of temple structures with statuary, that mound summits are places where high-level strategy meetings take place, and where elites and/or leaders tended to place their domestic residences. In many instances, temple statuary and other items belonging to the Mississippi Ideological Interaction Sphere (MIIS) are found in mound contexts (King, 2003b; Lindauer and Blitz, 1997: 184). At Pacaha, Talimeco, and the Natchez district, mound summits are the locations of ritual structures with temple statuary. The nearby Chucalissa site has evidence for a mound summit structure that unfortunately contained few artifacts (G. Smith, 1990: 144). In and around the Mississippian world, mound summit structures were used as elite residences, public buildings, and council houses, and partitions and palisades were also common (King et al., 2011; Lindauer and Blitz, 1997).

Based on material culture, microwear studies, and thin-section analysis, it has been demonstrated that Structure 1 on the Mound D summit was used for the production of wooden and shell objects and that these objects were most likely temple statuary, shell beads, and shell gorgets (Mehta et al., 2016), although it is possible a much broader array of items were made. This argument is based on the following evidence: (a) the recovery of numerous Burlington chert drills and Citronelle gravel chisels from Structure 1, (b) the identification of polish and rounding on the distal bit ends of drills, and (c) the recovery of microflakes of Burlington chert in samples of thin sections taken from the floor of Structure 1. This evidence, in addition to comparative structure size data which indicate that Structure 1 is one of the largest structures at the Carson site (Mehta et al., 2016: 482), and larger than 77.5% of structures across the Mississippian world (see

White and Steere, 2014), supports statements that Structure 1 could have been used for craft production (Mehta, 2015; Mehta et al., 2016, 2017a, 2017b). Since these arguments and presentation of data have been made elsewhere, this section is a synthesis meant to set the stage for a discussion on the implications of this structure on the Mound D summit.

Unfortunately, no finished products were recovered during CMAP excavations, and interpretations of individualizing strategies of power have to be made from inferred data; specifically, material culture, microwear, and thin-section analysis. A total of 42 microdrills, microblades, and chisels were recovered from Structure 1 on the mound summit (Figure 9). Microlithic tools were made on an imported lithic material, Burlington chert, and Mississippian chisel forms were made on local, Citronelle gravels (Figure 10). Finally, microartifacts identified in thin sections of samples taken from the Structure 1 floor suggest that Burlington chert and Citronelle gravel tools were used to make craft objects that required drilling, incising, and chiseling, all of which resulted in microartifacts of Burlington chert and shell becoming embedded within the structure floor (Mehta et al., 2016). Given the rounding and polish identified on the tips of Burlington chert drills, it is likely softer materials like wood and leather were perforated and drilled, not harder materials like shell (see Yerkes, 1983; see Mehta et al., 2016 for the published analysis). Either these perishable materials did not preserve and consequently were not recovered, or they were traded away to other towns. In the absence of finished products, interpretations about structure function are limited to recovered artifacts and thin-section analysis of the structure floor.



Figure 9. Front and back views of a microlithic drill, made of Burlington chert from Structure I, on the Mound D summit.



Figure 10. Front and back views of Mississippian chisels, made of local Citronelle gravel, from a cache found in Structure 1, on the Mound D summit.

Discussion

This research adopts the perspective that the relationships between monuments and the communities that build them are contested and negotiated; mounds can be durable symbols of power or they can serve to reify community solidarity—it

is in how and why they are built that meaning emerges. At Carson, the site is characterized by exceptionally large earthen monuments, small earthen mounds and rises, embankments, and plazas; how these features were related to leadership structures and systems of social organization will require a long-term project focused on the development of the Mississippian landscape. At a smaller scale, the research considered here can focus on the construction of Mound D and how it was used and, consequently, offer some considerations of social relations at this mound, which itself was located within a much larger and more complex sociopolitical milieu. Given the data presented here, the following postulates are offered:

1. Mound D was built in four stages, two of which were monumental in scale and which led to its present pentagonal shape. My interpretation (following Blitz and Livingood, 2004; Payne, 1994) is that these large building stages were structured by social rules that were different from rituals which guided the building of smaller mounds that were annually rebuilt and/or remantled.
2. After Mound D reached its present form, sometime in the 15th or 16th century, its summit supported a structure (and likely multiple buildings) that could have been used for craft production, of which possibilities include shell beads, shell gorgets, shell-tempered pottery, and/or wooden statuary and wooden objects. An uber-conservative interpretation would posit that the artifact assemblage found in Structure 1 could have been used for activities related to drilling, cutting, carving, and chiseling and that shell and lithic fragments embedded in the structure floor originated from those activities.
3. Mound D is monumental in scale and the largest mound by volume at Carson. As such, its presence on the landscape likely represents concepts ranging from power, to authority, to communally held concepts of ideology and cosmologic representation. Its meaning was negotiated in a dialectic between observer and observed, and given ethnohistoric descriptions of mounds and mound summits, wherein they supported elite domiciles and temples with ancestral significance, it is reasonable to suggest that Mound D was also used in a similar fashion.

How might mound building and the use of mound summits be used to understand constellations of political authority and strategies of leadership at Carson? The settlement histories of Cahokia, Moundville, Etowah, and Carson all point to a pattern of elites increasingly distancing themselves from commoners, whether through the construction of palisades around central districts at Cahokia (Dalan, 1997: 101), through the development of a necropolis at Moundville (Hodge, 2011: 236; Knight and Steponaitis, 1998), or differential emphases on mound building and/or trade goods at Etowah (King, 2003a). Much like at Etowah, material evidence from Carson's Mound D suggests a shift over time in actions emphasizing community driven mound building to

actions favoring the status of single individuals or kin groups. Early in Carson and Mound D's history, large-scale efforts were directed at preparing the landscape for mound construction and in building the mound itself. The clean, homogenous fill and absence of rain-sorted lenses in Stage III suggests the mound was constructed rapidly (see recent findings at Cahokia and Poverty Point; Ortmann and Kidder, 2013; Kidder and Sherwood, 2017; Sherwood and Kidder, 2011, 2018). This construction probably took place during the 13th century A.D., a period of rapid expansion in monumentality across the Yazoo Basin (Brain, 1978). Most importantly, the majority of Mound D was evidently constructed quite early in the history of the Carson site. While the mechanisms for leading the construction of monumental mounds remain difficult to parse, data from Mound D demonstrate that large mound stages, Stages II and III, were built of fairly uniform, well-sorted sediments that have little evidence of loading, water sorting, or disturbance. This signifies that two large mound stages were made by a labor force larger than a single kin group (perhaps ranging in size from 79 to 236 workers). Given the amount of time it took to build the mound, it is likely that several generations were responsible for the construction of Mound D, from its inception in the early 13th century (OSL1; Table 1) to the end of Stage III in the late 14th to mid-15th century (RC#7, Table 1). During this time, it is most likely that communities participated in mound building events that were coordinated and rapid. These communities could have been acting collectively and for their mutual benefit, they could have been compelled to build this monument, or the scenario may have been some version of both. What we know from existing studies is that the social rules for monumental construction were different from social rules structuring the building of smaller mounds and for ritual rebuilding events. To this, one might consider how documents from the Soto expedition depict mounds and mound summits as the domain of political and social elites. Therefore, it is reasonable to infer the role elites may have played in sponsoring, supporting, and/or guiding collective action in the building of mounds. This labor need not have been forced or compelled and given the importance of ritual in the building of smaller mounds, it is likely these rituals were co-opted or enhanced by elites to build larger, monumental mounds.

After the building of Mound D and Stage III were completed, subsequent construction was rare. Instead, a series of structures were built and rebuilt in place on the southeastern corner of Mound D (Mehta et al., 2017b). This palimpsest of structures produced evidence of microlithic tools, small wood-working chisels, and an abundance of serving wares. Thin-section analysis of the structure floor reveals embedded microflakes and shell (Mehta et al., 2016). Following my initial postulate, it is possible that these microlithic tools and small chisels were part of a crafting toolkit to make prestige-good items that were embedded within Mississippian ideology and cosmology. However, without recovering any finished products, my interpretations are limited, and it is

possible these items were used only to make utilitarian items. Nevertheless, the proximity of these finds to the mound summit might suggest that the whatever crafting industry was taking place on the mound summit was controlled from a seat of power on Mound D, by a person or persons with significant social and political status.

Let us now consider how strategies of leadership at Carson are reflected across Mississippian societies of the Eastern Woodlands. If we consider the histories of Cahokia, Moundville, and Etowah, mound building was typically constrained to the early phases of these monumental towns. While the chronology of Carson's other mounds is unknown, Mound D certainly follows the established Mississippian pattern. Consequently, I interpret Carson's built environment of monumental mounds as a medium through which power was enacted. Ethnohistoric descriptions interpret mounds as domains of chiefly power. For example, at Casqui and Pacaha, the Soto documents portray mounds and mound summits as places where important social contracts were defined, including the building of a Christian cross and raiding a rival's temple. Some have even suggested that the militaristic grand-standing displayed by the warrior boatman of Pacaha and downriver chiefdoms was a mechanism for asserting power and supremacy over other subordinate leaders (Earle, 1987; Smith and Hally, 1992: 106). At Carson, and other sites in the Mississippian world, one method of demonstrating social power was through earthen mound construction. At Etowah and Moundville, "platform mounds were particularly important symbols often associated with the forging of group identity, and thus with strategies of persuasive aggregation" (Beck, 2003: 652; Knight, 1986). At both sites, strategies for garnering power changed over time, the value of authority and leadership roles changed, and neither site remained resilient for long after shifting to strategies emphasizing a prestige-goods economy. The history of events at Carson that lead to its eventual abandonment are poorly understood, but there is evidence to suggest that mound building is limited to the early phases of occupation and that burials in the Carson village date to late in the site's occupation. If so, events at Carson would mirror those at Moundville and at Etowah. One must then consider the role that socially integrative rituals play in cohering a polity and a community together. Put another way, one must wonder to what extent mound building is a necessary first step in the development of the Mississippian political landscape.

Conclusion

Several lines of data are used to argue for the roles that mound construction and mound summit use play in the development of the Carson site. The rapid construction of Stage III indicates a rapid deployment of labor and laborers, speaking to the ways in which social elites used communal rituals to sponsor mound construction (Knight, 1986: 680). Summit architecture on Mound D revealed

the presence of chisels and drills with polish and microwear, and microdebitage from drill use embedded in the structure floor. These lines of evidence point to the strategies employed by emergent elites to enact their will and accomplish their goals. During the Mississippi period, competition among mounded villages and polities in the northern Yazoo Basin was intense, and occupations were short, sometimes as little as one hundred years (Connaway, 1984; Haley, 2014; Kassabaum et al., 2011; Nelson, 2014; Stevens, 2006). However, occupation and mound building at Carson span the entire Mississippi period, over 400 years of mound construction and village life out of a settlement spanning 1.6 km with evidence of well over 80 earthen mounds. How might one make sense of Carson in this competitive Yazoo landscape? The following discussion addresses this question.

Stratigraphic data suggest that Mound D at Carson was built to withstand cycles of geological, social, and political change. The site's longevity and long history of leadership intertwined with monumental contexts. Excavations reveal that the mound was built in four stages, the most significant of which are Stages II and III. These massive stages were built through community rituals and as landmarks to leaders who provided tangible and intangible benefits to a population despite rapid changes in the courses of the Mississippi River, floods that inundated entire viewsheds and plains, and competition from rival polities. Consequently, it might be reasonable to assume that mound building and domestic life all began at Carson as part of a coeval process and that all of the architecture at the site represents the remains of a singular polity lasting over 400 years. Therefore, what we have at Carson is a long history of occupation, mound building, and centralized leadership.

The building of Mound D by nonelites could likely have provided intangible social and ideological benefits, as well tangibles like protection from raiding, warfare, and subsistence buffers through organized food storage. Furthermore, the elevation of the Carson landform protected the site from flooding. The contemporaneity of radiocarbon dates between Mound A and Mound D, and Carson's location over one geomorphic unit tie the site together as one powerful political unit. Leaders at Carson were able to maintain the relevance of a site, its mounds, and its peoples for over 400 years. Certainly, leadership changed hands over this timespan and strategies of power likely shifted, yet through these changes, the site and its mounds persisted in a dynamic riparian landscape characterized by rapidly changing environments and social upheavals.

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Note

1. There was certainly infighting during the late 17th and early 18th centuries in the Natchez Bluffs region, where a polity like Quigualtam once wielded power.

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