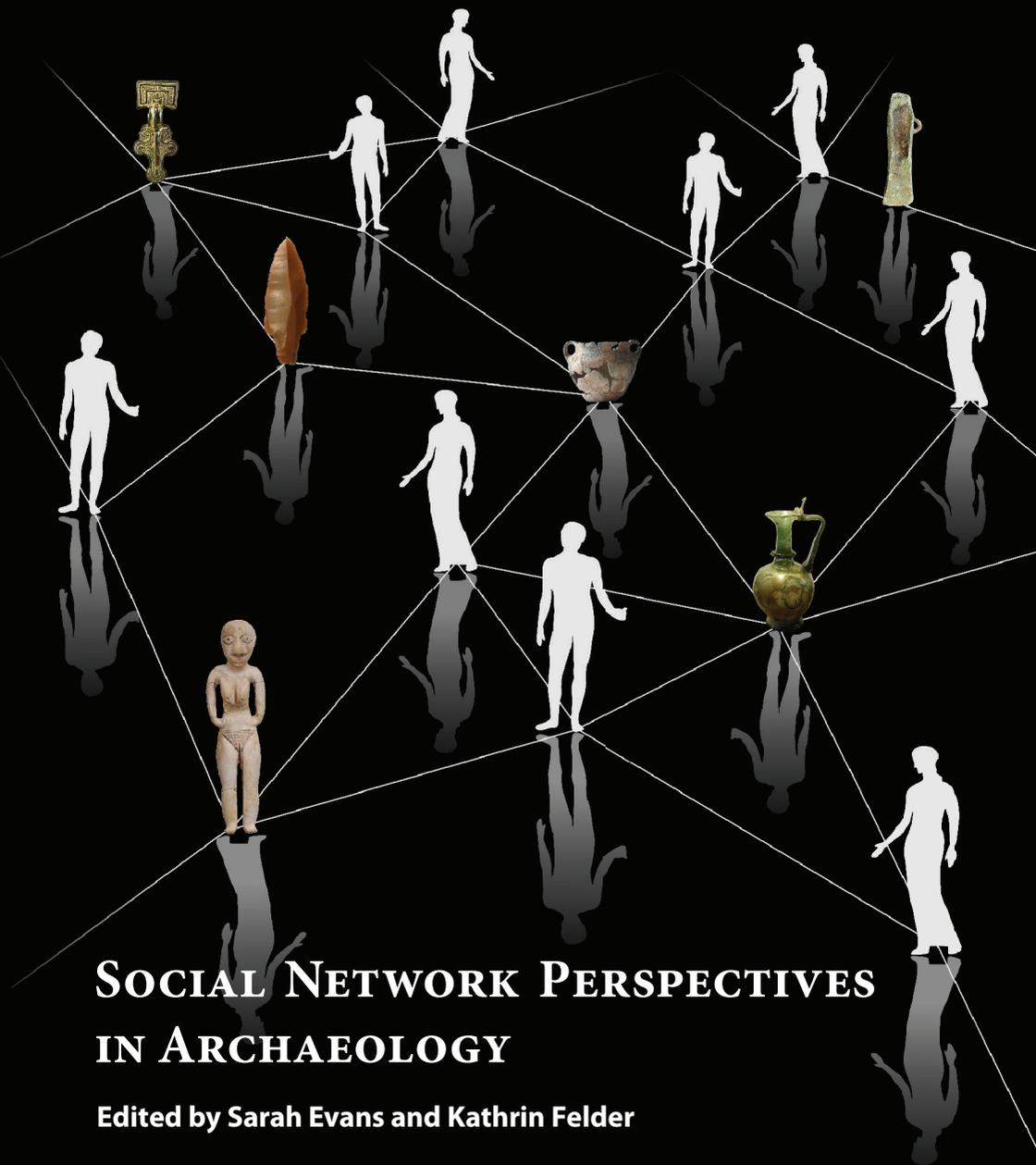


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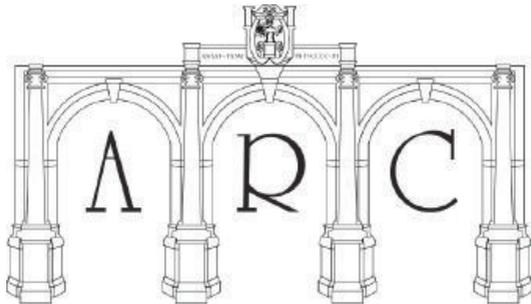


SOCIAL NETWORK PERSPECTIVES IN ARCHAEOLOGY

Edited by Sarah Evans and Kathrin Felder

Archaeological Review from Cambridge
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Social Network Perspectives in Archaeology



Edited by Sarah Evans and Kathrin Felder

Archaeological Review from Cambridge

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Expanding social networks through ritual deposition: A case study from the Lower Mississippi Valley

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Introduction

Feltus is a Late Woodland period (AD 700–1100) American Indian site located in the Lower Mississippi Valley (fig. 1). Being a non-residential ceremonial centre, it was a place where people came together periodically to participate in gatherings that included feasting, setting and removing freestanding posts, building mounds and burial of the dead. These gatherings brought the dispersed population together at a particular time and place. However, we also believe that the ritualized process of setting posts played an important role in gathering members of the community who were not physically present. This focus on the connective properties of place and ritual action is repeatedly referenced at Feltus in the material remains of depositional practices and landscape modification. In this article, we consider the idea of connectivity from a perspective that combines network thinking and a consideration of the culturally defined worldview within which Late Woodland social life took place. We argue that material

inclusions in post deposits had associations related to Late Woodland peoples' beliefs about kinship, the geography of the cosmos, and the nature of connections between people, places and things. Several material inclusions, including standing posts, bear and human remains, and objects with fire and water associations had the ability to connect people and places, enabling the expansion of the social network to include non-living and fictive kin, as well as social actors from other worlds. The durable remains of depositional practices and landscape modification further connected past and future participants in gatherings at Feltus, expanding the social network temporally as well as spatially.

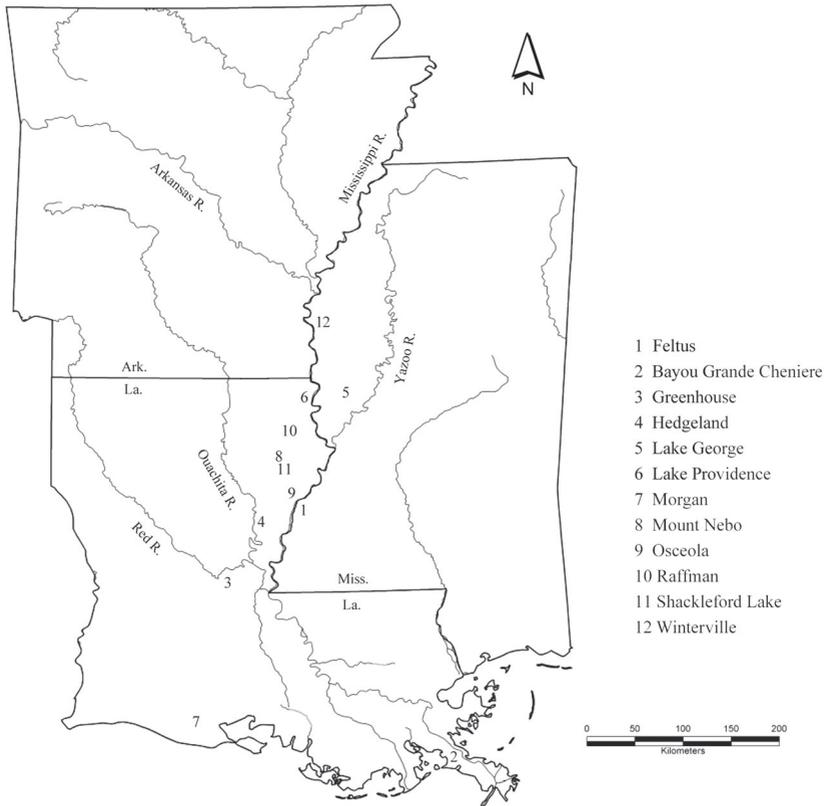


Figure 1. Location of Feltus and other major Late Woodland Coles Creek mound centres in the Lower Mississippi Valley.

By introducing network thinking into the study of an American Indian mound centre, we shed new light on the connective and integrative nature of sites like Feltus. In doing so, we broaden our archaeological

interpretation of mound function to include social integration, commemoration and production of social memory. Finally, we identify and elucidate the ways in which non-human agents and other worlds are brought into the Late Woodland social network, suggesting how social network approaches can be expanded upon to include social actors who are typically left out of archaeological interpretations of past communities.

Underlying concepts and theoretical considerations

In order to explore more fully the nature of Late Woodland communities, we consider two sets of ideas about human social networks recently utilized by archaeologists: Social Network Analysis (SNA) and Actor-Network-Theory (ANT). Both apply network thinking in that they seek to characterize the relationships—ties, links or *connections*—between network participants—nodes, vertices or actants (Brughmans 2010; Knappett 2011; Latour 2005; Mills *et al.* 2013). These perspectives differ from more traditional archaeological approaches that tend to focus on the physical (stylistic or techno-functional) attributes associated with archaeological artefacts, assemblages or sites.

Knappett (2011: 48–53) provides a useful review of the convergences as well as distinctions between the two bodies of theory. For him, SNA has largely focused on describing the *structure* of social networks using mathematical models and graphs for visualization. However, the structuralist bias of SNA approaches struggles to do the agency of network nodes justice. In other words, it does not fully consider the actions taken by participants in the social network that have an effect on social outcomes. ANT, on the other hand, has focused primarily on the *agency* of nodes or actants involved in social networks without always considering the structural or organizational nature of the whole, tending, in fact, to view networks as unbounded. Significantly, for our purposes, ANT views objects as equal with humans in terms of their abilities to act in ways that are social (Latour 2005).

While these perspectives have contributed to our ability to understand the structure of social networks and the agents involved in them, we focus our attention here on the third aspect of social networks: the *connections*, ties or links that hold networks together. By honing in explicitly on the connectors linking nodes in gatherings at Feltus, our approach allows us to consider both the agency of network participants (human and non-human) as well as the overall spatial and temporal structure of the network in which social action takes place. Furthermore, we consider the possibility

that some network participants (nodes) can also be connectors. In their dual role, these special objects, substances and persons possess a type of agency that is different in character from the agency of living human members of the social network. In making this argument, we deviate from both SNA and ANT by considering the particular attributes of materials used during large gatherings of people. Unlike traditional non-network approaches, however, we consider the *social* attributes of artefacts and assemblages, rather than their merely physical ones.

Our primary archaeological data is a series of freestanding post features at Feltus that date to three distinct time periods. Despite their temporal separation, the deposits surrounding these posts were similarly structured, consisting of zones of specially procured sediments such as ash and river clay. Within these sediments, Late Woodland people interred an array of materials including bear and human remains, pipe fragments and feasting debris. We find that these depositional practices exhibit many attributes typically considered by anthropologists to be indicative of ritual, namely that they are “symbolic, non-technical, formal, prescribed, structured, and repetitive” (Brück 1999: 314). However, we concur with Brück (1999: 326) that “the beliefs that lie behind what western observers identify as ritual practices are in fact a particular manifestation of the values, aims and rationales that shape practical action,” and further, that “all human action draws on and reproduces the sets of cultural principles embedded within particular cosmologies or belief systems.” Rather than dismissing the notion of ritual out of hand, our approach is to elucidate the process and social function of formal, structured and repetitive depositional activities by examining the worldview in which these activities were embedded.

With this in mind, we draw on historic and contemporary ethnographic accounts of American Indian belief systems and the place of humans, non-humans and objects within them. In doing so, we argue that the posts at Feltus, as well as objects and materials deposited with them, had connective properties for the people who placed them there. In their role as connectors, these objects and materials had the ability to connect living members of the Feltus community with those members of the social network residing in different cosmological and temporal realms.

In this sense, ANT aligns well with Native beliefs by recognizing that non-human objects have a particular kind of agency within social networks. Understanding the material inclusions in post deposits *as connectors* allows us to follow these connections, in much the same way that ANT seeks to “follow the actors” (Latour 2005: 12). We can ask where, when and to what

or whom do these connectors lead? Unlike ANT approaches, we suggest that Late Woodland social networks were not unbounded—rather, Native practitioners conceived of the world as consisting of a number of realms or domains with clearly defined boundaries. These realms exist in harmony “as long as all beings believed to inhabit the cosmos follow prescribed rules and maintain orderly communication between the separate domains” (Black 1998: 344). At Feltus, incorporating non-human animals, objects and materials with connective properties in ritual deposits allowed prehistoric people to safely access spatial and temporal domains that were otherwise closed to them, thereby expanding the network of participants who took part in social gatherings.

The archaeology of Feltus

Situated on the edge of high loess bluffs overlooking the Mississippi Alluvial Valley, Feltus consists of four earthen mounds symmetrically arranged around an open plaza (fig. 2). Mounds A, B and C are still standing. Though its location is known from early accounts, the smallest (D) was destroyed in the early twentieth century (Steponaitis 2008). As part of the Feltus Archaeological Project, run by the University of North Carolina, Chapel Hill, the authors conducted a total of nine months of excavation at the site.

The bluffs on which the earthworks were built formed during the Pleistocene as strong winds deposited fine silt sediments in thick layers along the eastern edge of the Mississippi River. Naturally fertile, the loess provided prehistoric people with a wealth of animal and plant resources, in addition to being an ideal material with which to build earthen mounds (Brain 1978: 334). However, the sediments are devoid of stone, sand and clay deposits. As the bluffs near Feltus are over 30 metres higher than the river bottom, procurement and transport of such materials from the river valley or elsewhere for inclusion in post deposits would have required substantial effort.

The chronology of the Lower Mississippi Valley has been comprehensively studied and divided into broad periods. Within each period, there are a number of archaeological cultures, defined on the basis of geographic and material similarity. These cultures are further divided into more specific temporal phases that delineate important shifts in material culture (Kidder 2002: 67). Radiocarbon dates from Feltus place the site in the Late Woodland period (AD 700–1100) (fig. 3), a time of dramatic social

change in the Lower Mississippi Valley characterized by the development of new site types (namely, mound-and-plaza complexes like Feltus), new forms of sociopolitical organization and new subsistence economies (Kidder 2002: 79). Feltus's geographic location within the Natchez Bluffs and ceramic decorative motifs identify it as belonging to the Coles Creek culture, named by archaeologists for the tributary of the Mississippi River along which a number of related sites are located (Ford 1936). The radiocarbon dates from Feltus form three distinct temporal clusters, which align closely with the commonly accepted phase designations for the Late Woodland period within this region (fig. 3).

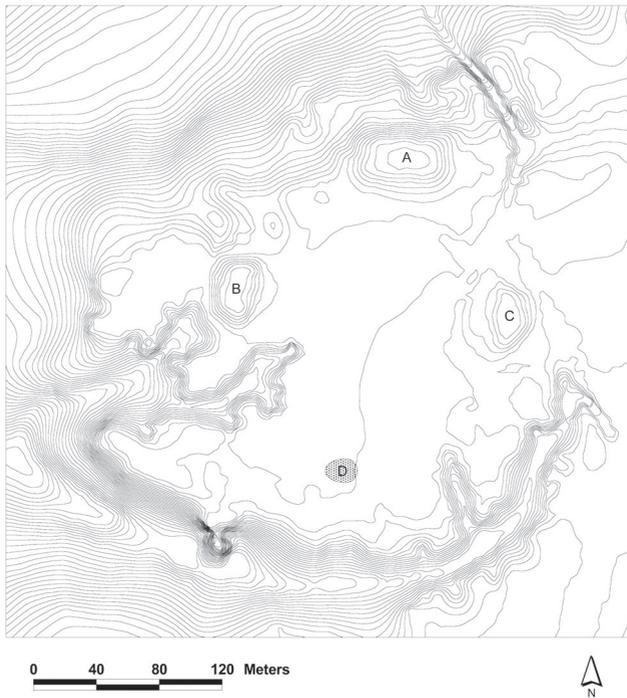


Figure 2. Topographic map of Feltus showing location of mounds A, B, C and D.

Initial use of the site took place during the Sundown phase (AD 700–850) and is represented archaeologically by a series of post and pit features located near the southern end of the plaza (figs 2 and 4). Mound construction followed during the Ballina phase (AD 850–1000), and some additional occupation occurred in the Balmoral phase, shortly before the site's abandonment around AD 1100 (Steponaitis *et al.* 2012). Coles Creek people used Feltus for some 400 years, but the occupation was episodic and no evidence for permanent habitation exists. Archaeologists are still working

to understand the distribution of Coles Creek people across the landscape; however, we know that the settlement pattern at this time was dispersed with people living in scattered farmsteads around mound centres (fig. 1; Kidder 2004; Steponaitis *et al.* 2012). We therefore consider Feltus to be a non-residential site where Coles Creek people gathered periodically to carry out various activities. As detailed below, some of these activities include feasting, setting and removing of freestanding posts, building mounds and burial of the dead. We begin by describing the archaeological features associated with the three phases of occupation at Feltus, with particular focus on the depositional sequence associated with the setting and removal of posts.

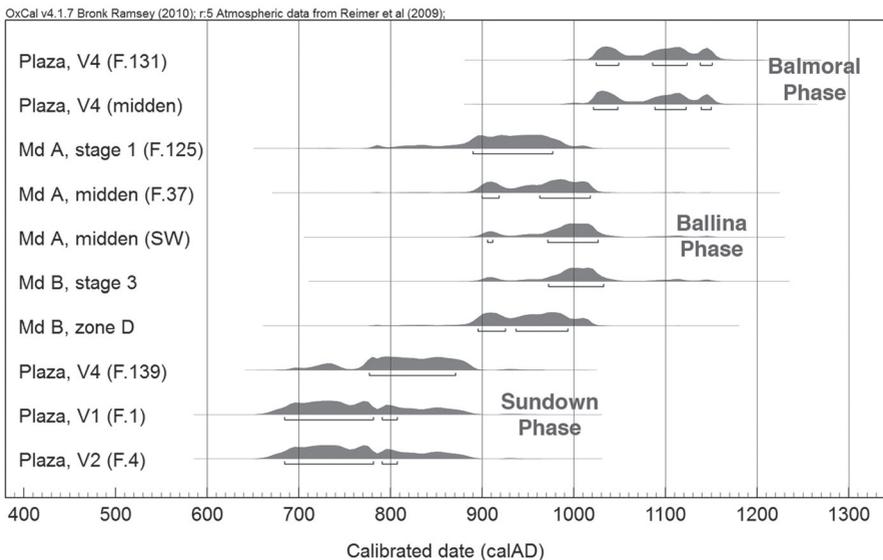


Figure 3. Feltus chronology showing radiocarbon dates in three distinct clusters.

Sundown Phase (AD 700–850)

A number of features located in the south plaza date to the late eighth century AD, the earliest period of activity at Feltus (fig. 4). Among these is a large pit (feature 4), filled with animal bone and ceramic refuse. The character of the pit refuse suggests rapid dumping, with large, uninterrupted fill episodes, and contains numerous pot breaks and partially articulated deer bones. We interpret these food remains as evidence of a large-scale feasting event, due to the exceptional size of reconstructed ceramic vessels—many with rim diameters over 40cm—and the greater frequency of serving

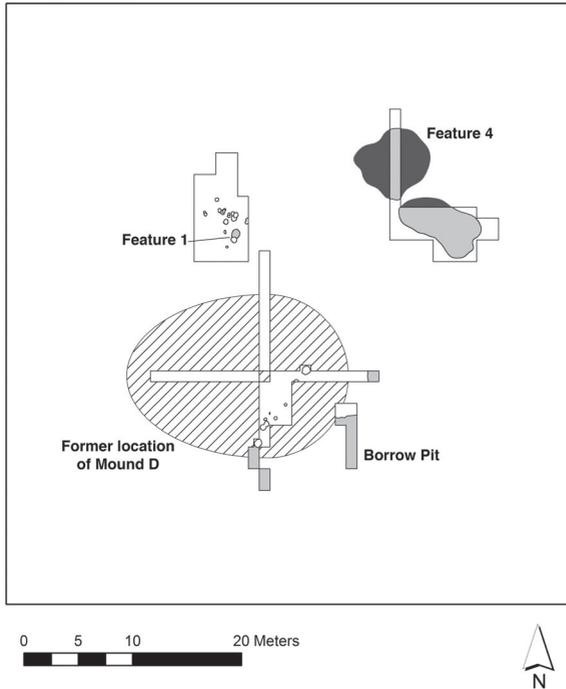


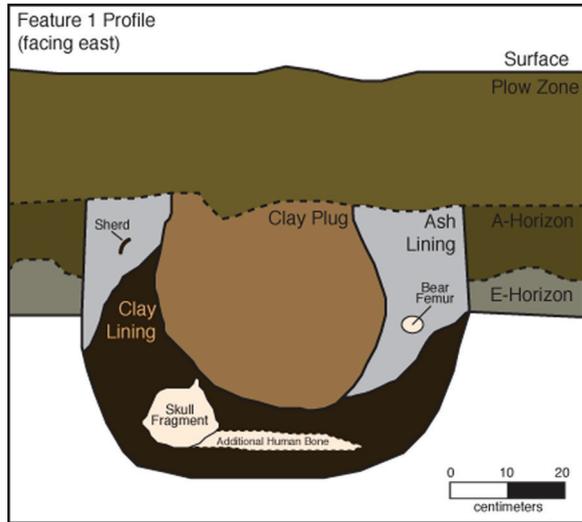
Figure 4. Map of Feltus south plaza excavations showing post field, feasting pit, former location of mound D, and borrow pit.

vessels (bowls) compared to cooking or storage vessels (jars) (Braun 1980). In addition, the quantity and exceptionally large size of certain faunal specimens (namely fish, deer and bear) implies a scale beyond domestic consumption (Kassabaum 2013).

A few metres to the west of these feasting remains we discovered 24 post features, both in front of and beneath mound D (fig. 4). Though these features vary in size, they are remarkably similar to each other in the concentric nature of their fill zones, as well as the materials included within them. Eight of these 24 postholes are less than ten centimetres in depth and likely originate from a platform surrounding mound D (Wailes 1852). As these shallow postholes have largely been destroyed, they are not included in our discussion. The remaining 16 postholes range from 13 to 78cm in depth and from 28 to 90cm in diameter. The lack of alignments or arrangements indicating the presence of a structure suggests that they were freestanding.

Feature 1 can serve as an example of the repeated depositional sequence followed in setting these posts (fig. 5). First, Coles Creek people dug a large 78cm deep hole and lined the bottom with dark clay-rich sediment. Because of the aeolian nature of the bluffs on which Feltus sits,

Figure 5. Line drawing of feature 1 profile, south plaza, near the former location of mound D.



this sediment must have been procured from elsewhere, either excavated from deep within the loess deposits or transported from the river bottom.

Along with this clay lining, cranial fragments and other bones belonging to four or five children under the age of five were deposited. Next, they lined the pit with ash and set a large post, nearly 40cm in diameter into the hole. Presumably this ash represents the remains of one or more eating events, as it contains fragmentary ceramic vessels, faunal remains including deer, turkey, squirrel, rabbit, possum and at least eight species of fish, as well as a typical Late Woodland assemblage of starchy and oily seeds. In addition, the ashy lining contains an intact bear femur and metacarpal. Upon removal of the post, the void was promptly filled with a deposit of clean, clayey soil. This basic procedure was repeated in nearly all of the postholes excavated from the south plaza, some of which were reset with additional posts after the first was removed (table 1). In addition to similarities in fill, a small number of postholes had unusual artefacts, including bear and human remains, pipe fragments, an egg-shaped concretion and a fragment of an organic container holding a distinct, clean fill.

Identical radiocarbon dates indicate that a number of these postholes were contemporaneous with the feasting pit described above, and striking similarities in unusual material inclusions such as pipe fragments and bear bone suggest a further connection. In short, early in the site's history, the post pits and nearby refuse deposits appear to be linked through ceremonies that involved placing and removing posts and attendant feasting.

Post	1	2	3	5	6	7	8	13	17	124	131	132	135	139	159	160
Plug	X		X	X	X	X	X		X	X	X	X	X	X	X	X
Reset	X	X			X			X		X			X	X		?
Ash-lined	X		X	X	X					X	X			X	X	
Clay-lined	X		X	X					?		?	X	X	lump	?	
Mottled		X			X	X	X	X	X	X		X	X	X		X
Ceramics	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Faunal	X	X		X						X	X		X			
Special	bear, human										pipe, con- cretion	con- tainer	pipe			

Table 1. Material inclusions in south plaza posts at Feltus

Ballina Phase (AD 850–1000)

Some time after the feasting and post-setting in the south plaza took place, the locus of activity shifted to the northern end of the site in the vicinity of mound A. Mound A sits upon an extremely dense midden deposit similar in character to the fill of feature 4, described above. Microstratigraphic analyses of the deposit indicate no breaks during its formation. Potsherds from the top and bottom of the midden were refitted, further supporting a rapid deposition that likely resulted from a large-scale feasting event.

While removing the mound fill from atop this midden during excavation, we uncovered a circular void, indicating a post pulled immediately before mound construction began (fig. 6). This post (feature 37) was lined with ash, precisely like those in the south plaza. Again, pipe fragments from the post and the surrounding midden could be refitted, confirming that they were part of a single event. In addition to these pipe fragments, the ash lining included a crayfish claw, clam shells and river-worn pebbles, all materials that are unique to this context. After its erection, debris accumulated rapidly around the post as a result of the large feasting event. Before this debris had the chance to weather, the post was pulled and the first 2.5 metres of mound A were immediately constructed on top of it.¹ In this instance, post-setting and feasting were tied to a third type of activity: mound-building.

¹ It is likely that the first stages of mounds B and C were also constructed during this time. However, because little excavation has been done at the bases of these mounds, we cannot say whether or not standing posts also stood in their locations prior to construction.

Figure 6. Feature 37, an ash-lined posthole capped by the construction of mound A.



Balmoral Phase (AD 1000–1100)

The third and final period of use of the Feltus landscape in the late eleventh century AD included additional post-setting in the south plaza. Radiocarbon dates tie this activity to another episode of large-scale earth moving. Feature 131, an ash-lined post including pipe fragments and an unusual egg-shaped concretion, was set at approximately the same time as a large borrow pit was dug. This borrow pit is at least 3m deep, 60m long and 20m wide, and is likely connected to the construction of mound D (fig. 4). Again, as with mound A in the preceding phase, during the third period of use post-setting was associated with mound-building. In the case of mound D, excavations by Warren K. Moorehead in 1924 revealed that the mound contained the remains of seven or eight individuals (Moorehead 1932: 163–164), reinforcing burial of the dead as part of the cycle of feasting, post-setting and removal, and mound-building identified at Feltus.

In summary, Feltus is a vacant centre where Coles Creek people gathered periodically to reinforce social bonds by eating together, setting ritual posts, building large earthen mounds and burying their dead (Steponaitis *et al. in press*). Early in the site's history, activity focused on large feasting events accompanied by repeated setting and removal of freestanding posts (Kassabaum 2013). In addition to the posts themselves, specially procured ash and clay sediments as well as ceramic pipes, bear and human remains, and other material inclusions were essential components of the depositional process. Mound-building and associated burial joined food consumption and post-setting as important elements of the ritual

sequence during the second and third iterations. These activities drew the scattered Late Woodland population together at a central location, creating and reinforcing the relationships that connected the geographically dispersed population. The connective function of *place* is clearly important to Coles Creek people as evidenced by the repeated episodic use of the Feltus landscape. In the following section we will argue that the particular ritual practices being enacted at Feltus, as well as the materials used in these practices, repeated and reinforced this connective function.

Interpreting material inclusions

While network approaches like ANT and SNA have dealt with temporality in various ways, few archaeologists have followed network connections to places and actors who do not physically exist in the world of Cartesian geography (Knappett 2011: 9). In this section, we argue that materials with particular associations (namely non-human animals, objects and naturally occurring substances) were routinely included in gatherings at Feltus in order to access and include participants located in spatial and temporal domains not commonly considered part of human social networks. To do this we draw on ethnographic material regarding some of the meanings Native North American people associate with the objects and materials included in the post deposits, as well as the posts themselves.

Our ethnographic sources range from accounts written down in the earliest years of European contact with Indian groups in the seventeenth century (see Mooney [1900] and Swanton [1929] for syntheses) to contemporary ethnographic descriptions of the belief systems of traditional Native practitioners (e.g. Jackson 2003; McClellan 1975; Riggs 2012). Although details vary among Indian groups and much has changed since the early contact period, there are striking similarities in beliefs about the structure of the cosmos and the place of humans, non-humans and material objects within it (Townsend 2004). Moreover, the geographic extent of this shared worldview, encompassing large areas of Eurasia and the Americas, implies great time depth (Bradley 2000; Eliade 1961; Hudson 1976; Lankford 2007; Mathews and Garber 2004; Schele and Freidel 1990; Townsend and Sharp 2004). These similarities allow us to carefully apply ethno-historic and ethnographic analogies to understand archaeological remains at prehistoric American Indian sites (Berres *et al.* 2004; Townsend 2004: 20–21). Increasingly, archaeological investigations have found that past people inscribed this worldview onto landscapes, artefacts and iconography (Charles *et al.* 2004; Knight 1986; Pauketat and Emerson 2001; Reilly and

Garber 2007; Sugiyama 1993). At Feltus, this worldview was similarly inscribed in the material remains of depositional practices. In the following discussion, we focus particularly on commonly held beliefs about the social and connective roles of some of these material remains, including bears, posts and objects/materials with fire and water associations.

Bear symbolism

When archaeologists uncover animal bones on a site, they often focus on that animal's utilitarian and economic roles. We argue that the unusual prevalence of bear remains at Feltus and their inclusion with human remains in feature 1 suggests a significant *social* role. Since the Palaeolithic, bears have been potent spiritual symbols for peoples across Eurasia and North America (Bieder 2006; Black 1998; Hallowell 1926; Rockwell 1991; Shepard and Sanders 1985). This spiritual significance becomes evident in traditional stories about bears across numerous North American and European cultures. While the details of these stories change based on context, there are several common themes that are relevant to our discussion—bears are food providers, they are kin to humans in a different way than other animals, and they have the ability to communicate and navigate between the human and spirit worlds. The wide geographic extent of these themes implies their great time depth, allowing extrapolations into prehistoric times. These recurrent themes within American Indian beliefs about bears form the basis for our interpretation (specific examples are cited with their cultural source in footnotes).

First, in a variety of fashions, Native stories characterize bears as food providers. In stories ranging in origin from Northwest Territories² to the American South,³ bears are seen as giving themselves willingly to hunters (Black 1998: 343). Furthermore, throughout the United States, Native groups see bears as controlling all game animals and thus the success of subsequent hunts⁴ (Bieder 2006: 164; Berres *et al.* 2004: 10, 22). Due to their similar diet, it is also likely that bears guided humans in the collection of edible plants (Shepard and Sanders 1985: 72–73). Finally, stories often depict bears producing nuts and berries from their bodies by rubbing their stomachs or extracting grease from their fat without being harmed.⁵ Thus, in Native tradition, bears contribute both materially and figuratively to

² Cree (Rockwell 1991: 26; Skinner 1914)

³ Alabama (Lankford 2011: 123); Cherokee (Mooney 1900: 327–329)

⁴ Mesquakie (Owen 1904: 55)

⁵ Cherokee (Mooney 1900: 273–274, 327–329); Lummi (Lake-Thom 1997: 54–57); Pawnee (Dorsey 1904: 189–191; Rockwell 1991: 71–72)

food production. Due to their distinct overrepresentation in the large-scale feasting events at Feltus, it is likely that they were seen as key players in gathering the food and thus served as active nodes within the social network.

A similarly broad range of cultures from early prehistory to the present have viewed the bear as a person, “albeit a different-from-human person who possessed immense spiritual power” (Bieder 2006: 163). In addition to striking skeletal and muscular similarities recognized in both traditional and contemporary scientific accounts (Hallowell 1926: 149; Sims 2007), bears have many behavioural characteristics often considered uniquely human. Bears walk on two feet, construct dwellings, eat similar foods as humans and have a voracious sweet tooth (Berres *et al* 2004: 8; Black 1998: 345; Hallowell 1926: 148–152). Traditional accounts further suggest that bears react emotionally in human-like ways—they cry tears, spank their children and moan and sigh when worried or upset (Hallowell 1926: 148–152; Shepard and Sanders 1985: xi). For these reasons, ethnohistoric accounts and oral tradition repeatedly portray bears as kin or ancestors⁶ (Black 1998: 345). Thus, their presence at Feltus may also signify the inclusion of a broader kin group, echoing the extension of the social network to include kin spread over great geographic distances.

Finally, as particularly human-like animals, bears are thought to have the ability to communicate and navigate between the human and spirit worlds (Black 1998: 343–345; Rockwell 1991: 64–67). For example, bears are seen as deriving powers from the sun and/or inhabiting both this world and the sky.⁷ Their hibernation patterns are believed to show an ability to travel back and forth between the realm of the living and the realm of the dead.⁸ Shamanic figures in many groups were thought to either be bears or turn into bears⁹ (Rockwell 1991: 5, 64–67; Shepard and Sanders 1985: 63–69). The killing of a bear is widely considered to be “an offering by which humans communicate with the non-human, spiritual domain” (Black 1998: 343; see also Berres *et al.* 2004: 10, 24). Thus, the inclusion of bears in feature 1 and the feasting deposits in the south plaza and under mound A may have allowed participants from the spirit realm or the realm of the dead to also participate in events taking place there. We can therefore think of bears as connectors, in addition to their roles as nodes in the social network.

⁶ Cherokee (Rockwell 1991: 264); Chitimacha (Swanton 1929: 354); Modoc (Bieder 2006: 166); Yuchi (Rockwell 1991: 107)

⁷ Modoc (Bieder 2006: 166); Pawnee (Dorsey 1904: 189–191, 343–344)

⁸ Cherokee (Loucks 1985: 237–239; Mooney 1900: 327–329)

⁹ Chikchansi, Eskimo, Lakota, Ojibwa, Pomo, Tlingit, Yavapai (Rockwell 1991: 64–72); Iroquois, Menominee, Sauk, Winnebago (Berres *et al.* 2004: 16–17)

Standing post symbolism

Unlike bear remains, freestanding (non-structural) posts are common on Woodland period sites. At sites such as Biltmore, Garden Creek, Cold Springs and Walling, large standing posts have been associated with ritual activity such as shamanic ceremonies and feasting (Kimball *et al.* 2010). At the McKeithen site, large pine posts were used during complex mortuary rituals and may have had ceramic effigies affixed to them (Milanich *et al.* 1984). At the Range site, central posts are consistently found in the courtyards of village areas signaling the courtyard as a shared community space and marking its centre as symbolically meaningful (Kelly 1990).

The variable interpretations of such features are largely based on ethnohistoric accounts of the use and meaning of standing posts in southeastern American Indian groups. For example, in a Choctaw migration story recorded in the 1830s, a leaning pole directs the people each morning on their way to a new homeland. When the pole no longer leans, the people have found their new home and settle there, building homes for the living and burying their dead in mounds (Swanton 1931: 10; Galloway 1995: 331–332).

One of the better-known interpretations of post ritual is based on historic period and contemporary Native beliefs regarding the structure of the world. Like beliefs about bears, this cosmology is shared among many indigenous populations of Eurasia and the Americas (Bradley 2000; Eliade 1961; Hudson 1976; Lankford 2007; Mathews and Garber 2004; Schele and Freidel 1990; Townsend and Sharp 2004). In it, the world consists of three divisions (fig. 7). The Above World is made of air, and is associated with “structure, expectableness, boundaries, ... order, stability, and past time” (Hudson 1976: 128; see also Jackson 2003; Swanton 1928). It is inhabited by supernatural beings; chief among them is the sun. Categorically opposed to the Above World, the Beneath World is made of water and associated with “inversions, ... invention, fertility, disorder, change, [and] future time” (Hudson 1976: 128). In between the sky and the watery underworld lies *this* world (or Middle World), home to humans, non-human animals, plants and fire, the earthly representation of the sun. The three worlds are separate but there are connections between them in the form of *axes mundi* and ‘portals’ through which certain people and supernatural beings can travel.

In iconographic representations from the Americas and Europe, the *axis mundi* is often represented visually as a pole or a tree (fig. 7; Bradley 2000; Lankford 2007; Reilly 2004; Schele and Freidel 1990; Waring and

Holder 1945). We therefore suggest that the standing posts at Feltus served the purpose of connecting the Above and Beneath Worlds with the Middle World, where the feasting event took place. By providing this connection, the posts further allowed the participation of beings inhabiting these other worlds.

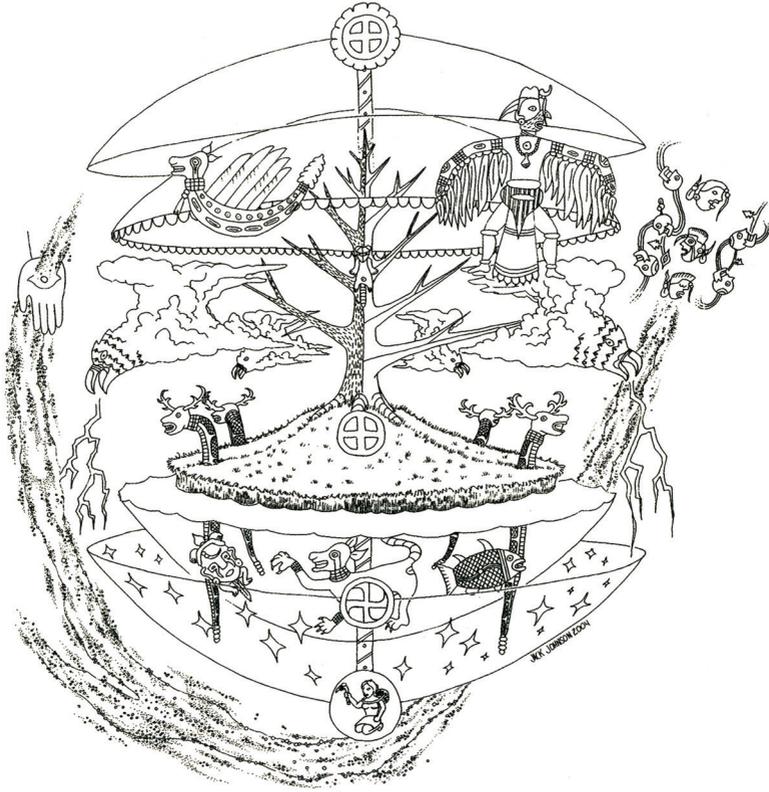


Figure 7. Artist's interpretation of southeastern Native cosmology, showing the tripartite division of the world. The *axis mundi* is depicted as a tree or post connecting the fire symbol of this world, the sun symbol of the upper world and the 'swastika' symbol of the lower world. Drawing by Jack Johnson, reproduced with permission of F. Kent Reilly.

Fire and water symbolism

Interestingly, the *axis mundi* is also sometimes described as a column of light or smoke, symbolized in iconography by superimposed fire and sun symbols (see fig. 7) (Lankford 2007: 31; Reilly 2004). According to Waring (1977: 34), "the most basic ceremonial concept in the entire Southeast [United States] is that of the sacred fire identified with the sun." Smoke, the

product of fire, creates a direct visible connection between the Above World and the fire of the Middle World and acts as a witness, communicating with the Above World spirits about earthly happenings (Jackson 2003: 73; Lankford 2007: 38). It is common in American Indian ritual to use pipe smoking as a means of making this connection (Brown 1953: 7; Paper 1987: 300–301). While we cannot observe fire or smoke archaeologically, material correlates of fire include ash, charcoal, cooked food and smoking pipes—all things found in abundance at Feltus. We suggest that these substances, and particularly the ash surrounding the Feltus posts, share some of these world-linking attributes with their more ephemeral counterparts (Nelson 2012).

Connections between the Middle World and the Beneath World are often described as whirlpools or rough water (Reilly 2004; Riggs 2012). Iconographically, portals to the Beneath World are frequently symbolized by clockwise spirals or swastika motifs (Lankford 2004). Like fire, water is archaeologically invisible, but may be represented by materials found in water such as river clay, water-worn pebbles and the remains of species that live in water. Clay is a common inclusion and occurs in both posts and mounds at Feltus, though there is no functional reason to include it. Although less common among the post inclusions, a crayfish claw, clam shells and river-worn pebbles all occur in one example of a post under mound A and are absent from non-post deposits.

Though the strength of the connection between the Middle World and the Beneath World at Feltus does not appear to be as strong as that with the Above World, the site's bluff top location implies that these materials were intentionally procured from elsewhere, probably from the river bottom itself, and included in the deposits along with objects and substances that reference other parts of the cosmos. Archaeological interpretations of southeastern American Indian cosmology based on iconography show that certain sites focused more on connections with the Above World and others more on connections with the Beneath World (Lankford *et al.* 2011; Pauketat and Emerson 2001; Steponaitis and Knight 2004). At Feltus, objects with water associations create an important connection to the Beneath World at a site that is otherwise focused on Above World connections.

Symbolic intersections

The repeated association of many of these elements in stories—especially bears, posts and fire—makes their combination in multiple depositional contexts at Feltus more compelling. Broadly held Native beliefs about bear hunting provide a good example of these associations.

Though bears *were* hunted, their status as human-like animals meant they were treated differently from other game after their death. Ethnohistoric accounts describe disposing of bear remains in ritually prescribed ways such as lighting fires to burn off the blood or scorch the paws and head,¹⁰ or hanging the head, skin or paws high on a post to protect them from scavengers and give the bear spirit time to escape¹¹ (Hallowell 1926: 135; Loucks 1985). Smoking tobacco over the carcass or sharing a pipe with the bear is also a near ubiquitous practice in such accounts.¹² Swanton (1929: 122) reports that bears were the original owners of fire, and it was through them that humans first accessed this indispensable tool.

This repeated association between bears, posts and fire draws attention to the similar roles these three components play in ethnohistoric accounts of American Indian social groups. Essentially, these elements connect people, places and things. Posts and fire represent the centre of physical, metaphysical and social worlds. Bears and smoke have the ability to communicate between people and spirits in other worlds. Posts, fire/smoke and some forms of water are world axes or portals that connect the worlds. Finally, bears, posts and the remains of sacred fires are all things that require special ritual disposal. We thus interpret the rituals occurring at Feltus as an attempt to use these material inclusions to create connections between people physically located in the Middle World, and other beings located in the Above and Beneath Worlds. Opening a portal to these other worlds would be a powerful and potentially dangerous endeavour. The repeated depositional sequence of the Feltus posts indicates that setting and removing the posts may have required specialized knowledge. We interpret the plugging of posts in the south plaza as well as the capping of at least one post by mound A as a way of safely closing these connections.

Expanding the social network

Thus far we have argued that many of the objects and materials included in the Feltus rituals performed social roles related to connecting participants across cosmological domains. In the earliest period, the

¹⁰ Tagish (Rockwell 1991: 116–121); Tlingit (McClellan 1975: 128)

¹¹ Cree (Rockwell 1991: 40; Skinner 1914); Eskimo (Hallowell 1926: 79); Menominee, Montagnais-Naskapi, Saulteaux, Wabanaki (Hallowell 1926: 63–66, 136–140); Navajo (Rockwell 1991: 48–51); Ojibwa (Hallowell 1926: 136–140; Skinner 1914: 207)

¹² Algonkian (Hallowell 1926: 68–72); Cree (Berres *et al.* 2004: 10; Rockwell 1991: 35–38; Skinner 1914); Montagnais-Naskapi (Hallowell 1926: 63–66); Ojibwa (Berres *et al.* 2004: 10–11)

inclusion of both bear and human remains in feature 1 suggests a notion of ritual that is focused on the gathering of extended kin networks, including the dispersed Late Woodland population along with non-human fictive kin and non-living human kin. To return to the idea of network thinking, we consider the bear and human remains at Feltus as both literal and figurative nodes in an extended social network that should be considered as participants in the same way that we consider living humans to be participants.

However, we can also think of bear and other material inclusions from the perspective of network ties. Bears, posts and pipes or smoke all connect or communicate between the human and spirit worlds. Thus, the act of including particular objects and substances in the setting of the Feltus posts represents not only the drawing together of an extended network of kin, but also the drawing together of worlds. The Beneath World is represented by objects and substances brought up from the river bottom as well as the remains of the dead. The Middle World is incorporated largely by the involvement of living Coles Creek people in the activities taking place at Feltus, and materially represented by the remains of fire and feasting. It is the connectors and communicators, such as ash, pipes, bear and the posts themselves, that signify the inclusion of participants from the Above World. Following these connections allows social network perspectives to enter uncharted territory—incorporating network nodes belonging to the metaphysical as well as the physical world.

Considering the Above World's association with past time and the Beneath World's with future time (Hudson 1976), we suggest that inclusions with cosmological references simultaneously draw in participants across temporal domains. Moreover, including the physical remains of community members literally and symbolically drew past participants into the social network. Burial of the dead in mounds indicates inclusion of ancestors in social gatherings, while the remains of young children placed in the outer rings of standing posts incorporates those who may not have reached the full status of community members (Braun 1977: 283; Van Gennep 1960).

By “reiterating past experience sensually” (Jones 2007: 62), the repetitive nature of depositional activities associated with community gathering and the durability of the materials involved in them also link the present with past and future time. Most of the materials included in the Feltus deposits are used repeatedly in all three iterations of the ritual cycle. Therefore, the activities themselves and the archaeological remains of previous iterations of those activities, provide strong connections to the people who were involved in the past and will be involved in the future.

In this case, new spatial and temporal nodes in the social network are connected through the physical durability of objects or through repetition of activities during which the more ephemeral substances are recalled but not physically there (Jones 2007: 82–83; see also Gosden 1994).

As Jones (2007: 52) reminds us, “activities are not isolated; rather each act is directed towards the past and oriented towards the future.” A number of researchers (*e.g.* Jones 2007; Mills and Walker 2008; Van Dyke and Alcock 2003) have discussed ritual activity in its relation to the production of social memory, and we acknowledge the important role commemoration plays in the activities that took place at Feltus. However, we believe the Feltus gatherings go beyond memory to the actual *inclusion* of those not present. If we return to our original question about where, when and to what or whom material connectors lead, the answer is that they lead to different cosmological realms, to the past and to the future, and to all sorts of people who are considered essential parts of the social whole. Throughout each repetition of the ritual cycle at Feltus, non-human participants were able to cross boundaries that humans normally cannot cross, making present those who are absent (*sensu* Chapman 2008). Broadening the social network in this way includes not only the living but also the dead, not only humans but also otherworldly beings, not only present but past and future participants.

Our analysis takes its cues from social network perspectives that have recently gained traction among archaeologists. However, it differs in key ways that we believe may be of benefit for the future of network thinking in archaeology. Instead of focusing our attention on the agents or nodes within the network (*i.e.* ANT), or alternatively on the structure of networks (*i.e.* SNA), we focus on the links or connectors. To do so, we incorporate culturally defined understandings of material inclusions whose purpose was to gather members of a social network dispersed across temporal, physical and metaphysical domains. Furthermore, our analysis highlights the potential for certain actors (bears in our case) to serve as both nodes and connectors within a social network. Understanding bears, posts, ash and other material objects and substances as having connective properties allowed us to follow the network to realms that often remain unconsidered in archaeological network approaches, but are very real to Native practitioners. Moreover, structured communication between these realms is an important part of Native ritual and served to gather the social whole. By including the inhabitants of these realms in our analysis, we have attempted to gain a more comprehensive picture of a past social network as it may have existed for the people who were part of it.

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References

- BERRES, T.E., Stothers, D.M. and Mather, D. 2004. Bear imagery and ritual in northeast North America: An update and assessment of A. Irving Hallowell's work. *Midcontinental Journal of Archaeology* 29(1): 5–42.
- BIEDER, R.E. 2006. The imagined bear. *Current Writing* 18(1): 163–173.
- BLACK, L.T. 1998. Bear in human imagination and in ritual. *Ursus* 10: 343–347.
- BRADLEY, R. 2000. *An Archaeology of Natural Places*. London: Routledge.
- BRAIN, J.P. 1978. Late prehistoric settlement patterning in the Yazoo Basin and Natchez Bluffs regions of the Lower Mississippi Valley. In Smith, B. (ed.), *Mississippian Settlement Patterns*. New York: Academic Press, 331–368.
- BRAUN, D.P. 1977. *Middle Woodland—(Early) Late Woodland Social Change in the Prehistoric Central Midwestern U.S.* Unpublished PhD dissertation submitted to the University of Michigan.
- BRAUN, D.P. 1980. Experimental interpretation of ceramic vessel use on the basis of rim and neck formal attributes. In Fiero, D., Munson, R., McClain, M., Wilson, S. and Zier, A. (eds), *The Navajo Project, Research Paper 11*. Flagstaff: Museum of Northern Arizona

BROWN, J.E. 1953. *The Sacred Pipe: Black Elk's Account of the Seven Rites of the Oglala Sioux*. Norman: University of Oklahoma Press.

BRÜCK, J. 1999. Ritual and rationality: Some problems of interpretation in European archaeology. *European Journal of Archaeology* 2(3): 313–344.

BRUGHMANS, T. 2010. Connecting the dots: Towards archaeological network analysis. *Oxford Journal of Archaeology* 29(3): 277–303.

CHAPMAN, J. 2008. Object fragmentation and past landscapes. In David, B. and Thomas, J. (eds), *Handbook of Landscape Archaeology*. Walnut Creek: Left Coast Press, 187–201.

CHARLES, D.K., Van Nest, J. and Biukstra, J.E. 2004. From the earth: Minerals and meaning in the Hopewellian world. In Boivin, N. and Owoc, M.A. (eds), *Soils, Stones and Symbols: Cultural Perceptions of the Mineral World*. Portland: Cavendish Publishing, 43–70.

DORSEY, G.A. 1904. *Traditions of the Skidi Pawnee*. (Vol. 8. For the American Folk-lore Society). Boston: Houghton, Mifflin and Company.

ELIADE, M. 1961. *Images and Symbols: Studies in Religious Symbolism*. Trans. Mairer, P. London: Harvil Press, London, 27–56.

FORD, J.A. 1936. *Analysis of Indian Village Site Collections from Louisiana and Mississippi*. New Orleans: Department of Conservation Louisiana Geological Survey.

GALLOWAY, P. 1995. *Choctaw Genesis, 1500–1700*. Lincoln: University of Nebraska Press.

GOSDEN, C. 1994. *Social Being and Time*. Oxford: Blackwell.

HALLOWELL, I. 1926. Bear ceremonialism in the northern hemisphere. *American Anthropologist* 28(1): 1–175.

HUDSON, C. 1976. *The Southeastern Indians*. Knoxville: University of Tennessee Press.

JACKSON, J.B. 2003. *Yuchi Ceremonial Life: Performance, Meaning, and Tradition in a Contemporary American Indian Community*. Lincoln: University of Nebraska Press.

JONES, A. 2007. *Memory and Material Culture*. New York: Cambridge University Press.

KASSABAUM, M.C. 2013. *Feasting Reconceptualized: A View from the American South*. Paper presented at the Society for American Archaeology Conference, Honolulu.

KELLY, J.E. 1990. Range site community patterns and the Mississippian emergence. In Smith, B.D. (ed.), *The Mississippian Emergence*. Washington, D.C.: Smithsonian Institution Press, 67–112.

KIDDER, T.R. 2002. Woodland Period archaeology of the Lower Mississippi Valley. In

- Anderson, D.G. and Mainfort, R.C. Jr. (eds), *The Woodland Southeast*. Tuscaloosa: University of Alabama Press, 66–90.
- KIDDER, T.R. 2004 Prehistory of the Lower Mississippi Valley after 800 B.C. In Fogelson, R.D. (ed.), *Southeast*. (Handbook of North American Indians 14). Washington, D.C.: Smithsonian Institution Press, 545–559.
- KIMBALL, L.R., Whyte, T.R. and Crites, G.D. 2010. The Biltmore and Hopewellian Mound use in the southern Appalachians. *Southeastern Archaeology* 29(1): 44–58.
- KNAPPETT, C. 2011. *An Archaeology of Interaction: Network Perspectives on Material Culture and Society*. Oxford: Oxford University Press.
- KNIGHT, V.J. JR. 1986. The institutional organization of Mississippian religion. *American Antiquity* 51(4): 675–687.
- LAKE-THOM, R. 1997. *Spirits of the Earth: A Guide to Native American Nature Symbols, Stories, and Ceremonies*. New York: Penguin.
- LANKFORD, G.E. 2004. World on a string: Some cosmological components of the Southeastern Ceremonial Complex. In Townsend, R.F. and Sharp, R.V. (eds), *Hero, Hawk, and Open Hand: American Indian Art of the Midwest and South*. New Haven: Art Institute of Chicago in association with Yale University Press, 207–218.
- LANKFORD, G.E. 2007. Some cosmological motifs in the Southeastern Ceremonial Complex. In Reilly, F.K. III and Garber, J. (eds), *Ancient Objects and Sacred Realms: Interpretations of Mississippian Iconography*. Austin: University of Texas Press, 8–38.
- LANKFORD, G.E. 2011. *Native American Legends of the Southeast: Tales from the Natchez, Caddo, Biloxi, Chickasaw, and Other Nations*. Tuscaloosa: University of Alabama Press.
- LANKFORD, G.E., Reilly, F.K. III and Garber, J.F. 2011. *Visualizing the Sacred: Cosmic Visions, Regionalism, and the Art of the Mississippian World*. Austin: University of Texas Press.
- LATOUR, B. 2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
- LOUCKS, G. 1985. The girl and the bear facts: A cross-cultural comparison. *The Canadian Journal of Native Studies* 5(2): 218–239.
- MATHEWS, J.P. and Garber, J.F. 2004. Models of cosmic order: Physical expression of sacred space among the ancient Maya. *Ancient Mesoamerica* 15(1): 49–59.
- MCCLELLAN, C. 1975. *My Old People Say: An Ethnographic Survey of Southern Yukon Territory*. (National Museum of Man, Publications in Ethnology 6). Ottawa: National Museums of Canada.

- MILANICH, J.T., Cordell, A.S., Knight, V.J. Jr., Kohler, T.K. and Sigler-Lavelle, B.J. 1984. *McKeithen Weeden Island: The Culture of Northern Florida, A.D. 200–900*. Orlando: Academic Press.
- MILLS, B.J., Clark, J.J., Peeples, M.A., Haas, W.R. Jr., Roberts, J.M. Jr., Hill, J.B., Huntley, D. L., Borck, L., Breiger, R.L., Clauzet, A. and Shackley, M.S. 2013. Transformation of social networks in the late pre-Hispanic U.S. Southwest. *Proceedings of the National Academy of Sciences of the United States of America* 110(15): 5785–5790.
- MILLS, B.J. and Walker, W.H. (eds). 2008. *Memory Work: Archaeologies of Material Practice*. Santa Fe: School for Advanced Research Press.
- MOONEY, J. 1900. *Myths of the Cherokee*. (19th Annual Reports, of the Bureau of American Ethnology). Washington, D.C.: Smithsonian Institution Press.
- MOOREHEAD, W.K. 1932. *Exploration of the Etowah Site in Georgia: The Etowah Papers* (Phillips Academy Department of Archaeology, Andover, Massachusetts). New Haven: Yale University Press.
- NELSON, E.S. 2012. *Sacred Substances: Linking Community and Cosmos*. Paper presented at the Society for American Archaeology Conference, Memphis.
- OWEN, M.A. 1904. *Folk-Lore of the Musquakie Indians of North America and Catalogue of Musquakie Beadwork and Other Objects in the Collection of the Folk-Lore Society*. Glasgow: University Press.
- PAPER, J. 1987. Cosmological implications of pan-Indian sacred pipe ritual. *The Canadian Journal of Native Studies* 7(2): 297–306.
- PAUKETAT, T.R. and Emerson, T.E. 2001. The ideology of authority and the power of the pot. *American Anthropologist* 93(4): 919–941.
- REILLY, F.K. III. 2004. People of earth, people of sky: Visualizing the sacred in Native American art of the Mississippian Period. In Townsend, R.F. and Sharp, R.V. (eds), *Hero, Hawk, and Open Hand: American Indian Art of the Ancient Midwest and South*. New Haven: Art Institute of Chicago in association with Yale University Press, 125–137.
- REILLY, F.K. III and Garber, J.F. 2007. Dancing in the otherworld: The human figural art of the hightower style revisited. In Lankford, G.E., Reilly, F.K. III and Garber, J.F. (eds), *Visualizing the Sacred: Cosmic Visions, Regionalism, and the Art of the Mississippian World*. Austin: University of Texas Press, 294–312.
- RIGGS, B. H. 2012. *Uk'tena Lives Here*. Paper presented at the Southeastern Archaeological Conference, Baton Rouge.
- ROCKWELL, D. 1991. *Giving Voice to Bear: North American Indian Rituals, Myths, and Images of the Bear*. Niwot: Roberts Rhinehart Publishers.

- SCHELE, L. and Freidel, D. 1990. *A Forest of Kings: The Untold Story of the Ancient Maya*. New York: Morrow.
- SHEPARD, P. and Sanders, B. 1985. *The Sacred Paw: The Bear in Nature, Myth, and Literature*. New York: Viking Penguin Inc.
- SIMS, M.E. 2007. *Comparison of black bear paws to human hands and feet*. (Identification Guides for Wildlife Law Enforcement No. 11). Ashland, USFWS, National Fish and Wildlife Forensics Laboratory.
- SKINNER, A. 1914. Bear customs of the Cree and other Algonkin Indians of Northern Ontario. *Papers and Records of the Ontario Historical Society* 12: 203–209.
- STEPONAITIS, V.P. 2008. Notes on B. L. C. Wailes's survey of the Feltus Mounds in 1852. *Research Laboratories of Archaeology, University of North Carolina at Chapel Hill*, online. Website: http://rla.unc.edu/feltus2/History/Wailes_mapping.pdf, accessed 16 December 2013.
- STEPONAITIS, V.P., Kassabaum, M.C. and O'Hear, J.W. 2012. *Coles Creek earthworks and ritual at the Feltus Mounds in southwest Mississippi, AD 700–1100*. Poster presented at the Society for American Archaeology Conference, Memphis.
- STEPONAITIS, V.P., Kassabaum, M.C. and O'Hear, J.W. In press. Coles Creek antecedents. In Pauketat, T.R. and Alt, S.M. (eds), *The Medieval Mississippians*. Santa Fe: School for Advanced Research Press.
- STEPONAITIS, V.P. and Knight, V.J. Jr. 2004. Moundville art in historical and social context. In Townsend, R.F. and Sharp, R.V. (eds), *Hero, Hawk, and Open Hand: American Indian Art of the Ancient Midwest and South*. New Haven: Art Institute of Chicago in association with Yale University Press, 167–181.
- SUGIYAMA, S. 1993. Worldview materialized in Teotihuacan, Mexico. *Latin American Antiquity* 4(2): 103–129.
- SWANTON, J.R. 1928. Sun worship in the Southeast. *American Anthropologist* 30(2): 206–213.
- SWANTON, J.R. 1929. *Myths and Tales of the Southeastern Indians*. (Bureau of American Ethnology, Bulletin 88). Washington, D.C.: Bureau of American Ethnology.
- SWANTON, J.R. 1931. *Source Material for the Social and Ceremonial Lives of the Choctaw Indians*. (Bureau of American Ethnology, Bulletin 103). Washington, D.C.: Bureau of American Ethnology.
- TOWNSEND, R.F. 2004. American landscapes, seen and unseen. In Townsend, R.F. and Sharp, R.V. (eds), *Hero, Hawk, and Open Hand: American Indian Art of the Ancient Midwest and South*. New Haven: Art Institute of Chicago in association with Yale University Press, 15–35.

TOWNSEND, R.F. and Sharp, R.V. 2004. *Hero, Hawk, and Open Hand: American Indian Art of the Ancient Midwest and South*. New Haven: Art Institute of Chicago in association with Yale University Press.

VAN DYKE, R.M. and Alcock, S.E. 2003. *Archaeologies of Memory*. Malden: Blackwell Press.

VAN GENNEP, A. 1960. *The Rites of Passage*. Trans. Visedom, M.B. and Caffee, G.L. Chicago: University of Chicago Press.

WAILES, B.L.C. 1852. *Notes in the field, March 11– April 22, 1852*. Manuscript (field diary). Mississippi Department of Archives and History, Archives and Library, Wailes papers, Z/0076.000/S, Box 2, Folder 2.

WARING, A.J. 1977. The southern cult and Muskogean ceremonial. In Williams, S. (ed.), *The Waring Papers: The Collected Works of Antonio J. Waring*. (Papers of the Peabody Museum of American Archaeology and Ethnology 58). Cambridge: Peabody Museum Press, 30–69.

WARING, A.J. and Holder, P. 1945. A Prehistoric ceremonial complex in the Southeastern United States. *American Anthropologist* 47(1): 1–34.