The Ramey
Incised Pottery of Cahokia (IL) USA.
Transmission and Adaptation of an Iconographic Message and Socio-Political Implications

Melissa Mattioli

Doctorado en Recerca
Historia del Arte y Musicologia del RD99/2011
año 2021

UAB
Universitat Autònoma de Barcelona

Director
Victòria Solanilla Demestre

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Abstract

Cahokia is the earliest and largest settlement of pre-Columbian North America. Located in the American Bottom floodplain, a few kilometers from present day St. Louis, MO (USA), this archaeological site had risen to be the greatest Mississippian settlement by the middle of the 11th century until its abandonment at the end of the 14th century. The archaeological investigations led at the site have involved only a small part of its extension. One of the most extensive excavations took place in the Merrell Tract and has been led by the University of Bologna (IT) from 2011 to 2016. The results obtained by University of Bologna's excavations, combined with data coming from previous researches led in that same area since the 1920s, enabled us to formulate a new hypothesis concerning the settlement dynamics and the use of space in the interested area, as well as its contextualization in the wider picture of the history of this Mississippian center. The aim of the research is to use the sum of archaeological and iconographic data for artistic and socio- political investigation purposes, focusing on a specific typology of pottery and using it as main research tool. The Mississippian culture is characterized by a set of distinctive traits, including the adoption of the shell-tempered Ramey Incised pottery which, through its iconographic meaning, aided the development and the diffusion of a system of religious beliefs known as South-Eastern Ceremonial Complex. These pots had a huge geographic distribution and they have been frequently found in both ceremonial and domestic contexts, highlighting their value and significance in the Mississippian communities. Traditionally, it is granted that the presence of Cahokia-style cosmograms outside of the American Bottom represents an expression of Cahokian religious ideology as adopted by hinterland groups, revealing a local desire to participate in the Cahokian cultural phenomenon. Through the comparative analysis of a variety of iconographic and archaeological data, it was proved that peripheral inhabitants, from northern American Bottom area to the South-eastern of the United States surely were in contact. However, these populations did not passively adopt the practices of more powerful core polities but in some way reinterpreted them according to local knowledge, understandings and histories. By supporting this theory and extending the same inquiries to the Amerindian area, the author concludes that at the moment we cannot confirm the cultural contact between the Mississippian and the Amerindian areas. However, with the support of the evidences provided we were able to demonstrate the circulation, across the Pre- Columbian American territory, of the same socio-political meaningful concepts accompanied by their iconographic contextualized representations, and so we were able to re-open the debate on this interesting topic and to suggest some reflections for further investigations.

Acknowledgments

These ten years of research have been far from the easiest of my life.
Writing this dissertation and trying to conciliate work with personal life, during the last two years in particular, has been really challenging but luckily I was overwhelmed by the support of so many people.

I would like to express my sincere gratitude to UAB but most of all to my thesis director, Professor Victoria Solanilla Demestre, for guiding me, for believing in the project and for sharing her knowledge and enthusiasm with me.

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I pay my deep sense of gratitude to my family, you are all irreplaceable. Anna, Giampiero, Vanessa, Fabiano ed Edoardo, this work is dedicated to you all.

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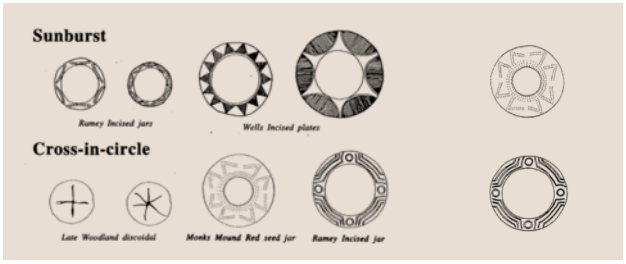

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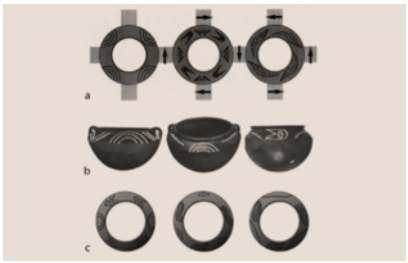

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Introduction

Located in southern Illinois, a few kilometers from present day St. Louis (MO), Cahokia was once the largest polity of pre-Columbian North America. It became the most prosperous Mississippian settlement by the middle of the 11th century, reaching the acme of its greatness throughout the 12th century, to be then progressively depopulated by the end of the 14th. With its 120 earthen pyramids arranged in clusters around plazas, it reached an estimated population ranging from 10,000 to 15,000 individuals (Milner, 2006; Pauketat and Lopinot, 1997) spread over an area of 16 km2 (Fowler, 1997; Kelly, 2000; Chappell, 2002; Dalan, et al. 2003; Iseminger, 2010; Pauketat and Alt, 2015). The size and monumentality of the settlement made this site an exemplary case in North America. Multiple hints suggest that it was in Cahokia that the egalitarian societies that had been prospering for millennia in the Eastern Woodlands developed their first ranked political system (Mehrer, 1995; Roger and Smith, 1995; Brown and Kelly, 2015).

Because of its complexity, Cahokia has been at the center of a longstanding debate concerning the degree of its economic and political system and its relationship with the hinterland (e.g. Blitz, 1999; Cobb, 1993; Rogers and Smith, 1995; Emerson, 1997; Welch, 2006; Brown and Kelly, 2015).

The site has been initially categorized as chiefdom (Milner, 2006) or a "Complex Chiefdom" (Pauketat and Emerson, 1997: 3), but later on other scholars attributed to Cahokia the role of capital of a state, the extension of which would have encompassed the American Bottom region as a whole (O'Brien, 1989; Zimmermann Holt, 2009). Today the general consensus is that Cahokia was a city able to flourish while yet detached from the state-making process (Kelly and Brown, 2014; Brown and Kelly, 2015; Alt, Pauketat and Kruchten, 2010). Nonetheless, however we choose to label it, Cahokia has positively been an example of urban development among the Pre-Columbian societies of North America.

Before extensive excavations at the site, scholars believed Cahokia a big ritual center with no residential areas (Young and Fowler, 2000); this prevalent view changed after the extended investigations carried out in the 1960s in Tract 15A and 15B (Pauketat, 1998; Valese, 2017; Pauketat, 2013). As a matter of fact the archaeological records unveiled the presence of a dense and continued occupation of the site from the Emergent Mississippian phase until the demise of Cahokia (Wittry and Vogel, 1962; Fowler, 1997). Moreover, after a huge salvage excavation project that encompassed the entire American Bottom area had been put into effect in 1977, several more Mississippian settlements were brought to light, revealing a much more complex picture of the Mississippian world than previously believed (Young and Fowler, 2000).

The Merrell Tract is located in the central core of the site, approximately 300 meters West of Monks Mound, Cahokia's main earthwork. In 2011, the University of Bologna's research in the area aimed at clarifying the settlement dynamics and its use of space, and more specifically at understanding the transition from a residential area to a large open arena complete with public buildings during Cahokia's apogee (Valese, 2017). The location of the excavation has been chosen due to the proximity to the above mentioned 15B Tract, to which it can be considered as a continuation. The archaeological explorations undertaken by the Italian team over a six-year period have revealed hundreds of archaeological features spanning through the entirety of Cahokia's chronology, from the Emergent Mississippian to the Sand Prairie occupation, in line with the results of former investigations of the area (Valese, 2017). The results obtained by the University of Bologna's excavations combined with data provided from previous researches, enabled us to formulate new hypotheses about the settlement's dynamics and use of space in the interested area, as well as its political influence and contextualization in the wider picture of the history and role of this Mississippian center (Valese, 2017).

The choice of specific methods has had an essential role during these last three years of researches. The starting point of this dissertation has been the systematic collection of information regarding all previous and contemporary archaeological and iconographic investigations related to this area of interest. Then data sets from different researches have been integrated and compared to one another. The results thus obtained suggest a more complex picture in regard to the development and the diffusion of a system of religious and political beliefs than previously thought.

One of the main objectives at the base of this research has been the use of the newly-found results of the Italian excavation and the post-processing of the data for iconographic and socio- political investigation purposes, and more specifically to focus the author's inquiries on a particular Mississippian pottery typology and using it as main research tool.

From 2011 to 2016, throughout University of Bologna's excavations, the author of this dissertation has been in charge of ceramic analysis and of the supervision of laboratory operations (Valese, 2017 and Mattioli, 2017). Amongst all of the ceramic specimen collected throughout the six years of the excavation, I decided to focus my attention on the Ramey Incised variety of pottery, basing my research on the iconographic comparison between pottery sherds recovered from the Italian excavation, which are in the classic Ramey Incised style, to those detected across the sites of the Cahokian hinterland to clarify the nature of the relationship between different communities.

The Mississippian culture is characterized by a set of distinctive traits, including the adoption of the shell-tempered Ramey Incised pottery which, through the dissemination of its iconographic message, laid the basis for the development and the diffusion of a system of religious beliefs known as South-Eastern Ceremonial Complex all over the Mississippian area.

Early theories of cultural contact suggest that inhabitants of peripheral settlements unquestioningly adopted the practices of a core polity. In reality, as many experts believe, they may have resisted the dominant influence or negotiate it on their own terms and according to their own histories and existing worldviews (Dietler, 2010; Lightfoot and Martinez, 1995; Pauketat and Alt, 2005; Silliman, 2005; Stein, 2002). Traditionally, it is widely accepted that the presence of Cahokia-style cosmograms outside of the American Bottom represents an expression of Cahokian religious ideology as adopted by hinterland groups, revealing a local desire to participate in the Cahokian cultural phenomenon (Friberg, 2017). However, through iconographic analysis, the author intends to support the theory that inhabitants of peripheral settlements, from northern American Bottom area to the South-eastern of the United States, did not passively adopt the practices of more powerful core polities, but more likely, there was an entanglement between Cahokian and local ideas and symbolism.

For this research, the author strongly believed in the use of the interdisciplinary perspective. We combined the archaeological research and the iconographic methodology approach to investigate how political and religious concepts were transmitted and adapted across the Mississippian area.

This research is mostly based on archaeological and iconographic data collected from the Merrel Tract- Unibo excavation, and also from several other American Bottom sites. The data collection has been carried out through the use and the comparison of original data sheets and published or unpublished site reports and analyses.

This study can be framed as a final stage following the conclusion of a bigger archaeological project which the author was lucky enough to follow from the very beginning. The entire research has been composed of 4 stages: archaeological excavation, data collection and analysis, creation of computerized databases, comparison and interpretation of archaeological and iconographic data.

The dissertation will be organized as follows: the first chapter will be devoted to introduce a general overview of Cahokia, providing geographical, archaeological and socio- cultural information.

The second chapter will introduce the reader to the archaeological excavations occurred in the interested area and more in specific on the University of Bologna's project, providing archaeological results and summarized conclusions (Valese, 2017 and Mattioli, 2017).

The third chapter will provide an accurate summary of the ceramic report from the Italian excavation, with a detailed description of the ceramic material assemblage recovered from the field as well as methodological aspects applied to field and laboratory operations and data management (Valese, 2017; Mattioli, 2017).

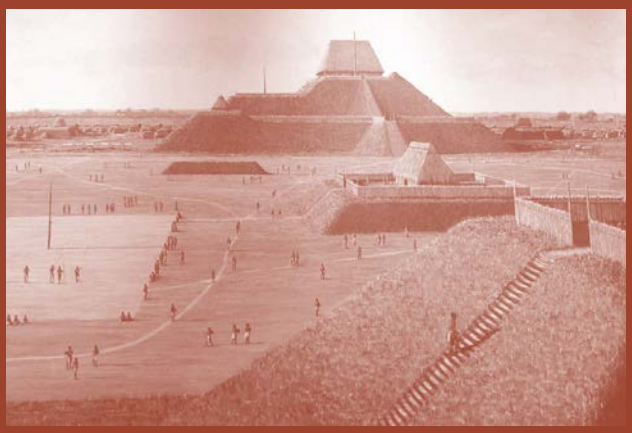
A following fourth chapter will be devoted to deepening the Ramey Incised ceramic iconographic study and to provide information about the Southeastern Ceremonial Complex phenomenon.

In each related chapter, detailed maps, drawings, photographs, and metric information will be provided as a support for the author's considerations, plus at the end of the dissertation the reader will find an appendices showing all the Ramey Incised findings discovered during the Merrel Tract-Unibo excavation, with related database records (Valese, 2017; Mattioli, 2017).

The second part of the fourth chapter is dedicated to deepening the research topic. We investigated, through the comparative analysis of a variety of iconographic and archaeological data the diffusion and interpretation of specific Mississippian iconographic motifs across Cahokia's hinterland regions.

Finally, in the last paragraph the author investigated some iconographic similarities detected between the Mississippian, the Mesoamerican and Andean area, with the intent to extend the cultural contact discussion and reflections to a wider area.

The final chapters will be focused on the interpretation of the data presented in the previous ones and on the elaboration of the related conclusions.



Chapter 1

Cahokia and the Mississippian Culture

The Mississippian centre, known as Cahokia, is located in the American Bottom floodplain, at the confluence of the Missouri and Mississippi River, near the modern city of St. Louis, in south western Illinois, USA. This region, known as American Bottom, is a broad alluvial plain bounded on the north by the bluffs at present day Alton, Illinois, just north of the confluence of the Missouri River, and to south by the town of Chester, Illinois just south of the mouth of the Kaskaskia River. Today, the Mississippi River flows along the western edge of the American Bottom, and the floodplain is circumscribed to the east by bluffs between 50 meters to over 100 meters high (Milner, 1998:35). The Cahokia site is situated on the floodplain of the American Bottom, approximately 13 km east of the Mississippi River.

The archaeological site expands over an area of 13sq km including 120 mounds arranged in clusters around plazas. Cahokia was the largest polity of pre-Columbian North America with an estimated population ranging from 10,000 to 15,000 individuals (Milner, 2006; Pauketat and Lopinot, 1997) spread on 16 km2 (Fowler, 1997; Kelly, 2000; Chappell, 2002; Dalan et al., 2003; Iseminger, 2010; Pauketat and Alt, 2015).

An even greater area, encompassing the Cahokia Mounds State Historic Site and surrounding lands, is recognized as a federally designated National Historic Landmark (Fowler, 1997:8), is on the National Register of Historic Places, and is a UNESCO World Heritage Site.

This archaeological site had risen to be the greatest Mississippian settlement by the middle of the 11th century until its final abandonment marked by the arrival of French colonists in 18th century and coincided with the general depopulation of a wider region later known as the Vacant Quarter (Kelly, 2009).

Figure 1.1 *Aereal Ricostruction of Monks Mound and Downtown Cahokia, Cahokia Mounds Historic Site.*

1.1 Site Environment

The area was rich in fertile alluvial soils and wet areas hosting abundant animal and vegetal life, providing perfect conditions for human occupation that started since the tenth millennium BC with small groups of Paleoindian hunters and gatherers followed, from 8000 BC, by Archaic hunters and gatherers (Iseminger, 2010 and Valese, 2017).

Due to the dynamic of the Mississippi River, the American Bottom is characterized by diverse geomorphic microenvironments and therefore diverse floral and faunal resources (White et al., 1984). Three primary geomorphic zones comprise the American Bottom area: the uplands, the colluvial veneers and alluvial fans and the floodplain. Although the American Bottom is within the temperate deciduous forest biome characteristic of much of the eastern of the United States, the aforementioned diversity of environmental zones made the American Bottom an especially rich and attractive resource base for human occupation.

Based on earlier work by Gregg (1977) and Welch (1975), White et al. (1984:30-31) describe five general ecological zones: the river edge; the floodplain forest; the lake, slough, and pond zone; bottomland prairie and the floodplain oak-hickory zone. Together these zones encompassed a great species diversity within a relatively small area, where plant resources were available throughout the annual cycle (White et al. 1984). Faunal resources, important as food and raw materials for clothing, tools, and decorative items were equally rich and diverse.

THE PREHISTORIC AMERICAN BOTTOM

With Mississippian Sites
● Mound Group
○ Single Mound Site
■ Moundless Community

Figure 1.2 *Map of the American Bottom showing rivers, lakes and streams as well as the location of Cahokia and other Mississippian towns, villages and farmsteads. Adapted from a map by Mikels Skele.*

1.2 Cahokia Chronology

The earliest chronology for the prehistoric occupation of Cahokia was proposed by A. Kelly (1933) based on stratigraphic differences in ceramic materials from a small mound excavated in 1931. Originally labeled the "pure village site" culture and "Bean pot-effigy bowl" culture by A. Kelly (1933), this two-period chronology was subsequently divided into the "Old Village Focus" and the "Trappist Focus" by Griffin (1949), who also delineated the ceramic types associated with each period. Hall (1966:8) later proposed the following dates for these periods: Old Village - A.D. 1050-1300 and Trappist - A.D. 1300-1550. A significantly more detailed chronology, portions of which remain in use today, was devised by participants in the Cahokia Ceramic Conference in July, 1971 (Fowler and Hall 1972, 197 5). Refinements have been proposed several times since 1971 (e.g., Bareis and Porter 1984; Hall 1991; J. Kelly l 990a· Milner et al., 1984). This overview is based in large part on Bareis and Porter's (1984) and J. Kelly's (1990a) American Bottom Chronology, and on the calibrated American Bottom Region Chronology developed by Hall (1991) and utilized in Pauketat and Emerson (1997a).

Late prehistoric occupation in the American Bottom is divided into the Emergent Mississippian and Mississippian periods (but see Fortier and McElrath 2002). The Emergent Mississippian period ranges from A.D. 900-1050. At A.D. 1050, the Mississippian period begins with the "Big Bang," Pauketat's (1994) term for the sudden increase in size and complexity at Cahokia. The Mississippian period is divided into four phases. The Lohmann (A.D. 1050-1100) and Stirling (A.D. 1100-1200) are the Early Mississippian phases, a time of complexity and aggregation. The Late Mississippian is also divided into two phases: Moorehead (A.D. 1200-1275) and Sand Prairie (A.D. 1275-1350). This is a time of reorganization and dispersal. The Late Mississippian has been described as a decline in complexity (Milner 1990, 1991 a; Pauketat 1994), a social reconstitution (Kelly et al. 2001), or a shift in social and political networks or strategies (Trubitt 1996, 1997b; Peregrine 1998), this is a time of change with population dispersing from the Cahokia site (Mehrer 1995; Milner 1986).

TRADITION	PERIOD	CAHOKIA AREA PHASES
Paleoindian	**9500-8000 Be**	
Early Archaic	**8000-6000 Be**	
Middle Archaic	**6000-3000 Be**	
Late Archaic	**3000-600 Be**	
	3000- 2300	Falling Springs
	2300- 1900	Titterington
	1900- 1450	Mule Road
	1450- 1100	Labras Lake
	1100- 600	Prairie Lake
Early Woodland	**600-150 Be**	
	600- 300	Carr Creek
	500- 300	Florence
	300- 150	Columbia
Middle Woodland	**150 Be-AD 300**	
	150 BC- 50 BC	Cement Hollow
	50 BC- 150 AD	Holding
	150- 300 AD	Hill Lake
Late Woodland	**AD 300-750**	
	300-450	Rosewood
	450- 600	Mund
	600- 750	Patrick
Emergent Mississippian/ Terminal Late Woodland	**AD 750-1050**	
	750- 800	Sponemann
	800- 850	Collinsville
	850- 900	Loyd
	900- 950	Merrell
	950- 1050	Edlehardt
Mississippian	**AD 1050- 1400**	
	1050- 1100	Lohmann
	1100- 1200	Stirling
	1200- 1275	Moorehead
	1275- 1400	Sand Prairie
Oneota	**AD 1400- 1673**	
	1400- 1500	Groves
	1500- 1673	Vulcan
Historic	**AD 1673- Present**	
	1673- 1776	Historic & Colonial Indian
	1776- 1820	American Frontier
	1820- 1880	Rural & Urban
	1880- 1920	Urban & Industrial
	1920- Present	Recent

Table 1.1 *Chronological phases, adapted from Iseminger 2010.*

1.2.1 Pre Mississippian Period

Archaeologists involved in the FAI-270 project (e.g., J. Kelly 1990b; Kelly et al. 1984) advocate the use of a transitional period, the Emergent Mississippian, between the Late woodland and Mississippian periods for the American Bottom.
The term denotes the time period from A.D.900-1050 for Cahokia and American Bottom.
Kelly J. (1990a:117) notes that the Late Woodland to Mississippian transition focuses on "five general areas of change that are central to any and all definitions of Mississippian:

1. Dramatic changes in technology and material culture,
2. A shift to maize dominated field agriculture,
3. Interregional exchange,
4. An increase in size and organization of sociopolitical units,
5. A marked increase in social differentiation."

Kelly L. (200:41) adds:

6. Changes in faunal exploitation or provisioning strategies.

Kelly et al. (1984) describe a general continuity in the patterns of population increase and community plans from the Late Woodland to the early Emergent Mississippian. The aforementioned change in sociopolitical units and increase in social differentiation is reflected in an increasing number of sites as well as greater differentiation in size and site function. Two centers grew in importance during this time: the Cahokia site and the Lunsford-Pulcher site. At the end of the ninth century, new forms of community organization and a rapid increase in sociopolitical complexity led to the growth of a series of Emergent Mississippian villages (AD 850-1050) organized in a variety of community plans including numerous small, kin-based units; a single, large nucleated settlement; or scattered farmsteads (Kelly et al. 1984: 156). These settlements, arrangements of semi subterranean, single-post houses and structures, were "permanent, agrarian communities" (Kelly et al. 1984: 156) often set in four oriented with the cardinal directions (Kelly, 1990b) or by large communal and/or ceremonial structures. The analysis of formal construction patterns suggests the emergence of a ranked society maybe led by some sort of chiefs.
Archaeological findings attest that the chunkey game was practiced in the courtyards scattered across Emergent Mississippian villages; the game itself was probably an occasion for public gatherings, since it was associated with religious ceremonies and feasts in which people belonging to different social groups interacted; the bonds that were created during these feasting are probably attested by the wide circulation of red slipped pottery (Iseminger, 2010 and Valese, 2017).

Two distinct ceramic "traditions" were present in the American Bottom during the Emergent Mississippian period (Kelly, 1990a). The northern portion of the American Bottom, including the Cahokia site, was dominated by the "Late Bluff tradition," while the "Pulcher tradition" was centered on the southern portion of the region (i.e., Monroe County), which includes the Lunsford-Pulcher site (Kelly, 1990a: 117). These ceramic traditions differ primarily based on tempering materials. Vessels from the Late Bluff tradition are grit and grog tempered, with limestone temper dominating assemblages of the Pulcher tradition (Kelly et al. 1984; Porter, 1962) and can also be identified based on paste composition. Emergent Mississippian ceramic vessels in the American Bottom were made from a variety of muds (Porter, 1963a, 1963b). The salmon paste color is characteristic of Emergent Mississippian ceramic assemblages from the Late Bluff tradition of the northern portion of the American Bottom. Typical vessel forms of the period are jars and bowls with miniature vessels also present in low frequencies (Kelly et al. 1984). Stumpware - crude, footed vessels with undefined functions - are added to the assemblage (J. Kelly 1990a). Later in the Emergent Mississippian, new vessel forms such as seed jar and bottles are introduced. Surface treatments for Emergent Mississippian vessels include plain surfaces, red slipping and cordmarked. When decoration is present, it is typically focused on elaboration of jar lips; specifically, lips thickened by appliques, extruding or flaring lips, or lip notching/impressions (Kelly et al. 1984).

1.2.2 Mississippian Period

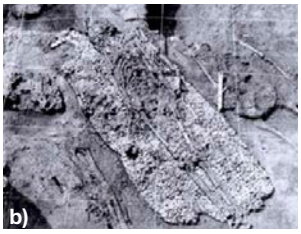


Figure 1.3 *a-e) Mississippian Culture traits.*

During the Mississippian period (AD 1050 – 1400) Cahokia began to expand (Kelly and Brown, 2014). The Mississippian culture is defined on the basis of a set of cultural traits: the construction of earthworks, cultivation of maize, wall trenched structures, shell tempered pottery, lithic technology which reflects the creation of a trading net linking Cahokia and other Mississippian centers such as Kinkaid, Angel and Siloh (Koldehoff and Carr, 2001) and the development and diffusion of a system of religious beliefs known as South-Eastern Ceremonial Complex (Brown and Kelly, 2000).

Significant changes clearly differentiate the Mississippian Lohmann phase from the preceding Emergent Mississippian period, however. The small villages and centers of the Emergent Mississippian were eclipsed by the large community centered around Cahokia. It was during the Lohmann phase (AD 1050-1100), defined by Pauketat (1997a) as the time of "Cahokia Big Bang" (Pauketat, 1994), that the village became a real urban center built on a plan that envisaged a real engineering effort such as the leveling of a central area of 19ha to form the mayor plaza and the construction of some of the site's biggest mounds. The Emergent Mississippian communities were relocated in order to create a brand-new settlement, whose monumental epicenter was centered on Monks Mound, a huge earthen mound around which four plazas were placed at the cardinal direction following the Native American cosmological pattern (Kelly, 1996a; Kelly and Brown, 2014). During the Cahokia Big Bang (Pauketat, 1994), the village become a real urban centre with complex social classes and hierarchies, but just few decades after, at the end of the Moorehead phase (AD 1200 – 1275), Cahokia began to collapse and to be abandoned (Kelly, 2009).

Most of the archaeologists consider that Cahokia was built following a preconceived plan based on the cardinal directions and the principles of centrality, quadrilateralism and dualism, adopting Monks Mound[1] as the center of the scheme; in fact the four site's plazas, each with its own development, are arranged around this focal point tracing a cross, the basic element of the Native American world (Kelly, 1996; Dalan et al., 2003; Emerson, 1997; Fowler, 1997; Young and Fowler, 2000; Iseminger, 2010; Kelly and Brown, 2014; Milner, 2006; Pauketat and Emerson, 1997; Pauketat, 2004, 2009; Pauketat and Alt, 2015).

We usually distinguish a nuclear area of the site, called "Downtown Cahokia", which includes the space enclosed by the palisade and goes from the Cahokia Creek group on the north, south to Mound 72; and from the mounds in State Park place on the east, west to the woodhenges (Kelly, 1996).

During the beginning of the Mississippian period the introduction of a new kind of building technique is attested: the new structures that surrounded the plazas and the mounds, forming household clusters, were now built with a "wall trench" method that excluded the employment of single posts. The walls, in fact, were made up in a unique item and erected inside a trench (Dalan et al., 2003) previously dug into the floor of the foundation basin, allowing the inhabitants to build structures of different shapes; Lohmann, in fact, is a phase of experimentation in which a wide typology of buildings with different plans flourished, probably reflecting the performing of different activities (Iseminger, 2010 and Valese, 2017).

T-shaped and L-shaped structures, because of the prominent position they occupied at the center of the plazas, have been interpreted as religious or political buildings (Kelly, 1996b) and the little chamber, which gave the structure the peculiar shape, could have been a shrine, the "sancta sanctorum" where the paraphernalia was exposed or stored.

During this time population increased due to a rapid income of people from surrounding regions, a process that led to the establishment of more complex and well-defined social classes and hierarchies; it is possible that the population quadrupled over a fifty-year period (Pauketat, 2004) and excavations' records testify that this growth was followed by a settlement rearrangement.

Artisanal production itself became more developed, as attested by craft specialization associated with areas of the site, such as the shell beads production area identified in the Kunneman mound group; political alliances became more important and ritualism tied and reflected those aspects of Lohmann phase. The major expression of this bond between ritual and political sphere is the mortuary complex at Mound 72 (Fowler et al.,

1999), below which was an élite burial consisting of a double interment composed by two individuals separated by a shell-bead falcon-shaped mantle (see Figure 1.3 a) surrounded by burials of a few retainers and exotic grave goods such as chunkey stones and hundreds of arrows divided by type and suggesting the participation of groups of different origins (Iseminger, 2010).
Surrounding the bead burial were four mass interments of dozens of young foreign women and one of four headless and handless men that, together with another big mass grave, testify the performance of human sacrifices (Iseminger, 2010 and Valese, 2017).
As mentioned above Cahokia was built following a master plan that involved the construction of mounds. There were three kinds of earth pyramids: the platform, or Temple mounds, the conical and the ridge top ones. The majority of the mounds were flat topped and the archaeological record shows that they were built as supports for different kind of buildings that could be interpreted as religious or ceremonial structures or maybe as élites dwellings. The mounds have sometimes additional terraces or extensions, as can be seen in the case of Monks Mound and these extensions are often associated with conical mounds; the comparison with Woodland period examples suggests that this kind of mounds had a funerary function. In most cases conical and platform mounds were built together and linked by a causeway, as we can see in the Grand Plaza area where the Twins Mounds stand; it is possible that they had a complementary function and that the structures above the platform mound could be interpreted as charnel houses, where the bodies of the élites were prepared or stored, while the conical mound was the resting place where the bones were moved thereafter (Iseminger, 2010).
The third type of mound is the ridge top, "longer than it is wide and coming to a crest at the top, roof-like in appearance"; there are at least six ridge top mounds at Cahokia and most of them are oriented following the north-south or west-east axis of the Cahokia site, because of their location at the margins of the site they are sometimes called "marker mounds" but they could have had several functions as attested in the cases of the Rattlesnake Mound, Powell Mound and Mound 72, where burials were found (Iseminger, 2010 and Valese, 2017).
The construction of those mounds involved the moving of great quantities of earth, an activity that also produced the so called "borrow pits", the depressions that dot Cahokia's terrain.
These depressions were created by mining the clay used in mounds construction and the archaeological researches have revealed that some of them were left open and let them fill up with rainwater while some others were filled in a short time, maybe during ceremonial activities, as happened for sub-mound 51in which a great amount of well-preserved goods was detected testify the performance of a ritual act in which a great amount of people was involved.
Site and community planning are evident at Cahokia, massive landscape alteration were undertaken to create the Grand Plaza.
As suggested by the investigations , the main plaza, the Grand Plaza, located south of Monks Mound would have been the theatre of public gatherings such as festivals, games (possibly the chunkey, also performed by some historic Native American tribes – Pauketat, 2009), rituals and possibly market activities (Dalan, 1993; Iseminger, 2010).
The North Plaza was located in the lowest zone of the settlement which is today a swampy area created by the presence of the Cahokia Canal. Since the area was possibly periodically flooded even during the Mississippian times, as the Canteen and the Cahokia Creeks ran in its proximity, the mounds were possibly built during a dry phase. As hypothesized by Byers (2006) and Kelly and Brown (2014), it is possible that the creation of the plaza in that specific location was tied to world renewal rituals, since during the floods the mounds would have symbolically risen from a "primordial sea". A different scenario, pictured by Iseminger (2010: 99), describes the Plaza as a port of entry for travellers and foreign traders arriving in dugout canoes. On the eastern side of Monks Mound, the analysis of the material retrieved from a controlled survey made by the University of Wisconsin-Milwaukee (Benchley, 1974) confirmed the presence of an open space between Mound 36 and 51, the East Plaza. This open space was relocated after the erection of the Cahokia stockade that surrounded the core of the settlement; at its place the so-called Ramey Plaza.

[1] *This Mound takes the name of the nearby XIXth century French Trappist Monks' settlement. Its size was calculated in 1988 as about 30 m high, 291 m and 236 m wide. This makes Monks Mound comparable to the Great Pyramid of Giza and the Pyramid of the Sun at Teotihuacan*

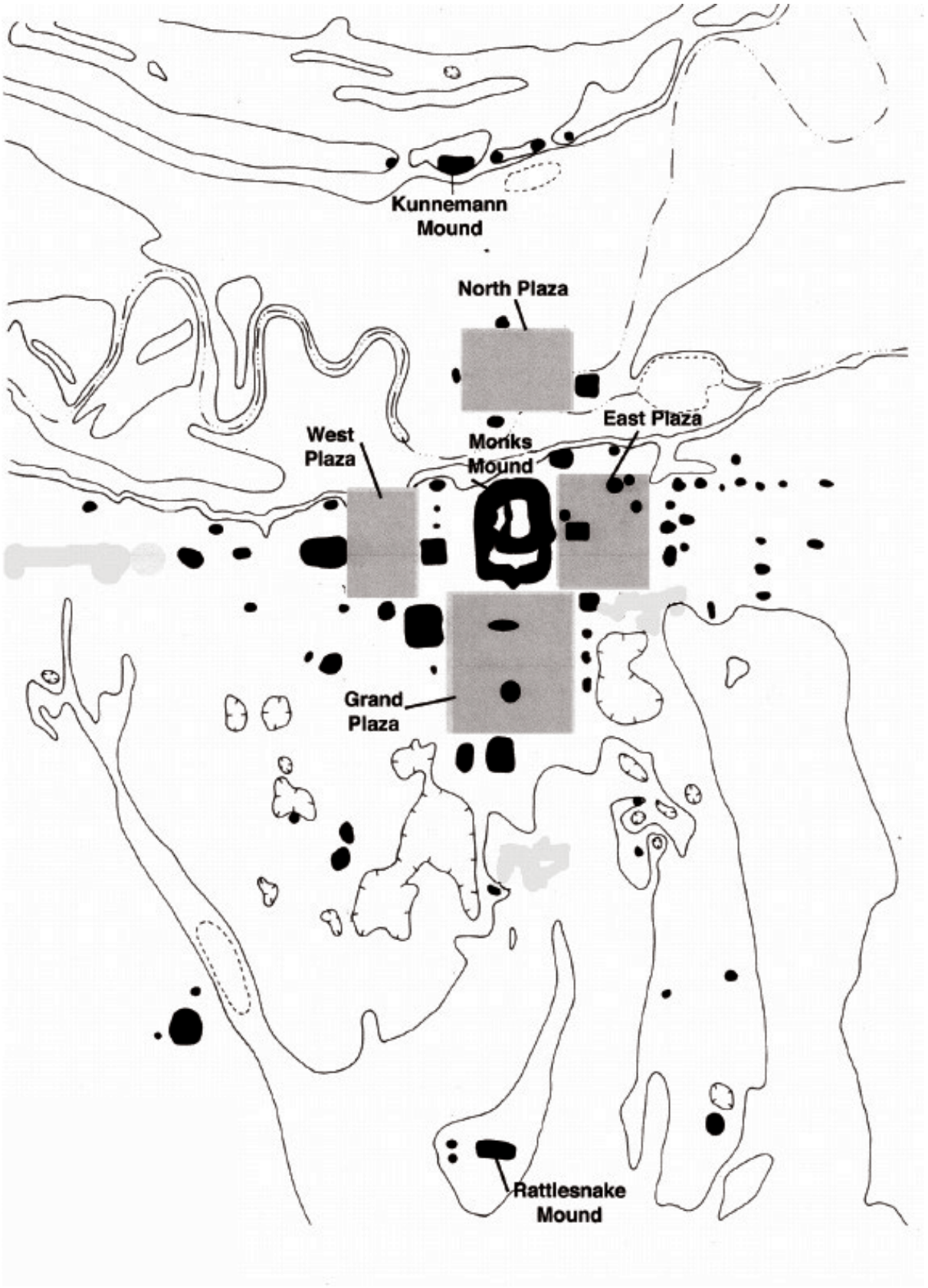


Figure 1.4 *General map of Cahokia. The four plazas coloured in blue, black, yellow and red courtesy of J. Kelly.*

Social ranking and status differentiation are already revealed in archaeological remains from the Lohmann phase. This phase is also characterized by the first fully Mississippian period assemblages at Cahokia and throughout much of the American Bottom region. Jar, bowl and seed jars are common in Lohmann phase ceramic assemblages, a variety of tempering material including crushed shell, grit, grog, and limestone are used in the Lohmann phase. Lohmann phase jars typically have plain or slipped (predominantly red) exterior surfaces and rarely cordmarked.

The following Stirling phase (AD 1100-1200) marks the apogee of Cahokia's development, during this time in fact population reached its acme, the occupation spread reached the limits of the site, the major number of mounds was raised during this period and the external contacts reached their peak, as attested by the diffusion of "Ramey-incised" pottery - mostly exchanged during ceremonial meetings and flintclay figurines that embodied some sort of Cahokian mythology based on fertility feminine figures and male warriors.

The Stirling phase is generally accepted as the apex of Cahokia's power and population. The effect of social ranking and site organization continued, and, perhaps, increased. During the Stirling phase, "highly ranked people began to tum former residential areas into places used for rituals and other activities related to their ostentatious way of life ... " (Milner 1998: 157).

Stirling phase ceramic assemblages were dominated by jars but with bowls common, and beakers, bottles, platters, pans, hooded bottles, seed jars, funnels, and stumpware vessels present. It is during the Stirling phase that this jar type, characterized by shell tempering, slipping, and wide incised line decoration forming linear and curvilinear patterns, becomes common in the Mississippian ceramic inventory (Holley 1989: 113). During this phase Ramey Incised pots, as other objects, were most popular at Cahokia and had a huge geographic distribution. These pots reflect the Mississippian cosmological model including upper and lower world and showing the quadripartition model represented around a central axis, or axis mundi (Emerson, 1989; Lankford, 2004, 2007; Pauketat, 2004; Pauketat and Emerson, 1991). These pots were widely distributed and are commonly found in both ceremonial and domestic context, highlighting their value in Mississippian communities (Emerson and Pauketat, 2008; Griffith, 1981; Pauketat and Emerson, 1991). As suggested by Kelly (1996b) the quadripartite layout of the site, which involved the creation of the four plazas placed at the cardinal directions in a cross-shaped manner, being the cross one of the main symbols of the Mississippian iconography, was possibly set by the end of the Emergent Mississippian and the beginning of the Lohmann phase (Kelly and Brown, 2014).

Mostly during the latest phases of the Mississippian period all the civilizations touched by the Mississippi river shared these vessels (see Figure 1.5).

We can assume that these interactions were based on political and economic aspects (Milner, 1998; Muller, 1997), but it is clear that many of these contacts had strong religious characteristics and implications (Brown and Kelly, 2000; Conrad, 1991; Emerson, 1989; Emerson, 1991a; Emerson and Lewis, 1991; Fowler et al., 1999; Hall, 1991; Kelly, 1991; Knight et al., 2001; Pauketat, 1997; Pauketat, 2004; Wilson, 2011). In an era of increasing social complexities, Cahokians relied on religious ceremonies and ritual objects to frame relationships among different social groups and the supernatural forces comprising the broader cosmos (Alt and Pauketat, 2007; Emerson et al., 2008; Emerson and Pauketat, 2008; Pauketat, 1997; Pauketat, 2002; Pauketat, 2003; Pauketat, 2010; Pauketat, 2013; Wilson, 1996).

The propagation of these items in the Mississippian world and the mythological meanings they carried let some scholars think that Cahokia was a purely ceremonial center, in which people from the hinterlands gather to perform rituals, while some others underline that the spread of artefacts made in Cahokia could be a hint for interpret the site as a node of redistribution which inspired the part-time specialization that characterizes the rural nodes surrounding it.

Although we cannot still establish what Cahokia was, we know for sure that during the Stirling Phase something changed in the political order.

Structure size increases from the Lohmann to Stirling phases and throughout the rest of the Mississippian period (Milner 1998; Milner el al. 1984:173). Mehrer (1995:97-100)

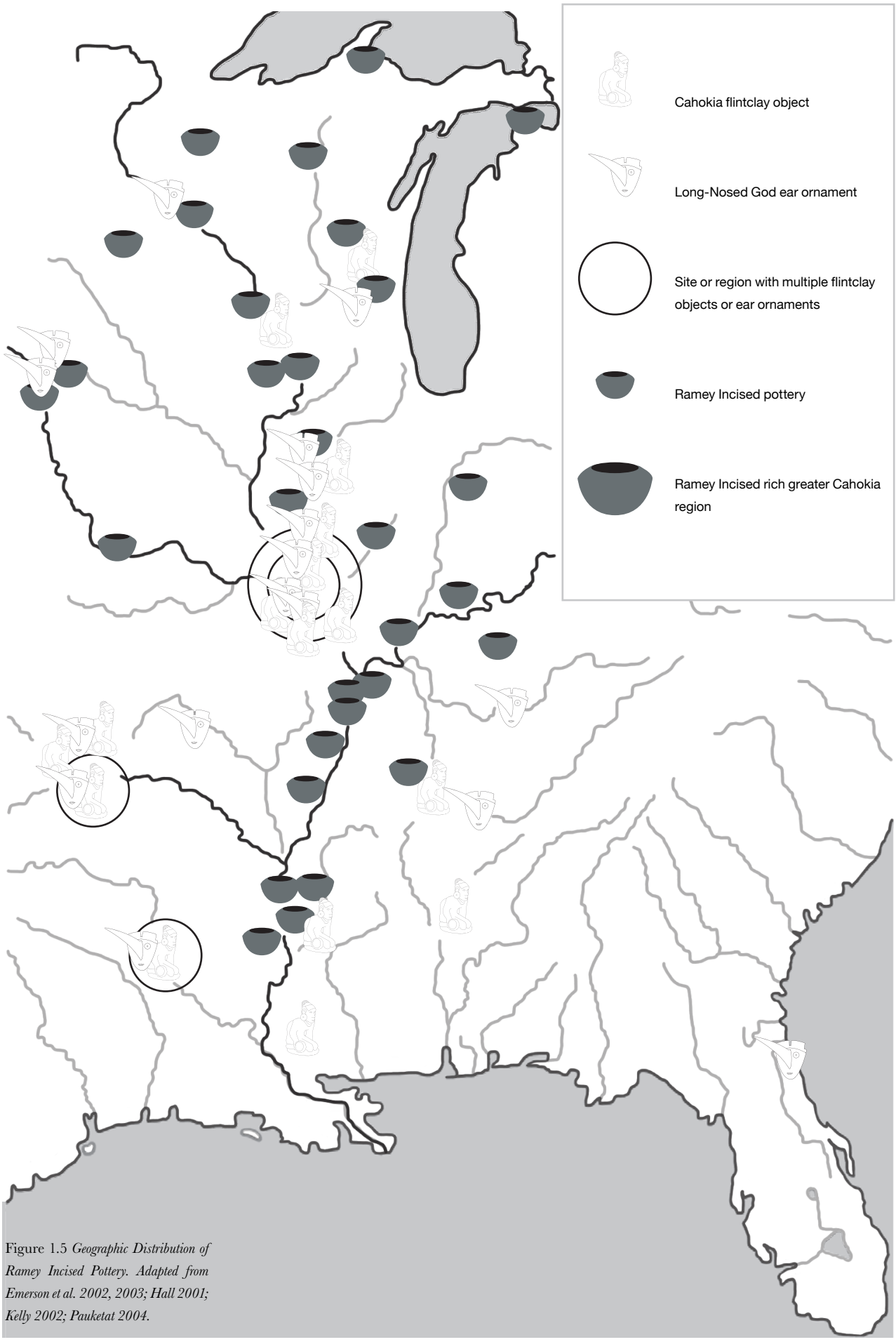


Figure 1.5 *Geographic Distribution of Ramey Incised Pottery. Adapted from Emerson et al. 2002, 2003; Hall 2001; Kelly 2002; Pauketat 2004.*

found the greatest diversity of building types and "obvious architectural distinctions based on floor plans" during this phase, as well.
Another major change in the history of the settlement was marked by the construction, during the Late Stirling phase, of a 3 km bastioned stockade encircling Monks Mound, the Grand Plaza and adjacent mound. The stockade, which cut through the East Plaza leaving outside the North Plaza, broke the old quadripartite arrangement of the site isolating "Downtown Cahokia", the central area of the settlement also known as "central precinct" (Dalan, 1989; Iseminger et al., 1990; Trubitt, 2003). There are a lot of hypothesis regarding this enclosure: someone thinks it was built for defensive purposes, but no archaeological clues of clashes have been found; what is unquestionable is that the structure was meant to be a barrier, maybe just visual, that cut off someone who wasn't anymore allowed to see or to take part of what happened inside (Valese, 2017).
During the Late Mississippian times (the Moorehead Phase AD 1200-1275 and the Sand Prairie Phase AD 1275-1400) Cahokia began to collapse; nevertheless its influence in other regions was still strong, even reaching its apex during the Moorehead phase.
A general depopulation of the Cahokia site and the floodplain began in this phase (Milner 1986, 1998; Pauketat and Lopinot 1997) However, the monumentalization of the settlement continued through the later Stirling (AD 1100-1200), and Moorehead (AD 1200-1275) phases with the erection of more than hundred earthen mounds used as boundaries of the plazas and the settlement itself and as support for élite residences, charnel houses, mortuaries or sacred buildings. The wall-trenched structures became squarer and larger but fewer comparing to the earlier phases. The new East Plaza, moved and rebuilt nearby outside the eastern palisade wall, became one of the foci of the cahokian Moorehead phase life as attested by the finding of ceremonial copper production residues under Mound 34 (Kelly, 2008).
The Moorehead Phase ceramic assemblage is dominated by shell-tempered jars. Exterior surfaces are most commonly plain, but may be cordmarked or slipped, with dark slip colors becoming more common than brown or red slips (Holley 1989). Cahokia Cordmarked jars, characterized by shell tempering and cordmarked exteriors, are added to the ceramic inventory during the Moorehead phase, and a particular variant Cahokia Cordmarked var. Perino (Kelly, 2001), characterized by a red slipped interior also becomes relatively common. Ramey Incised vessels continue to be manufactured during this phase (Pauketat, 1993a).
At the Cahokia Conference in 1972 (Fowler and Hall, 1975), the Sand Prairie phase was defined on the basis of Vogel's (1975) analysis of Late Mississippian materials from the tracts 15A and 15B after the division of the Trappist Focus, a phase named by Griffin in 1949, into an earlier Moorehead phase and a later Sand Prairie phase (Kelly and Koldehoff, 1995). This period was characterized by the disappearance of polished and slipped wares, Powell Plain and Ramey Incised replaced by assemblages composed by Wells Fine Incised plates, effigy head bowls, deep wide bowls, fabric-impressed pans and pans with vertical walls; among the new assemblage, beakers and Cahokia Cordmarked jars were kept in use (Vogel, 1975; Kelly and Koldehoff, 1995).
The shift to the Sand Prairie phase was characterized by the decline of population, a decreasing trend reflected in the dissolution of the upper levels of social hierarchy (Milner, 1986 and Merher et al, 1995). Sand Prairie phase structure, constructed with the wall-trench technique, tended to be larger and more squared than earlier Mississippian phase structures (Milner et al. 1984).
The great constructions scattered through the site were thrown down and replaced by new residential areas which were moved back in the proximity of the Cahokia precinct, close to Monks Mound, where public areas were converted to residential use, as attested for the West Plaza Area.
Little or no ceremonial construction of mounds is attested at Cahokia; additionally, on top of Monks Mound traces of non-elite residential activities were found (Benchley, 1974). Across the hinterland temple towns fell in disuse and floodplain mortuaries served smaller rural communities; this local segmentation has been interpreted as a consequence of the lack of Cahokia's integrating influence (Merher et al, 1995).
The Sand Prairie phase occupation at Cahokia, as defined by Holley (1989) and Dalan (et al, 2003), consisted in a "rump" population scattered around what once was the Cen-

tral Precinct confined around the flanks of Monks Mound with a higher concentration on the western edge, where structures were located and excavated (Rogers and Smith, 1995: 53).

This reorganization of the public space probably reflected increasing internal factional competition that, finally, could have led to Cahokia's decline and to its abandonment at the end of 14th century (Kelly, 2009).

It is possible to speak of a Greater Cahokia (see Figure 1.6) with a population probably surpassing the 30,000 individuals, since there were no boundaries between Cahokia and the two other large Mississippian towns, East Saint Louis (IL) and Saint Louis (MO) located to the West (Kelly, 1994, 1996, 1997). Moreover, the whole American Bottom, formed an integrated region economically and politically gravitating around Cahokia (Pauketat, 2008) and as proposed by Pauketat (2003) and Alt (2006a, 2006b, 2008) it was probably multiethnic environment due to migrations and population resettlements.

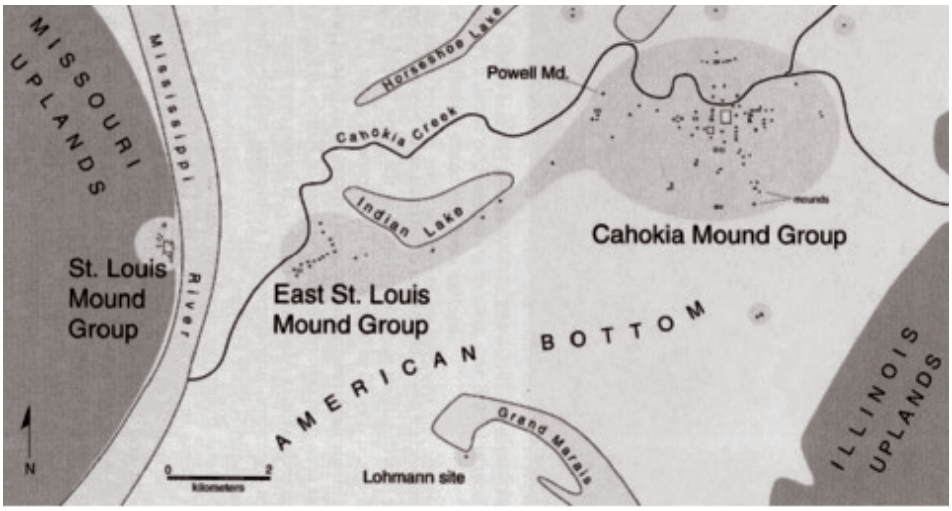


Figure 1.6 *Map of the Greater Cahokia (Pauketat, 2004)*

Starting from AD 1275 Cahokia was mostly abandoned, and very few Sand Prairie constructions were built at the site; its final abandonment coincided with the general depopulation - lasted until the arrival of French colonists in XVIII century – of a wider region known as the Vacant Quarter (Kelly, 2009). As long as Cahokia was declining other powerful centres arose in the wider Mississippian world, such as Moundville – Alabama (Knight, 2010; Knight and Steponaitis, 1998), Spiro – Oklahoma (Brown, 1996; Brown, Brues et al., 1996) and Etowah – Georgia (King, 2003); all of them were linked by the presence of cahokian artefacts and beliefs that spread all over the Mississippi Valley creating a unique cultural sphere called by Pauketat "Pax Cahokiana" (Pauketat 2007; Pauketat and Alt, 2015), whose cultural apogee is reflected in the construction of Spiro's burial mound, the so called "American King Tut's Tomb" (Brown, 1996).

The size and monumentality of the settlement made this site an exemplary case in North America; multiple hints suggest that at Cahokia the egalitarian societies that had prospered for millennia in the Eastern Woodlands developed in the first ranked political system (Mehrer, 1995; Roger and Smith, 1995; Brown and Kelly, 2015).

1.3 Cahokia Society

It is attested, chiefdom level societies were present in prehistoric North America, this topic was long time debated.
One of the best archaeologically documented prehistoric chiefdoms was centered in present- day Illinois at Cahokia, in the American Bottom of the Central Mississippi Valley.
Archaeologists use the term "Mississippian" to denote a prehistoric, chiefdom-level cultural tradition (A.D. 1000 - 1600) in the southeastern United States (e.g., Smith, 1978; Steponaitis, 1978, 1986).
The Mississippian tradition included settlement hierarchies with planned ceremonial and residential centers; extensive trade networks; distinctive material culture in a variety of media; and a hierarchical social, political and religious system (Griffin, 1985; Emerson, 1997).
Mississippian societies were extremely dynamic cultural entities, individual centers and chiefdoms did not function in cultural or geographic isolation. Hence, an examination of these centers must include consideration of both internal and external dynamics.

Most archaeologists (e.g., Anderson, 1994a; Milner, 1998; Muller, 1997) characterize Cahokia as a complex chiefdom. The Cahokia chiefdom is also referred to, by Pauketat and Emerson (1997b:5), as "the regional Mississippian capital" and has been characterized as a state (O'Brien 1989) or centralized political-administrative center (Emerson, 1997; Fowler, 1997; Pauketat, 1994) while, other scholars such as J. Kelly (1996) have focused on its importance as a ritual center.
The social and political system in place at Cahokia reached an apex of complexity during the late 11th and early 12th centuries A.D. (i.e., Pauketat, 1994).
Two important interpretive differences are presented here about the structure of the Cahokia polity. The first one is the domination model (i.e., Pauketat and Emerson) described as a highly centralized, elite-controlled chiefdom with a large, densely populated administrative center at Cahokia arising suddenly in the Lohmann phase. This polity operated via a tribute-based sociopolitical system, and with corvee labor to construct monumental earthen mounds.
This cultural hegemony is archaeologically visible in centralized and subsidized production activities, such as the production and dissemination of stone axe-head and shell beads. By Cahokia's peak, according to Pauketat (1994) and Emerson (1995), maintenance of authority by the elites depended on mobilization of tribute and public labor, control of prestige and exotic goods, and socio-ideological reinforcement through the iconography of the Ramey Incised pottery. It has been suggested that the ability to mobilize labor for the construction of mounds, plaza, woodhenges and a series of palisades attests to the social and organizational power of a small segment of Cahokia's population (e.g., Pauketat 1997:37; Pauketat and Emerson 1997).
The ideological message carried by the Ramey vessel, of legitimizing the relationship between the elite, non-elite, and the cosmos, was presented to Cahokians during calendrically-based, community-forced rites of intensification, and through distribution of the vessels, following such ceremonies (Pauketat, 1994; Emerson, 1995).
The second model, the decentralized (i.e., Milner, 1990; Muller and Saitta, 1994), proposes that a smaller, more dispersed population with a less centralized sociopolitical hierarchical system could have constructed the earthen mounds.

Other models (e.g., J. Kelly and L. Kelly) focus on non-coercive mechanisms for creating the community centered on Cahokia. Unlike Pauketat and Emerson's emphasis on dominance and control, Kelly et al. (2001) emphasize the power of Cahokia as a force of integration and community-building, and describe Cahokia as "not coercive but rather alluring in its ability to integrate the extant differences among various corporate entities into a "Megaconglomerate" of kin groups. They assert that the relatively large number of people living, fanning, and constructing monumental earthen mounds were attracted to Cahokia at A.D. 1050 "to celebrate its creation as a world center shrine" (Kelly et al., 2001:6).

The typical culture-historical overview of Cahokia (e.g., Pauketat, 1994) situates its sociopolitical peak during the Stirling phase (A.D. 1100 - 1200) with decline beginning in the Moorehead phase, and abandonment compete by the end of the Sand Prairie phase. Many suggestions have been offered to account for the Moorehead-Sand Prairie decline: resource (land, timber, and animal) overexploitation (Brown et al., 1988; Fowler, 1975; Lopinot, 1994: Lopinot and Woods, 1993; Milner, 1984, 1990); disputes among internal sociopolitical factions (Milner, 1998); environmental degradation (Brown et al., 1988); climatic change (Hall, 1991; Lopinot, 1994); hydrologic changes such as a rising water table, possibly associated with overexploitation of wood resources (Lopinot and Woods, 1993; Woods and Holley, 1991); and even political and economic competition from other Mississippian centers (Fowler, 1975).

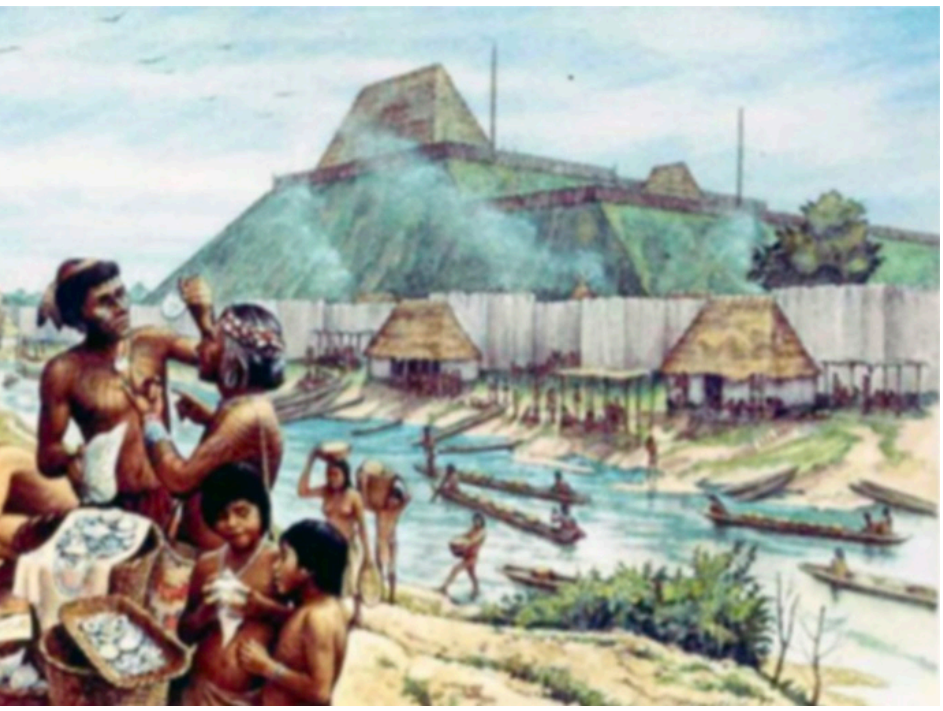


Figure 1.7 *View from the North Plaza. Michael Hampshire, Cahokia Mounds State Historic Site.*

The nature and meaning of those changes have been interpreted in a variety of ways. Emerson (1995) suggests that the American Bottom was home to a number of competing chiefdoms or elite groups during the Mississippian period. During the Lohmann and Stirling phase, these competing groups were consolidated into a powerful complex paramount chiefdom at Cahokia with power over much of the American Bottom. This political situation was unstable, however, and the consolidated power at Cahokia disintegrated during the Stirling phase and "was gone forever by 1200" (Emerson, 1995:91). The resulting political and social instability and opposition from elites from other centers necessitated the construction of the palisade.

J. Kelly, Brown, and Trubitt (2001) propose a very different situation for the Moorehead phase at Cahokia. They acknowledge the abrupt and visible changes at Cahokia and throughout the American Bottom during the Moorehead phase, but also point out the continuity and modification of existing traditions. The structure and organization of the Cahokia site underwent many significant changes. The construction of the massive palisade wall around the central precinct entailed a reorganization of the site outside the palisade. Many Moorehead phase changes may be related to increased warfare. The palisade wall provided a fortified barrier for the central portion of the site and many residential areas are organized outside this protected area (Kelly et al, 2001).

This area may also be the place of origin for the iconography of the Southeastern Ceremonial Complex, which subsequently spread throughout the southeastern United States (Brown and Kelly, 2000; Kelly et al., 2001). Kelly et al. (2001) propose that during the Moorehead phase at Cahokia "there is a reconstitution and florescence of this community on a different order and magnitude," referred to by Brown (2001) as the "Moorehead Moment." Perhaps the clearest indication for their assertion concerning the importance of the Moorehead phase is their reference to this time period as "Cahokia's Second Climax" (Kelly et al. 2001).

These experts are more inclined to think the Moorehed phase as a time for socio political change rather than to define it as a decline. Trubitt's (1996) investigation of household status

and marine shell bead production provides evidence for the continuation of a tribute-based sociopolitical system through the Moorehead phase, this phase should be interpreted as the mature or late stage of a prestige goods system in the American Bottom region " as a time of expansion of relations outside the American Bottom, with elites increasing contacts with other areas and importing more exotic goods into the American Bottom, resulting in increased separation between elites and commoners at the local levels".

During the Moorehead phase at Cahokia an "international art style" (Blanton et al., 1996) a marker of a network strategy, was created (Brown and J. Kelly, 2000). This art style, the Southeastern Ceremonial Complex (SECC), became an elaborate, pan-regional iconography, appearing on a variety of media including shell, copper, and pottery (e.g., Galloway, 1989; Knight et al., 2001). Artifacts bearing this imagery have been recovered from Mississippian sites throughout the Southeast, from Oklahoma to Georgia and Illinois to Florida.

While Cahokia was the largest and most complex prehistoric polity in the Eastern Woodlands (e.g., Emerson, 2002), it was also part of the larger, southeastern, Mississippian cultural and sociopolitical phenomenon. Although evidences does not support a scenario of Cahokia as dominating or even directly influencing the development or operation of other Mississippian centers, Anderson (1997: 262) argues that: "events in the American Bottom between ca. A.D. 900 and 1250 profoundly shaped the character and evolution of Mississippian societies throughout the Southeast, even in areas where people never saw a Ramey-Incised pot or met anyone who had visited Monks Mound."

The Southeastern Ceremonial Complex (SECC), succinctly defined by Brown and Kelly (2000:470) as an "archaeological complex of artifacts and motifs," was first codified by Waring and Holder (1968). Using archaeological material primarily from the Mississippian centers of Moundville, Etowah and Spiro, Waring and Holder (1968) formulated a trait list for the SECC, divided into four categories: motifs, god-animal representations, ceremonial objects, and costume. The SECC does not include "all Mississippian representational art, nor even all Mississippian art of ritual use or religious reference"(Knight et al. 2001: 132).

1.3.1 Ceramic as Social Indicator

Not only Ramey Incised pottery but ceramics in general are a rich source of information for investigating internal dynamics of chiefdoms. In the American Bottom and at Cahokia, ceramics have been used to explore temporal trends and as sensitive indicators of change. Ceramics can also be used to monitor the nature of social interaction, production, subsistence changes, and the role of ideology (Hamlin, 2004).

Ceramics are one class of material culture frequently utilized by archaeologists to address issues of social status, elite and commoner differentiation and interaction, and the remains of special activities such as ritual or feasting. Arnold (1985:1) writes: "Ceramics are one of the tangible products of man's culture. Their relatively widespread manufacture among cultures of the world, their relatively imperishable quality, their persistence through time and their almost universal presence have made them a very important tool for the archaeologist in the study of the past" to address inquiries related to the social, ceremonial, economic, and political dynamics of human group.

Several elements on ceramics, such as the decoration, the exotic provenience, the position and place did serve to mark status and other differences (Muller, 1986). While many Cahokia scholars have suggested ceramics can be indicators oh high status (Emerson, 1989, 1995, 1997b; Holley, 1989; Pauketat, 1994; Pauketat and Emerson, 1991; Trubitt, 1996; Wilson, 1998, 1999), the specific types or attributes marking high status are not widely agreed upon.

Ceramic vessels provide archaeologists with various data, such as community occupation span (e.g., Pauketat, 1989), household size and occurrence and frequency of social interaction and trade between communities (e.g., Brunson, 1985). Three of the most important and basic roles of pottery vessels are as food processing, storage, and presentation tools. Dietler (1996:87, 89) notes that "food is a prime political tool, it has a prominent role in social activity concerned with relations of power" and that "food and drink are highly charged symbolic media because they are a basic and continual human physiological need. Food and drink are also a form of 'highly condensed social facts embodying relations of production and exchange and link the domestic and political economies." Not only food but also such containers embody significant "politico-symbolic potential" (Dietler, 1996), pottery can tell us something about the social, politico-economic, and symbolic life of prehistoric people (Dietler, 1996; Emerson, 1989; Pauketat and Emerson, 1991).

Figure 1.8 *De Bry engraving of Le Moyne's "Preparing for a Feast" (Lorant, 1946:91)*

Studies focusing on variation among and between ceramic assemblages have provided social, political, and economic data. Archaeologists have long been interested in the many elements of variation in ceramic assemblages, particularly morphological, stylistic, and technological variation. Ethno- archaeology has provided information about morphological variation in ceramic assemblages, as well as relations among vessel morphology and vessel function, discard behavior, and breakage rates (e.g., DeBoer and Lathrap, 1979; Henrickson and McDonald, 1983; Rye and Evans, 1976). The analysis of ceramic assemblages from within a single site or between comparable sites (e.g., Graves and Spielmann, 2000) can provide insight into site function, intra-site structure, and inter-site interaction.

Hamlin (2004) proposes that, cultural behaviors, specialized ritual/ status activity in particular, is reflected in the make-up of and variation within and among American Bottom Mississippian period ceramic assemblages. Elements theorized to be important indicators of ritual/ status activity, include variation in and patterning of the surface finish and decoration of vessels, vessel size, temper material and size, and vessel form and function. Discussion of vessel form and function includes not only the technomic categories of cooking, storage and serving ware, but also the sociotechnic category of ritual/ status ware (sensu Binford, 1972).

The exterior and/or interior surface of a ceramic vessel may be modified by surface fi-

nish and/ or decoration. A surface finish, such as polishing, cordmarking, or slipping, can affect both the appearance of a vessel and its mechanical properties. Decoration, an intentional modification of the exterior and/or interior surface of a vessel, is, by definition, primarily aesthetic or stylistic rather than functional. Braun (1991:363) follows Rye (1981) in his definition of decoration on pottery as "any 'nonessential' manufactured characteristics of the pottery. Nonessential characteristics are those that go beyond what is needed for a pot to work as a physical tool, and that demand extra time and effort by the artisan for their creation." In contrast, the aforementioned surface finishing techniques (e.g., slipping) are not considered decoration because of their functional utility. A slipped surface may serve solely or primarily to make a vessel more aesthetically pleasing but adding a layer to the exterior and/or interior of a vessel can create a water-tight seal on a vessel surface.

Artifact requiring more time and skill to produce may indicate higher status and/or special activities such as ritual or feasting, and such investment may be reflected in decorated ceramics (e.g., Binford, 1972; Dietler, 1996; Drennen, 1976; J. Kelly et al., 1990; Leventhal and Baxter, 1988; McElrath et al., 1987; Milner, 1996; Pauketat, 1992; Trubitt, 1996). Archaeologists have noted a relationship between decorated ceramics and high status, irrespective of time or geography. Hagopian (1995) assumed that non-local, rare, or labor-intensive, specifically decorated, vessels had more social value. She concluded that differential access to vessels with painted decoration implied a higher social standing and status. Decoration including techniques such as incising, trailing, engraving, punctating, slipping, lip notching, and modeling into effigy form was Trubitt's (1996) single, general criterion for identifying high status ceramics in American Bottom assemblages. Emerson (1995) also considers decorated vessels to be "Rituali Status Ceramics." Obviously, the presence of a slip or decoration should not be the sole defining criterion of high status ceramics, although it is a useful starting point. Differentiating between serving and cooking vessels allows archaeologists to draw conclusions about food consumption behavior and related socio-political activity (Dietler, 1996:89). The proportion between cooking to serving wares, have been used as indication of high status activity in Mississippian assemblages (Dalan et al., 1993; Holley, 1990; Michals, 1998; Scarry, 1998; Welch, 1991; Welch and Scarry, 1995). Hamlin (2004) proposed that certain ceramic types or forms in the Mississippian world had sociothechnic functions. As Johnson (2000: 125) plainly states: "It was in ceramic vessels that food was cooked and presented in meals associated with rituals, feasts, and political negotiations."

Dietler and Hayden (2001) have concluded that "feasts are an extremely significant aspect of social life on a worldwide scale, and that understanding them is crucial for apprehending and comprehending many social and cultural processes in ancient society." Dietler (1996:89) characterizes feasts as ritualized social events in which food and drink constitute the medium of expression in the performance of what Cohen (1974) has called "politico-symbolic drama". As public ritual events, in contrast to daily activity, feasts provide an arena for the highly condensed symbolic representation of social relations. Feats are idealized representations of the social order, an individual or group may take the opportunity to fortify or alter their social status within that social order. In Dietler's view, then, commensal hospitality functions like gift exchange to "establish and maintain social relation" and provides "mechanisms of social solidarity that serve to establish a sense of community" (Dietler, 1996:91; Welch and Scarry, 1995). The purpose of this social activity may be to acquire or legitimize unequal social power by emphasizing a superior/subordinate, donor/receiver, or insider/outsider relationship between host and guests (Hayden, 2001).

Hayden (2001) presents a number of archaeological signatures of feasts covering topics such as "Food," "Preparation vessels," "Serving vessels," "Food- preparation facilities," "Associated prestige items," "Paraphernalia for public rituals," "Food-storage facilities" and "Pictorial and written accounts of feasts."

The importance of ceramic vessels in the execution of feasts as well as the typical abundance of ceramic artefacts on archaeological sites makes ceramic assemblages a significant source of information about feasting activities (e.g., Blitz, 1993a; Dietler, 1996; Graves and Spielmann, 2000).

A feasting event, therefore, is one type of ritualized sociopolitical activity often associated with high status individuals or groups that may be indicated by the make-up and context of a ceramic assemblage. Serving vessels of high quality, well-made with attractive surface

finishes and decorative motifs on those vessels may convey not just a message of quality, but also information about the ideological leaning of the hosts and participants.

The Moorehead phase is generally described as a time of decline for the largest Mississippian community with particular reference to a decreasing population and lessening socio-political complexity. Others, such as Kelly J., Brown, Trubitt, have focused on change rather than decline and have, in fact, referred to the Moorehead phase as "Cahokia's Second Climax" (Kelly et al., 2001). The ceramic analysis confirmed Cahokia continues to be a dynamic force in the Mississippian world, and in the lives of the residents of the American Bottom. Significant changes are evident at Cahokia and throughout the American Bottom during the transition from Stirling to Morehead phase and they continue during the 13th century A.D. Several of these local changes may reflect transformations in the greater Mississippian world of the Southeast.

Anderson (l994b) suggests, in contrast with Trubitt's (1996, 1997b) and Peregrine's (1998), that during the Late Mississippian, mound building and inter-regional exchange diminish while warfare increases, however ceramics assemblages reflect the participation of Cahokia and the American Bottom in a pan-Southeast system of symbolism, iconography, and ceremonialism.

There were changes in the social, political, and economic structure of the Cahokia polity concomitant with Cahokia's changing and perhaps expanding participation in the greater Mississippian world during the Moorehead phase. Pauketat (1997) suggests that Cahokia shifted from a political capital in the Loman and Stirling phase to a sacred center in the Moorehead phase. Alternatively, Kelly et al. (2001) characterized the nature of the Cahokia polity from its inception as alluring rather the coercive, a sacred center able to integrate the extant differences among various corporate entities into a "Megaconglomerate" of kin groups.

Several archaeological elements demonstrated the Cahokia general demise at the final phase of the Mississippian period, but the author in accord with many other experts wants to suggest, providing relevant information, that we can look at this phase under a different light as well. In such difficult period for a structured society to stay alive and to maintain its social composition, intentionally or not, Cahokia found alternative ways to survive.

After the analysis of a variety of political, social and artistic elements, the author decided to focus this iconographic study on Ramey Incised ceramic variety because, as previously mentioned, pottery can provide several information regarding societies. The author started from the analysis of Ramey Incised pottery fragments detected in the Merrell Tract-Unibo excavation and, in a secondary moment, we will compare the iconography displayed on it to the once detected across Cahokia hinterland selected sites.

By this comparative approach, the research intent is to provide a wider picture regarding the diffusion and the adaptation of the Ramey Incised iconography between different Mississippian populations and to investigate socio- political implications.

Chapter 2

Figure 2.1 *Detail of the West Plaza from general map made by Moorehead in 1923 (adapted from Fowler 1997).*

Discovering Cahokia

After its slow abandonment, beginning at the end of the XIII century, the Mississippian Cahokia was forgotten. The French colonists who settled the site centuries later never had any idea what those hills, over which they built their houses, represented for those who had preceded them. Not even 1800s' explorers such as Lewis and Clark ever wrote anything about Cahokia during their expedition through the West (1803-1806), even when they passed by the huge site. The first man appreciating the historical importance of those mounds was Henry Marie Breckenridge, who in 1813 wrote to his friend, the President Thomas Jefferson, describing what he saw two years earlier while he was visiting Saint Louis.

He had heard about a Trappist Monks' mission established close to some Indian mounds, so he decided to cross the Mississippi river and explore the swampy lowland of the Cahokia Creek, reaching the East Saint Louis Mound Group first, and then the Cahokia Mounds, a few miles away. However, during the first decade of the 1800s the interest in ancient mounds was mainly related with supporting the idea of Manifest Destiny. A race of Mound-builders was thought to have built those earth-works, an idea that helped justify the colonists' westward expansion; they were believed to have come from ancient Israel, India and Wales or even from mythological places such as Atlantis.

Those Eastern "imagined" predecessors deprived the American Indians of their original possession of the land, thus legitimating campaigns and wars against them (Pauketat, 2004).

It took seventy years before someone got interested in the Mississippian centre from a scientific point of view. In the 1880s John J.R. Patrick, a veteran and dentist from Belleville, made an accurate mapping of the area between Saint Louis and Cahokia, leaving us an important document through which we can retrieve the location of the mounds which have been destroyed by the constant process of urbanization. In 1894, to counter the "Moundbuilders myth", the government archaeologist Cyrus Thomas conducted a series of excavations with the aim of proving that mounds were made by Native Americans. Even though Breckenridge tried to emphasize Cahokia's importance, it was only in 1911 that a physician named John Francis Snyder established the Cahokia Mounds Association in order to submit to the Illinois legislature a law for the conservation of the site.

To achieve its goal, Snyder persuaded the nationally recognized archaeologist Warren King Moorehead to visit Cahokia and to express his opinion about it. It was ultimately thanks to the intervention of this archaeologist that in 1925 the State of Illinois established the Cahokia Mound State Park, consisting of 582.80 km2 of land bought whit money collected through fund-raising. This event took place after the release of Moorehead's pamphlet "Help save The Cahokia Mounds", in which he emphasized the relevance and the need to preserve the biggest group of Indian mounds he had ever seen (Valese, 2012).

2.1 Archaeological Researches at Cahokia

In 1921, Warren King Moorehead led the first scientific archaeological investigations in Cahokia (Iseminger, 2010; Pauketat, 2004; Kelly, 2000). In two months he tested the Kunnemann Mound, Schmidt's Mound, Edwards Mound, Jesse Ramey Mound, Mound 64 and two other mounds South of Highway 40. Moorehead also tried to locate the prehistoric cemetery that McAdams had investigated in the vicinity of Monks Mound in the 1880s. During the following year's spring, fieldworks were carried out in several areas between mounds.

After Moorehead's excavations and the establishment of the Cahokia Mounds State Park, only salvage or private interventions were carried out into the site.

The constant urbanization of the area, in fact, put the preservation of the mounds in danger, so that in 1930-31 A.R. Kelly dealt with the destruction of Powell Mound as Harriet Smith did in 1942 on Murdock Mound. After that, the United States entered World War II and works at Cahokia stopped since no institution had enough money to invest in such an extended site. Only a few archaeologists watched over Cahokia during this period, with Preston Holder between them. In 1956 he obtained funding to excavate a group of six mounds at the northern edge of the site, which was about to be levelled to clear space for a new bridge. Even if the process of urbanization has been a great problem for the preservation of the site, it has also been an important mean to give impulse to the archaeological research (Valese, 2012).

In 1960 a group of archaeologists was involved in a huge salvage project carried out in Cahokia and the whole American Bottom: The "Federal Alignment Interstate (FAI) 270" aimed at the preservation of the sites encountered during the implementation of those new infrastructures. Many scholars, such as Charles J. Bareis, Melvin L. Fowler, Robert L. Hall, James W. Porter, and Warren Wittry, put their best efforts in this project, which included the excavation of tract 15A and 15B. Those excavations highlighted the fact that Cahokia had been a big ceremonial center ruled by an élite and that thousands of people used to live there. The discovery of the Woodhenges by Warren L. Wittry during tract 15A's excavation encouraged Melvin Fowler to look for similar structures within the site, and after a few astronomical calculations in 1967 he decided to dig next to Mound 72. Not only he did find what he was looking for, but the ridge-top mound turned out to be the aforementioned unique élite burial. It was a time of great discoveries: in 1971 the Washington University excavation on top of Monks Mound discovered the birdman tablet, which is now Cahokia's logo, while Charles Bareis dug up the borrow pit under Mound 51, where a huge amount of refuse from ceremonial mass feasting, such as pottery, food remains and ritual paraphernalia had been dumped into the pit. As for Fowler's work at Mound 72, this excavation underlined the importance of Cahokia as a ceremonial center (Valese, 2012).

Figure 2.2 *1970's Excavation photo of an Emergent Mississippian House (H34) kept at RCC*

In the years that followed, archaeologists have carried out lots of excavations in Cahokia in order to reconstruct the history of the settlement. Scholars have focused on various areas:

The Grand Plaza: In 1986-87 Bill Iseminger and Bob Gergen conducted test excavations into Mound 50; in 1993 Rinita Dalan and George Holley (SIUE9), using remote sensing technology, found out that the plaza was an artificial creation (Holley, Dalan and Smith, 1993). In 1994 Pauketat, on behalf of University of Oklahoma, made some tests into the North and South edges of Mound 72 (Pauketat, 1994); in 1995 Bill Woods (SIUE) led a field school around Mound 48, and in 1997 Pauketat and colleagues Susan Alt and Jeff Kruchten (State University of New York-Buffalo) surveyed

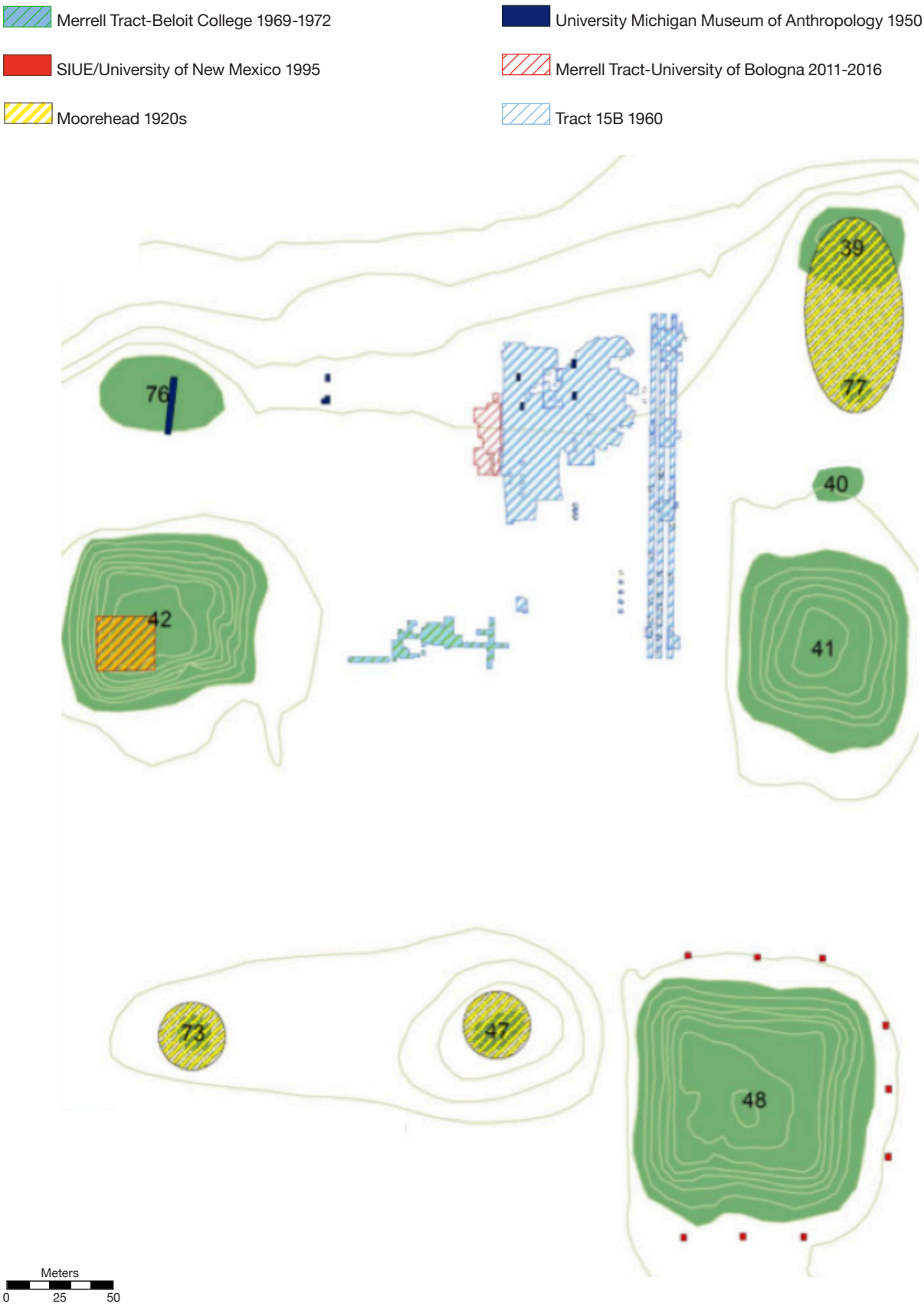


Figure 2.3 *Map of the West Plaza Area indicating the location of the investigations led since 1920 (Valese, 2017)..*

the works for a new waterline which would have crossed the site (Alt, Kruchten and Pauketat, 2010).

The East Plaza: In the summer of 1998 James Brown (Northwestern University) and John Kelly (Washington University) started a project that is still in progress. They decided to reopen a few of the former excavations led in 1956 by Gregory Perino, and to relocate and integrate them with new data, in order to better understand the dynamics that interested the East Plaza and its abandonment. From 1984 to 1986 Bill Woods (SIUE) supervised the works for the construction of the new Interpretative Center, which led to the identification of one of Cahokia's residential neighborhoods. That proved to be one of the most important examples of Cahokia's house-clusters which respected the site's grid during the Lohmann phase and evolved until the Moorehaed phase, giving us a complete picture of Cahokia's life development through the centuries (Collins, 1990).

The West Plaza: As previously mentioned, the first scientific archaeological investigations in the area were conducted by Moorehead during the 1920s (Kelly, 2000). In the spring of 1922, Moorehead dug trenches and test pits in Mound 39, also known as Sawmill Mound because of the facility that stood on it in the 1800s and that eventually blew up, killing several workers (Moorehead, 1929; Fowler, 1997; Kelly, 2000). On the basis of the good amount of archaeological data Moorehead suggested that an extensive habitation area once surrounded this mound- hypothesis later confirmed by the results of the 1960s' excavations. In 1923, Moorehead investigated the small and conic-shaped Mound 77, which only appeared on two pre-existing maps made by C. Thomas in 1894 and by the Ramey family in 1916.

Between 1969 and 1972 Beloit College, under the direction of Robert Salzer, conducted excavations on Merrell Tract, identifying two monumental T-shaped structures (Kelly, 1982). In 1969, E. Benchley (1974), of the University of Wisconsin-Milwaukee, ran some test excavations, focusing on the smaller mounds added during the Moorehead phase on the summit of flat-topped mounds, also known as secondary mounds.

In 1971, the University of Wisconsin-Milwaukee placed test units on top of Mound 42, which led to them actually locating a Moorehead/Sand Prairie structure on its summit, but unfortunately they could not clarify the relationship between the Merrell and its secondary mound.

Delimiting the North-West corner of West Plaza area is Mound 76, which has been investigated for the first time by J. B. Griffin and A. Spaulding from the University of Michigan's Museum of Anthropology (UMMA) in 1950 (Kelly and Brown, 2001); their effort was the first professional non-salvage work in the American Bottom area since Moorehead's works at Cahokia, which implied a careful and controlled method of excavation.

The first investigations on Mound 48 date back to 1995, when a joint field school from Southern Illinois University-Edwardsville, under the direction of W. Woods, and the University of New Mexico, under R. Santley, was carried out (Ringberg, 1996). The ceramic and faunal evidence located in a midden deposit dated to the Moorehead phase suggests the presence of élite residences located on top of the mound (Ringberg, 1996: 100). Furthermore, the recovery of Sand Prairie phase ceramic material attests a long occupational sequence for the Mound.

Extensive excavations that changed the perception of what Cahokia had been in the Mississippian time took place in 1960s'. During those years, an intense campaign of highway construction in the American Bottom area was under way; this meant that several archaeological sites were in danger, since various of the major East-West and North South interstate highways of the Federal highway system cut through the St. Louis area (Wittry and Vogel, 1962). To address the issue, the Illinois Archaeological survey in cooperation with the U.S. Bureau of Public Roads, United States Department of Commerce and the Division of highways of the state of Illinois Department of Public Works and Buildings, decided to establish an Archaeological Salvage Program for Interstate Highway areas. The cooperating institutions worked at the same time in different areas of the American Bottom: the Illinois State Museum Field Parties, under the direction of W. L. Wittry, was in charge of the two major areas - designated as tract 15A and 15B, while the University of Illinois Field Parties, under the lead of D. Lathrap and C. Bareis, conducted the excavation on the area located North of the former Powell Mound; also, for the same institution, James Porter directed the fieldworks at the Mitchell site, located

seven miles North of Monks Mound. The excavation of tracts 15A and 15B revealed the presence of hundreds of features, such as pits, houses and uncommon buildings such as the Woodhenges in Tract 15A and the sequence of rotundas and compounds in Tract 15B.

Before the discovery of these dense occupational areas, scholars thought that Cahokia had been a vacant ceremonial center where people gathered only for ritual occasions. Scholars believed that very few people lived sedentarily in the center, but the great number of houses and pits found during the excavations of tracts 15A and 15B attested to the contrary Cahokia was something more complicated than previously thought (Young and Fowler, 2000). Tract 15B excavations were conducted by Wittry in cooperation with R.J. Salzer, P. J. Munson and W. M. Hurley directed the fieldworks, a large number of workers dug the features, collected the artifacts in bags and left them in the features they belonged, while the archaeologists mapped, collected the bags and recorded the data. Tract 15B excavations brought to light evidences of an intense occupation starting from the Emergent Mississippian phase (ca. AD 950-1050) to the Sand Prairie phase (AD 1275-1400), testified by the presence of houses, associated with pits and diagnostic materials (Wittry and Vogel, 1962; Kelly, 1980, 1996b).

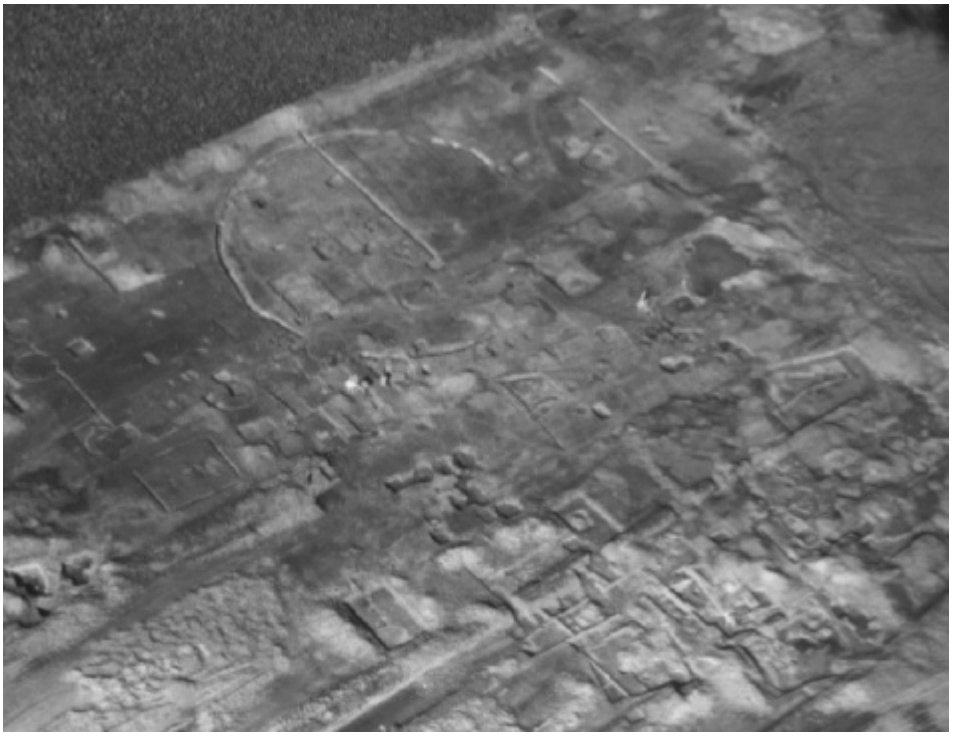


Figure 2.4 *15B Tract, Cahokia. General Shot, Research and Collection Centre (Springfield, IL).*

2.2 The Merrell Tracto-Unibo Project

Figure 2.5 *Localization of the Merrel Tract- Unibo excavation in the Cahokia West Plaza*

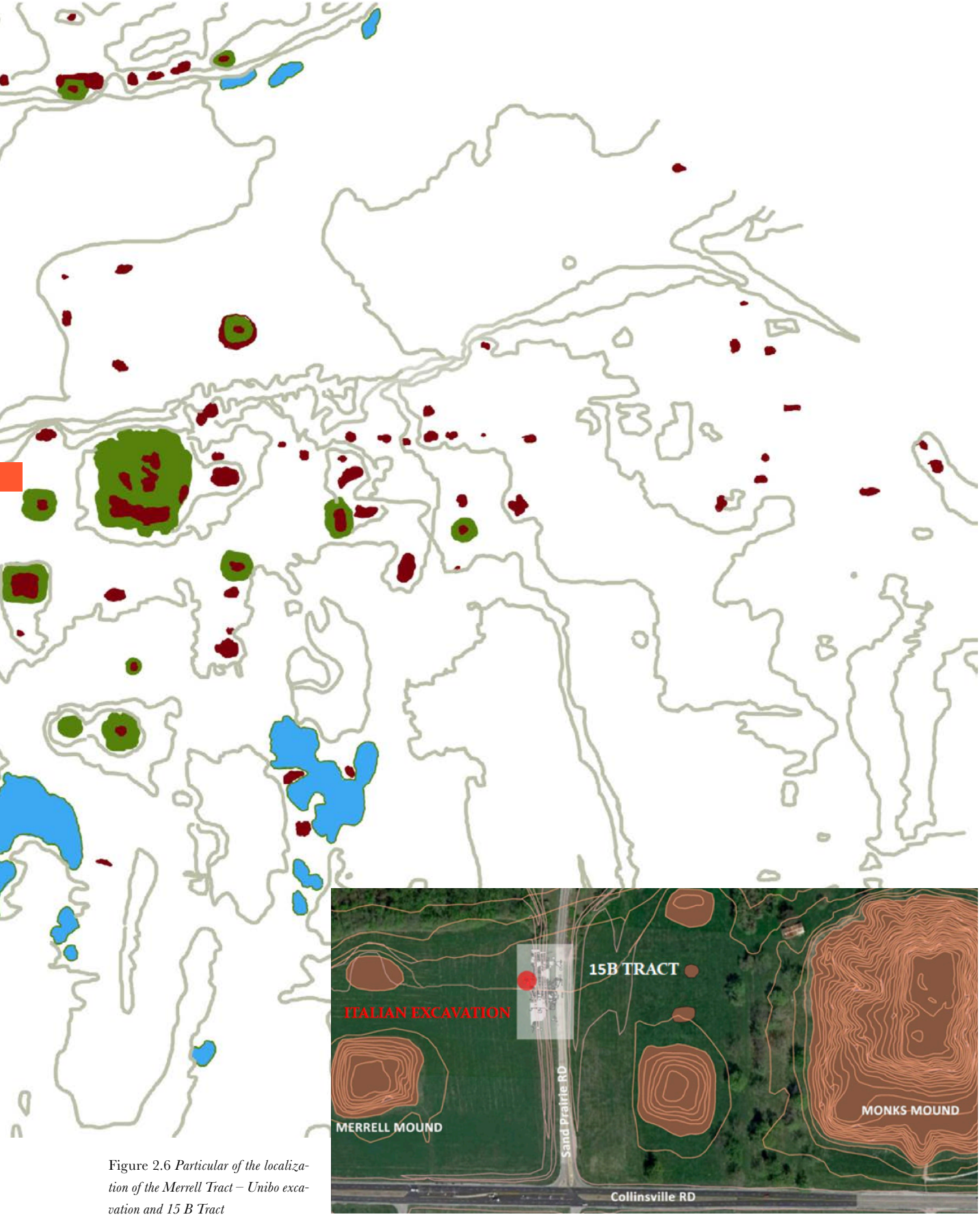


Figure 2.6 *Particular of the localization of the Merrell Tract – Unibo excavation and 15 B Tract*

In 2011, the "Cahokia Project: An Effort Toward the Integration of Different Scientific Traditions" was born from an idea of M. Tosi and based on a research agreement signed by the two organizing institutions, the Department of History and Cultures of the University of Bologna (Italy) and the Department of Anthropology of the Washington University, St. Louis (MO, USA). The project, carried out in the context of the wider "Cahokia Epicenter Project", led by J. E. Kelly, has been directed by D. Domenici and J. E. Kelly, while since 2013[1] I. Valese has been the vice-director and coordinator of the fieldwork activities and the author of this thesis, as well as the vice-director and coordinator of the laboratory analysis.

The six-year fieldworks were financed and received logistical support from multiple organizations: University of Bologna, Washington University in St. Louis, as well as from the Italian Ministero degli Affari Esteri e della Cooperazione Internazionale (Direzione Generale per la Promozione del Sistema Paese – DGSP – Ufficio VI – Settore Archeologia), Cahokia Mounds State Historic Site, Cahokia Mounds Museum Society, Powell Archaeological Research Centre, Illinois State Museum Research and Collections Center, and Carisbo Foundation. Furthermore, 2014's field season was co-funded by the National Geographic Society for the project "Settlement dynamics and use of space in the Mississippian World. The Compounds: public buildings in Cahokia's West Plaza" (Valese, 2017).

The University of Bologna's investigations have been carried out in the Merrell Tract, more specifically in the North-central section of Cahokia's West Plaza. In line with the wider purposes of the Cahokia Epicenter Project directed by J. E. Kelly, researches have been focused at clarifying the occupational sequence that interested the area and, more specifically, at understanding its transformation into a Plaza with public buildings during the phases of Cahokia's apogee.

The starting point for the Italian archaeological project was to collect and digitize unpublished fieldnotes, maps and photos related to Tract 15B's previously mentioned excavations. The Italian fieldwork area has then been attached to the older 15B tract grid in order to extend the survey to the West side of the highway (Mattioli, 2017; Valese, 2017). During the six fieldwork seasons in the Merrell Tract, an area of 368.823 m2 2 was uncovered. The approx. 30 cm disturbed plowzone was removed by shoveling and troweling, in order to expose the underlying undisturbed features. It is quite clear that, in most of the excavation area, plowing reached the ancient occupational levels, so that most of the original floors were destroyed by modern agricultural activities. Plowed soil was thus screened to recover cultural material originating from the upper levels of the underlying disturbed features.

The features were excavated by zones, where present, and were cross-sectioned in order to draw profiles; the soil recovered from the features was screened either using ¼-inch mesh or collected for soil and flotation samples. Both kind of samples were labeled with information about their provenance (feature number, unit number, level and zone) and stored in double plastic bags. The flotation samples were processed in order to obtain botanical samples (Mattioli, 2017; Valese, 2017).

The material collected from the field, both from the plowzone and features, was stored in paper bags labelled with the indication of site (11 MS 2/3), tract (Merrell Tract), units (N and W), bag number (MT2-North-West-sequntial number), feature number, level, date and name of recorder. Once taken to the laboratory, after having been washed, the material was subjected to preliminary sorting, counting a weighing, and then catalogued using the Inventory Sheet form, which refers to the general content of a bag. Subsequently, the ceramic material was sorted out by part of the vessel (rim or bodysherd), paste and surface treatment, and catalogued using the relative Rim, Diagnostic and Paste forms[2]. All diagnostic findings, ceramic and lithic, were studied, drawn and photographed (Mattioli, 2017; Valese, 2017).

As per the ceramic assemblage, the lithics were first sorted by tools and debitage, divided by material (chert, sandstone, etc.) and then recorded using the Lithic form. All the information recorded on paper forms, concerning excavation data and laboratory analysis, was digitized into an electronic database (Mattioli, 2017; Valese, 2017).

[1] *Maurizio Cattani and Florencia Debandi, University of Bologna, coordinated the field and laboratory activities from 2011 to 2013.*

[2] *More specific information regarding ceramic assemblages detected during the fieldwork will be provided in chapter 3.*

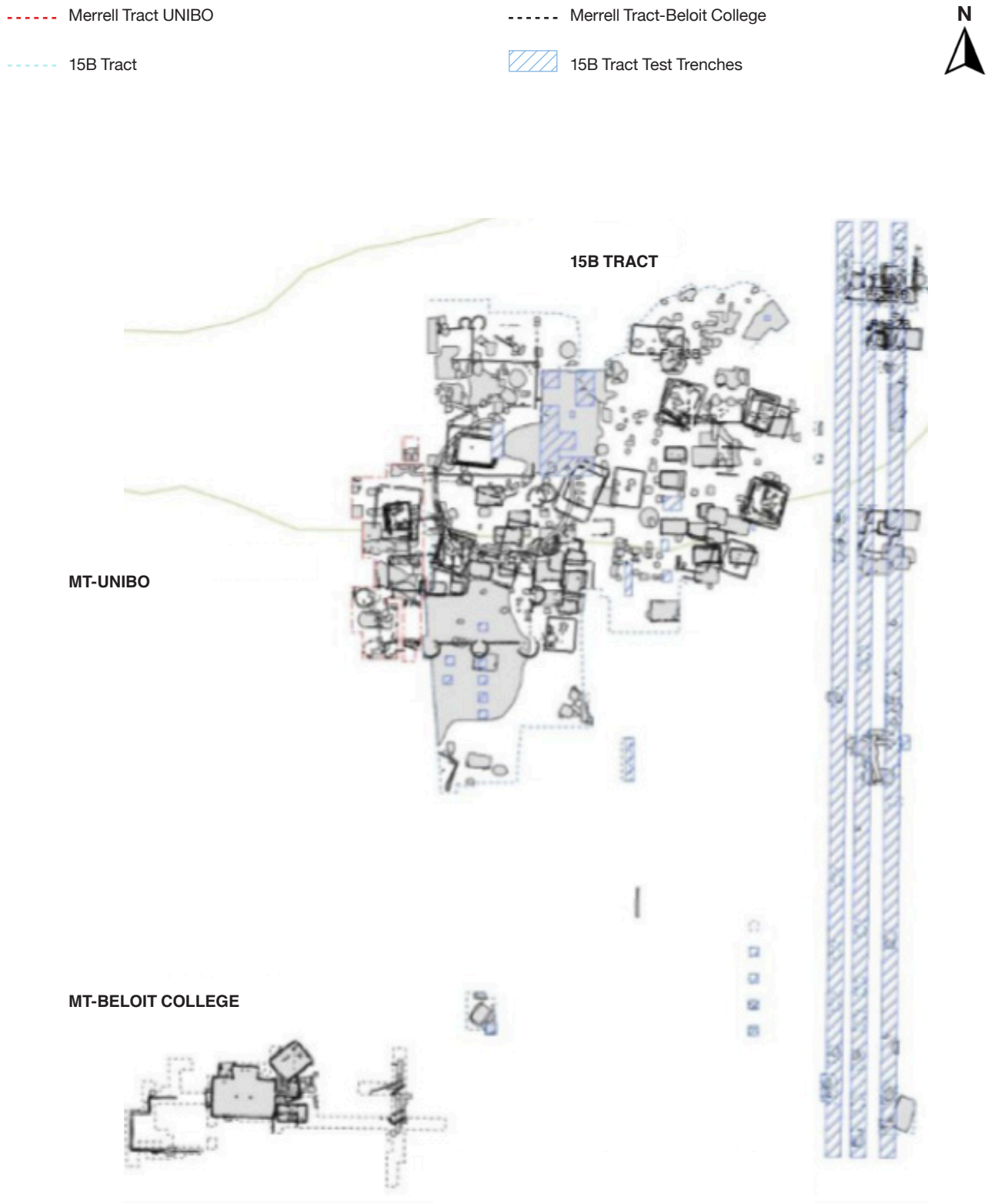


Figure 2.7 *Detail of West Plaza Area with the location of Merrell Tracts and 15B Tract (Valese, 2017)*

2.2.1 The Merrell Tract-Unibo Project Results and Conclusions

Cahokia was built following a preconceived plan based on the cardinal directions and the principles of centrality, quadralateralism and dualism, adopting Monks Mound as the center of the scheme with the four plazas arranged around this focal point (Kelly, 1996).
The West Plaza, our area of interest, was an integral part of downtown Cahokia, and by the 15B and Merrell Tracts' excavations, it seems like it played an important religious and/or political role.
The Merrell Tract excavations, in particular the one conducted by the University of Bologna, brought to light evidences of an intense occupation starting from the Emergent Mississippian phase (ca. AD 750-1050) to the Sand Prairie phase (AD 1275-1400).
During the Emergent Mississippian phase (AD 750-1050) the area was intended for residential use, meaning the area was mostly destined to domestic activities.

The constant superimposition of the buildings, which were rebuilt on the same spot, could imply, as suggested by Pauketat (2013), a social meaning related with the continuity of each family's position, both in social and spatial terms, expressed by the location of their houses organized around a main courtyard and distinguished by the presence of the typical four pits and central post arrangement. The Emergent Mississippian houses were built as semi-subterranean rectangular structures, cut into the sterile clayish or silty soil, with single-set perimetral posts (Kelly, 1990; Smith, 1990).

The house basins located on the Merrell Tract-Unibo matched the settlement dynamics already noted in the 15B and Merrell-Beloit Tracts[3] excavations. These structures were possibly part of at least another household cluster[4] already located in the 15B Tract; moreover, a possible new courtyard might have been located at the southern limits of the excavation area. The types of pit features and their content have proven to be different between the two portions of courtyard excavated in the Merrell Tract-Unibo. The northern one, which yielded evidences of pottery, lithic materials and plant processing and cooking activities with the presence of tobacco and morning glory seeds, could have been devoted to the performance of ritual/communal activities such as feasting or gathering. The southern courtyard could have been destined to a common storage area. The spatial arrangement of the pit houses located in the Merrell Tract-Unibo confirms the predominant East-West orientation already observed in the Merrell-Beloit and 15B Tracts (Kelly, 1991a; Valese, 2012; Pauketat, 2013). Such an organization could imply the creation of a community grid even before the creation of the "Cahokia grid" (Fowler, 1997), established at the beginning of the Lohmann phase, as also suggested by Kelly and Pauketat (Pauketat, 1998).

[3] *We use the Merrell Tract-UNIBO term to refer to University of Bologna excavation while the term Merrell-Beloit Tract is in reference to the Beliot College excavation conducted in the same Merrell Tract area between 1969 and 1972.*

[4] *By "household cluster" we intend a complex of buildings and outdoor facilities that was the domestic context of a "family" or a minimal social unit or corporate residence group (Hayden and Cannon 1982).*

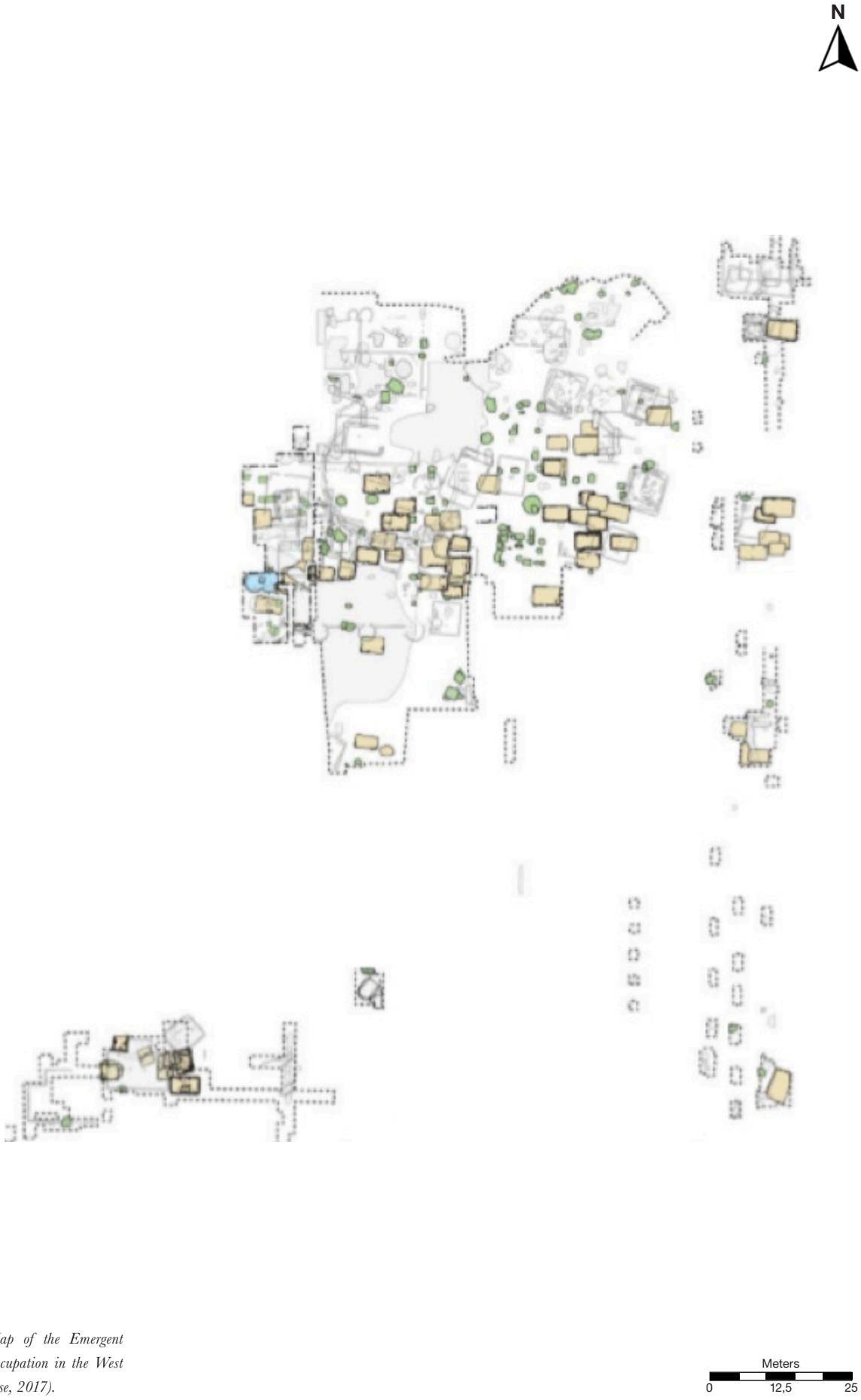


Figure 2.8 *Map of the Emergent Mississippian occupation in the West Plaza area (Valese, 2017).*

Figure 2.9 *Emergent Mississippian phase features located in the Merrell Tract–Unibo excavation (Valese, 2017)*

Data suggest a possible anthropic origin for the peculiar "Blue Fill" clayish soil located in the area (Pauketat, 2013; Domenici and Valese, 2016). This could be an archaeological "unicum" for this chronological phase and it has been interpreted, in the light of the Merrell Tract findings, as that to level the area made uneven by the multiple construction episodes (Pauketat, 2013). The communal intent towards the creation of an incipient "urban cluster" (Kelly, 2008) may be seen through the landscape modification activities that took place at a large scale during this phase (Williams and Kelly, 2017). As recently suggested by Brown and Kelly (2015), one of the bases of this phenomenon was the increased exploitation of maize and the resulting labor surplus that led slowly to social inequality and hierarchization; a political and settlement reorganization process that conceivably led to the formation of Cahokia as a "mega village" (Kelly, 2008; 1990) The transition from the Emergent Mississippian phase to the Mississippian phases (AD 1050-1400) was marked by a change with respect to the use of space. By the end of the Emergent Mississippian and the beginning of the Lohmann phase (AD 1050-1100), the entire settlement was subjected to a radical change, which was at the base of the constitution of Cahokia in the Mississippian times.

The "Cahokia grid" was established (Fowler, 1997), the former residential areas were moved outside the core of the "Cahokia precinct" and the cruciform layout of the four plazas was set around a focal point, Monks Mound (Kelly, 1996; Chappell, 2002; Dalan et al., 2003). It was during this reorganization of the settlement that the area located to the West of Monks Mound was finally designated as a Plaza. The area was cleared of all domiciles, which were moved away from public space, outside the central precinct, as shown by the excavations led at the Interpretative Centre Tract II (Collins, 1990) and at the 15A Tract (Pauketat, 1998), in which the Lohmann structures, organized in clusters gathered around courtyards, were oriented according to the "Cahokia grid". The salvage excavation led in the 15B Tract (Wittry and Vogel, 1962), along with the excavation in the Merrell Tract (Salzer, 1972; Kelly, 1996) revealed the presence of monumental architecture belonging to the Lohmann phase, hence coeval with the establishment of the public space.
Thanks to those investigations, the common understanding of Mississippian public spaces changed. Until Wittry's fieldwork in Tract 15B, plazas were depicted as empty spaces – and that would have been the case for Cahokia's West Plaza as well if the excavations had not taken place.
As a matter of fact, the archaeological records from the 15B and Merrell-Unibo Tracts, both pertaining to the phases in which the area was used as a public space, left limited quantities of evidences, as the activities performed in the public areas usually left little artifactual debris (Rogers et al., 1982).

Figure 2.10 *Map of the Lohmann phase occupation in the West Plaza area (Valese, 2017)*

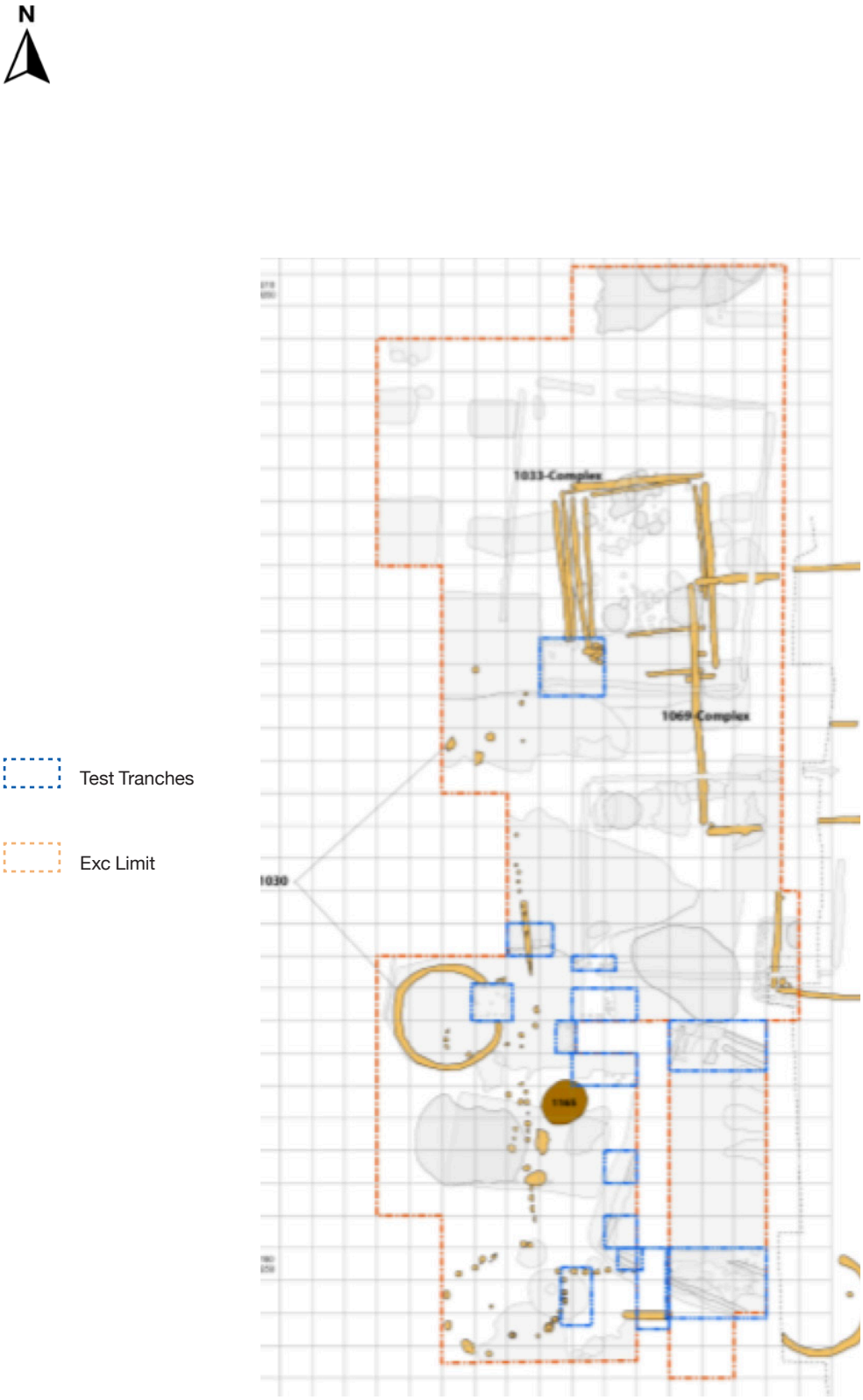


Figure 2.11 *Early Mississippian features located in the Merrell Tract –Unibo excavation (Valese, 2017)*

The West Plaza was not clear from edifices, since Rotundas and Compounds occupied part of it. The construction of the rotundas and the absence of residential buildings is an undeniable sign that the area was meant as a public space. It is hard to comprehend the exact purpose of those structures, since no data have ever been recorded, even though the size and the shape of the buildings bring to mind a religious or public function. Even if Cahokia rotundas cannot be firmly ascribed to the earth lodge building typology, the presence of comparable buildings used for special purposes in other contemporary Mississippian centers may suggest an analogous function (Bartram, 1793).

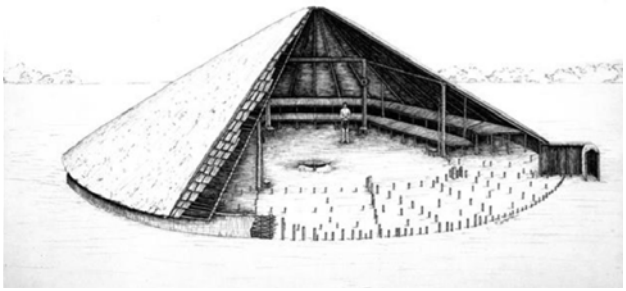


Figure 2.12 *Drawing of a Cherokee winter townhouse at Chota, by Thomas Whyte. Frank H. McClung Museum Photographic Collection, University of Tennessee, Knoxville.*

In the historical accounts, council houses were described as circular buildings, located at the margins of the public areas or on top of small mounds, whose floor was kept clean and free of debris. As reported by Rodning (2009), in the 18th century, among the Cherokee, many kinds of activities took place in these public buildings, ranging from sacred community rituals, such as the Busk Ceremony, to routine religious and/or political gatherings, such as councils and negotiations.
The creation of "Downtown Cahokia" following a plan based on the quadripartite arrangement of plazas, one of the basic tenets of Native American cosmologies that has its roots in the Emergent Mississippian community layout, has been described as one of the key elements in the creation of Cahokia's urban plan (Kelly and Brown, 2014).

During the Stirling phase (AD 1100-1200) the West Plaza has seen the erection of new special structures.

Even though the function the two T-shaped buildings remains uncertain, they probably played a different role than simple dwellings; their placement in public areas and their size suggest that they could have accommodated large numbers of people and objects, and the very peculiarity of their shape implies a special destination (Kelly, 1996).
Collins (1990: 76) and Alt later (2006) suggested, drawing on ethnographic evidence that the T-shaped and L-shaped buildings could have been residences for special people, such as religious specialists or chiefs, or some kind of storage facilities, as the smaller room had been interpreted as a sancta sanctorum for the storage of ritual paraphernalia.
During the 15B Tract's excavations, the remains of two imposing compounds (A and B/C) were retrieved in the northern portion of the public space. The two structures were studded with circular bastions (Alt and Pauketat, 2010; Pauketat, 2013) or rooms (Kelly, 1996) and both were dated to the Late Stirling phase.
The excavations led in the Merrell Tract by the University of Bologna were aimed at completing the investigations of Compound A and B/C, and at acquiring further information that could help understand the purpose of these buildings, but unfortunately the features were poorly preserved, so that no specific information could be gathered (Mattioli, 2017; Valese, 2017).
In the recent re-analysis of the 15B Tract's archaeological data, Pauketat (2013: 88-96), following Wittry, suggested a chronological sequence for the West Plaza enclosures that describes the circular bastioned compound A as the first structure to be erected, and then later replaced by compound B/C.
In light of the results of the Italian excavations led in the Merrell Tract, it is possible to put forward a different interpretation with respect to Compound B/C and their associated buildings. The hypothesis of a possible contemporaneity of the two structures, at least in one of their reconstruction episodes, as suggested by their almost perfect N-S alignment, is not to be hastily dismissed (Domenici and Valese, 2016).

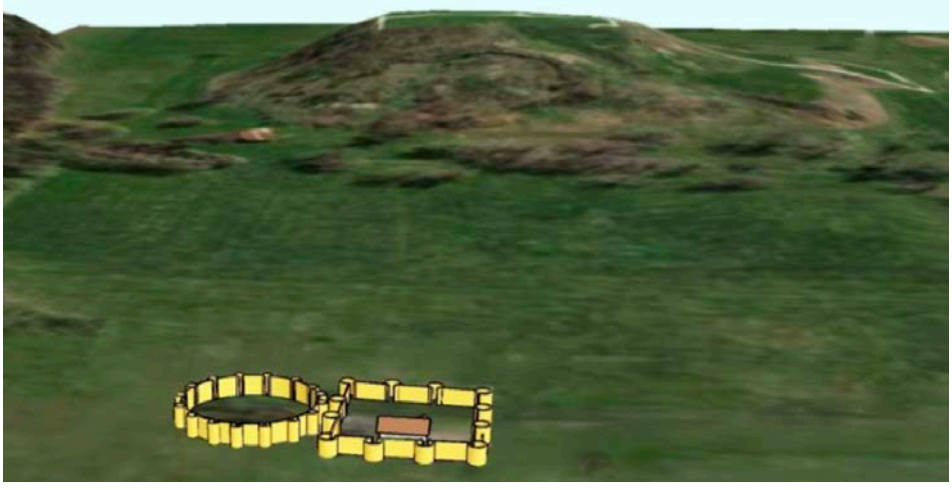


Figure 2.13 *3D reconstruction of Compounds A and BC. Realized with Google SketchUp (Valese, 2017)*

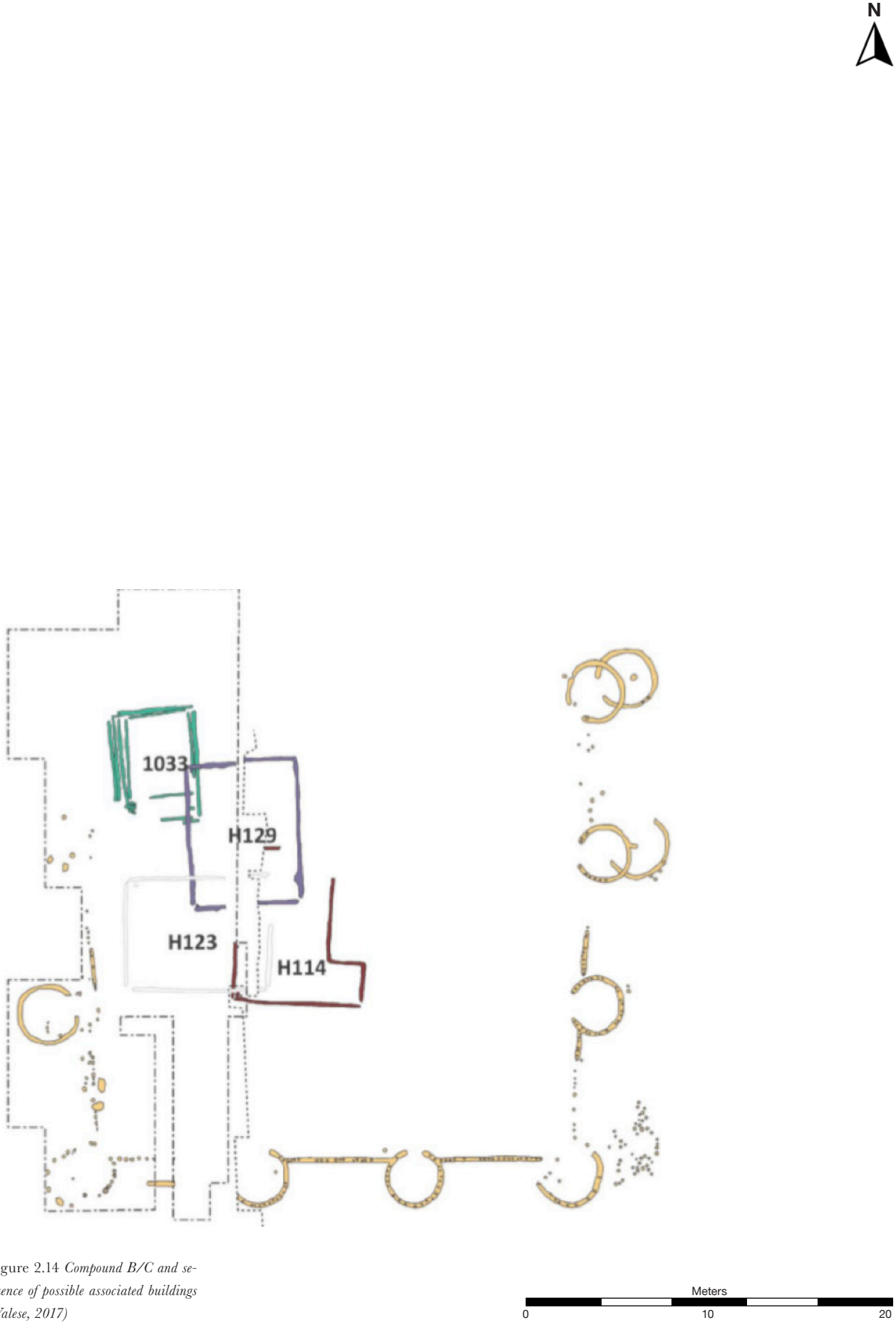


Figure 2.14 *Compound B/C and sequence of possible associated buildings (Valese, 2017)*

The pairing of rounded and square special-purpose structures was, in fact, a recurring trait of Eastern Woodland cultural tradition; this kind of associations were common among Ohio Hopewell earthworks such as Hopetown, High Bank, or Newark (Squier and Davis, 1848); even the shapes of the Twin Mounds in Cahokia's Grand Plaza mirrors the pairing of round and square shapes (Dalan et al. 2003; Valese, 2012; Kelly and Brown, 2014; Domenici and Valese, 2016).

Interestingly, a similar pairing occurred in the plazas of historical Cherokee and Creek settlements, often dominated by a rounded and a rectangular townhouse (Rodning, 2009, 2010, 2011; Domenici and Valese, 2016). Even though it is well known that the two shapes were associated to seasonal use (winter vs. summer building), it is not excluded that the two shapes may have had deeply entrenched symbolic meanings related to the inherent dualism of Eastern Woodland cosmology (Dalan et al., 2003: 204; Kelly and Brown, 2014: 316-317). We may also suggest that the compounds, as well as the earlier rotundas, could have been the physical embodiment of the corporate identity of specific social groups, precisely the same as with earth lodges and townhouses among historical Native American groups (Domenici and Valese, 2016).

Whether the function of these compounds was defensive or not is still debated. However here we intend to suggest that their function was in some way connected to the role played by the palisade.

The construction of Cahokia's Palisade and its chronological relationship to the Compounds introduces yet another inquiry about the spatial organization of Cahokia's epicenter in Stirling times, regarding whether the compounds A and B/C were built inside or outside the central stockade. The compounds being inside or outside of Cahokia's precinct is a factor that dramatically shifts their societal role. If they had been included inside the perimeter of Cahokia's main palisade, the value of the buildings, and of the goods and activities that they were secluding, would have been higher in significance seeing as it needed a double protection. Otherwise, if the compounds were to be found just outside the palisade, that could have been interpreted as some sort of "power statement", mimicking at a lesser scale the imposing central stockade, a materialization of the corporate identity of a lesser – but still important – social segment of Cahokian society. Whatever their spatial relation with the stockade, the buildings of the West Plaza area obviously fulfilled an important purpose within Stirling-phase Cahokia epicenter (Domenici and Valese, 2016).

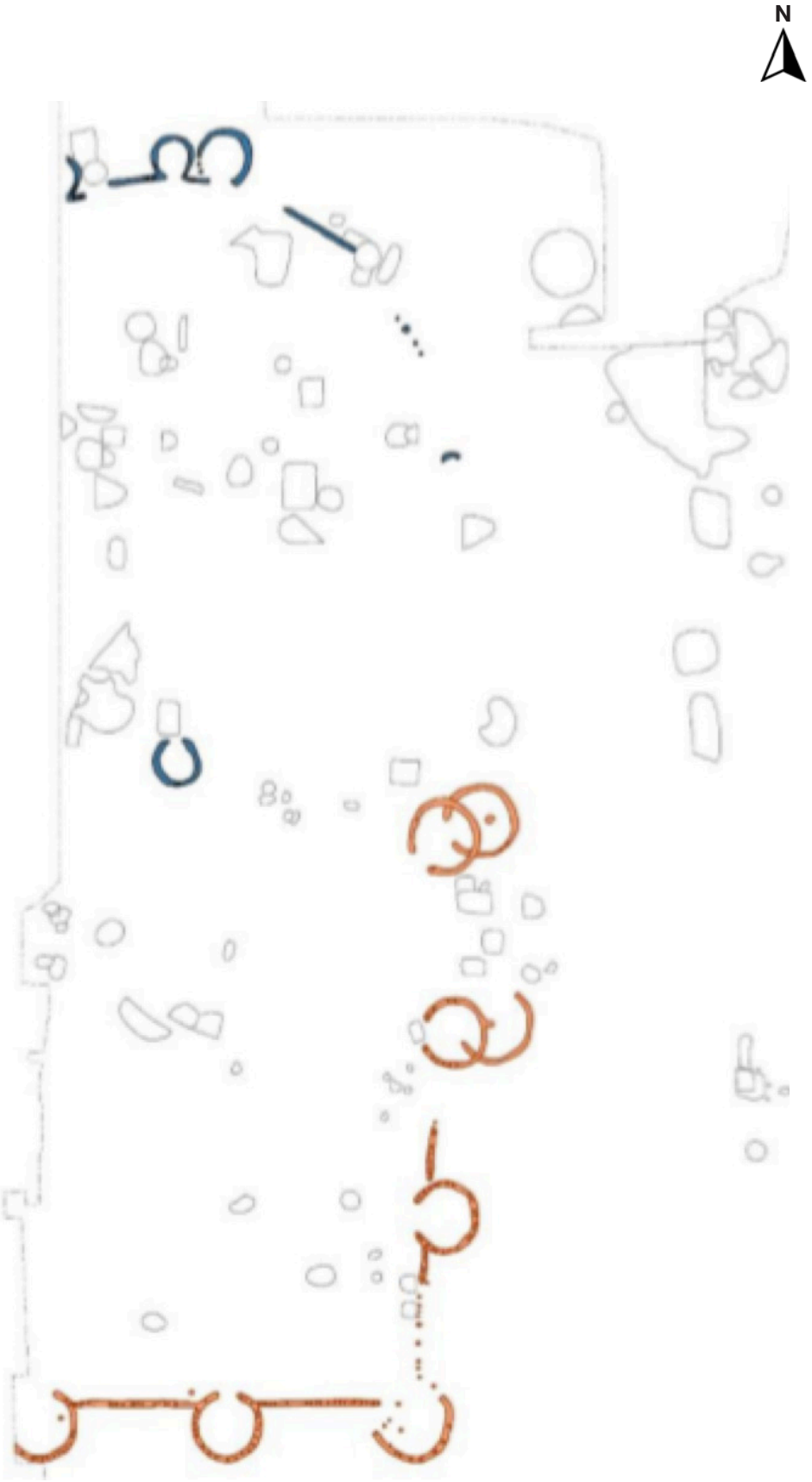


Figure 2.15 *GIS map detail of bastioned compounds. Compound A in blue and compound B/C in orange (Valese, 2017).*

Since the function of the stockade was tout-court defensive, the compounds may have played an important ceremonial and public role in their location, one of the main plazas of Cahokia. Furthermore, the possible association of the special L-shaped building may attest for the performance of ritual-related activities inside the compounds (Mattioli, 2017; Valese, 2017).
The presence of such structures, aimed at limiting both visibility and active participation, may suggest a shift in Cahokia's society. Perhaps factional divisions were emerging among the inhabitants of the subcommunities that cooperated during the earlier Lohmann phase in the establishment of the settlement (Domenici and Valese, 2016).
As for the chronological aspect, the construction of the palisade has been assigned so far to the Late Stirling phase (Fowler, 1997; Dalan et al., 2003; Kelly et al., 2008; Iseminger, 2010); however, recent investigations have revealed that the construction of Cahokia's stockade could be post-dated to the Moorhead phase (Schilling, 2010). According to this latest research, the compounds may have been built a hundred years before the stockade, representing some sort of architectonic prototype for the realization of the palisade.
In any case, screens and enclosures segregating religious or élite zones serves as an indicator of significant social divisions and, as pointed out by Alt and Pauketat (2010), possibly a reflection of the wider process of "compartmentalization" in which households and house spaces became highly organized by task (Rogers and Smith, 1995). The erection of the West Plaza compounds and of Cahokia's stockade were part of a radical social change that involved the whole settlement. The building of walls meant the destruction of social spaces along with the material dislocation of entire neighborhoods, (Iseminger and Kelly, 1995) seeing as walls divide and redefine communities (Alt and Pauketat, 2010).
Whatever the spatial and chronological relationship between the stockade and the compounds, the West Plaza area, during the Late Stirling phase, was still playing an important role as a special-purpose space in which ritual and/or the élites' activities were performed (Mattioli, 2017; Valese, 2017).
By the end of the Stirling and the beginning of the Moorehead phase, the dismantlement of the bastioned compounds suggests a radical change in the use of space relative to the former West Plaza. The area was in fact fully reconverted to residential use, although before that, for a certain time, it seems conceivable that ritual and public activities were still performed. Once the compounds were torn down, the West Plaza area was arguably still occupied for a brief period of time by a series of non-domestic buildings (Pauketat, 2013).
This hypothesis is supported by the presence of buildings having a possible sort of "public" or élite annex destined to the performance of non-domestic activities. Evidently, Moorehead public structures were functionally different from the earlier ones, but that may be regarded as one last example of Cahokia's acme, before the area was fully converted to residential use.
During the Late Stirling/Early Moorehead phase, borrowing activities took place at the northern end of the Merrell Tract-Unibo tract (Mattioli, 2017; Valese, 2017).
Some evidences show that the borrowed areas were rapidly filled by means of repeated episodes of refuse deposition rich in Late Stirling/Early Moorehead Ramey Incised pottery, and the presence of ceremonially significant plants reflects the performance of feasting or ritual-related manufacturing activities. (Kelly L., 2001). This extensive borrowing activity supports the possibility that the local Early Moorehead Cahokian community was still capable of coordinating and organizing corporate labor investments (Brown and Kelly, 2015; Domenici and Valese, 2016).
Peculiar to this pit is the presence of both tools and processing residues along with sacred woods - which might indicate how the associated big building was ostensibly not a common domicile, but possibly an élite building related to the preparation and/or storage of the ritual paraphernalia performed in the neighboring buildings. Moreover, it is possible that the pit deposit may have been arranged in a precise and ritualistic manner duplicating the "cosmological order", with the marine shells laid down at the bottom, representing the underworld and aquatic fauna, and the waterfowl placed on top, representing the element of transition between the watery underworld and upper world and the sky (Domenici and Valese, 2016).
This pit might testify, with the presence of exotic and élite goods (Figure 2.17), that the Late Mississippian Cahokian community had access to precious materials and still engaged in the performance of communal feasting (Kelly and Brown, 2014).

Figure 2.16 *Map of the Stirling phase occupation in the West Plaza area (Valese, 2017)*

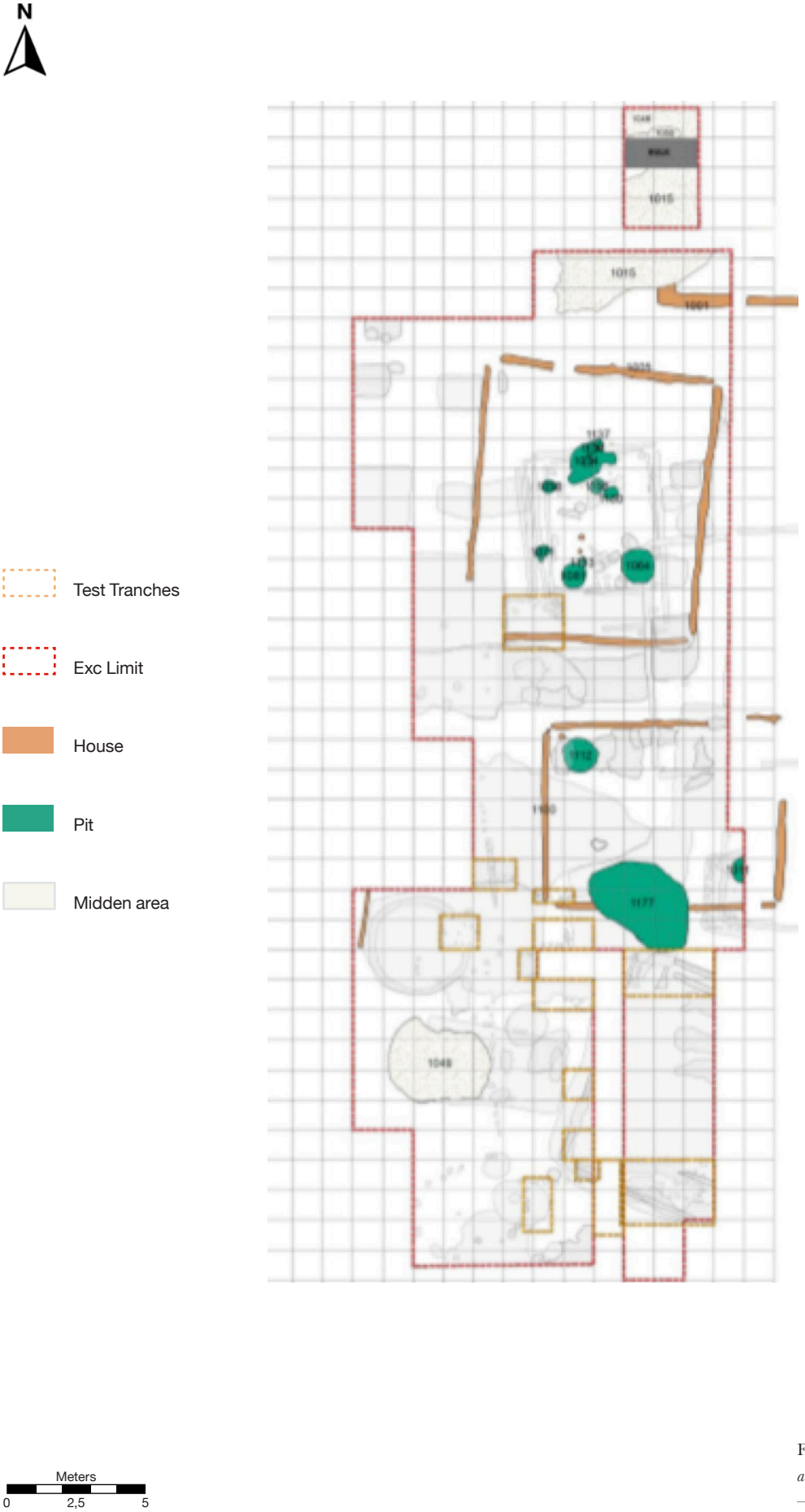


Figure 2.17 *General map of Moorehead's features located in the Merrell Tract –Unibo excavation (Valese, 2017)*

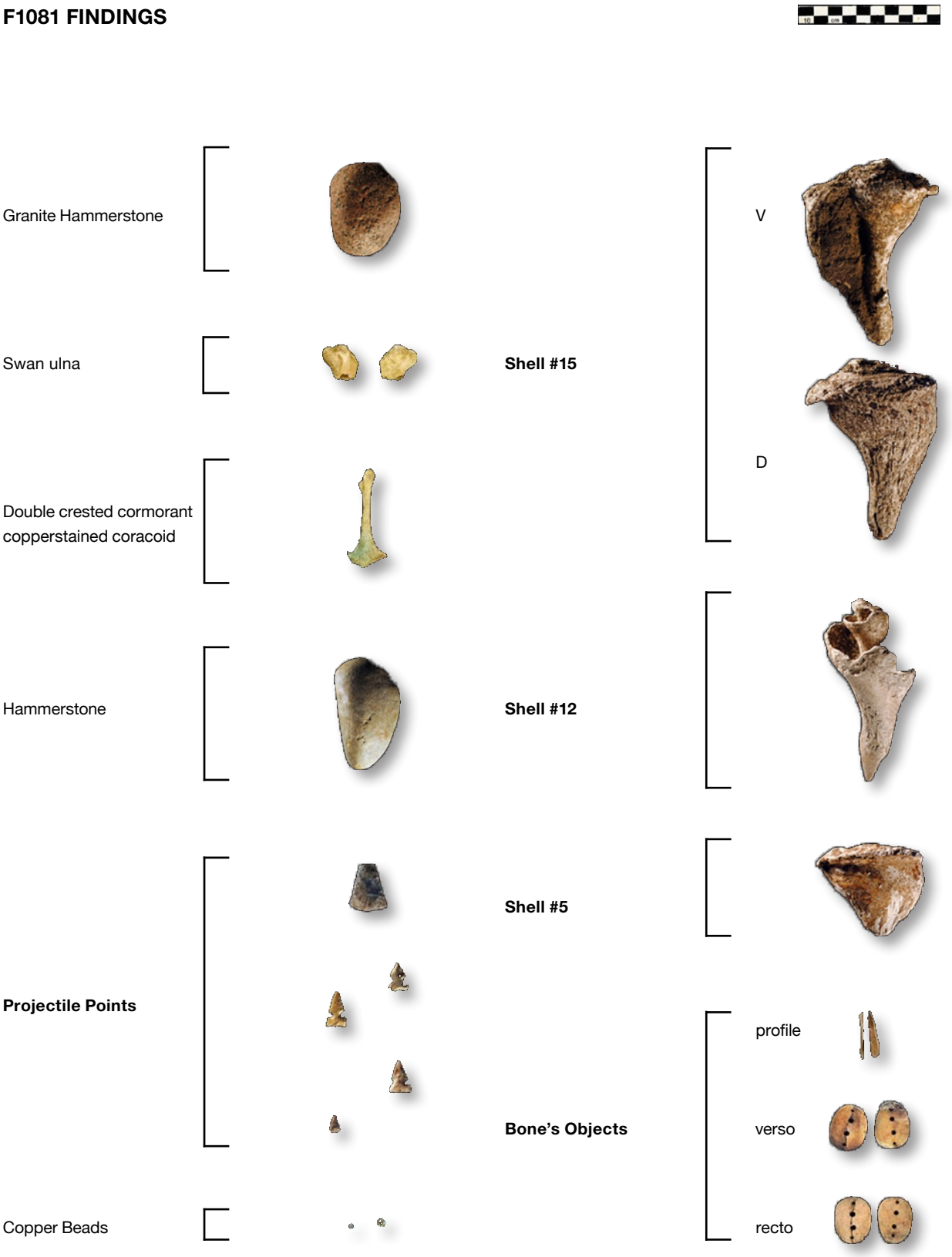


Figure 2.18 *Some of the objects found in F108, Merrell-Unibo Tract excavation*

During the Moorehead phase (AD 1200-1275) and continuing into the Sand Prairie phase, the Merrell Tract-Tract 15B area witnessed the sprawling of a new Late Mississippian residential occupation.
The public area was abandoned and Cahokia was reorganized separating the central precinct from the residential areas (Kelly et al., 2008).

The 15B and Merrell-Unibo tracts excavations revealed that the houses were organized in clusters grouped around small courtyards, which were kept almost at the same location until the end of Sand Prairie phase (Valese, 2012; Pauketat, 2013). The Moorehead phase residential structures are characterized by N-S orientation and by the presence of a few smaller buildings associated with the larger ones. This could reflect status differentiations or different functional destinations and it is conceivable, as suggested by Pauketat (1998), that the smaller buildings may have been storage facilities associated with larger domiciles being part of a same household.

One of the biggest dwellings has been uncovered during the University of Bologna's excavation; the large building, with its associated pits and midden areas, turned out to be rich in remains of precious materials such as Ramey Jars, decorated plates, quartz crystals, and fluorite beads. The presence of exotic and élite goods suggests that the Late Mississippian community of the area had access to precious materials and probably engaged in some kind of communal feasting. The area, even if reverted back to residential use, was still the theatre of some kind of ceremonial activity, probably of a more "local" kind associated with nearby residential clusters and not with monumental buildings anymore (Domenici and Valese, 2016).
This more private, domestic-centered ceremonial practices, paired with the increasing practice of burying the dead within the residential structures and not anymore in communal funerary facilities, seems to be in accord with the emergence of a Late Mississippian "new ceremonialism" (Pauketat, 2013: 302-303, Baltus, 2014) and with the general trend toward a more self-centered and inward-looking Cahokian society (Kelly and Brown, 2014: 213-215; Domenici and Valese, 2016).
University of Bologna located a burial and associated it with a Moorehead phase structure due to the recovery of materials such as: a miniature jar, several decorated plates, various pottery fragments and small remains of mica. The association between burials and houses can be ascribed to the endeavor of the social group to maintain the ties with their family members through a mortuary practice exclusive to this area of Cahokia (Pauketat, 2013: 181). During the Lohmann and Stirling phases, only high-status families had the right to put exotic goods inside their graves; by the Late Mississippian times a higher presence of these kinds of materials associated with burials and dwellings reflects a more widespread access for every individual to wealth or power (Pauketat, 2013).
The Moorehead phase occupation of the West Plaza area support the view of the Moorehead phase as a period of social transformation and creation of "new ways of being Mississippian", in the words of Baltus (2014: 9).

The Moorehead phase was identified by a general sense of insecurity resulted in the construction of the palisade[5] at Cahokia, which was the response to threats possibly coming both from the outside and from the inside of the cahokian community, a drop in population and evidence of warfare all over the American Bottom area.
This period has been defined as the "Moorehead Moment" by Brown and Kelly (2000) and it has been defined by the appearance of other Mississippian fortified centers scattered throughout the lower Midwest and Southeast (i.e. Angel, Kinkaid, Olin, Aztalan, etc.).
Sand Prairie phase structures (AD 1275-1400) located in the Merrell Tracts can be considered as part of a larger residential area located in the 15B Tract (Valese, 2017).

The house complex located during the 1970 Merrell Tract excavation (Salzer, 1972; Kelly and Koldehoff, 1995), showed evidence of ritual burial and pointed to the performance of rituals connected to activities involving the whole community, such as the Busk or Green Corn Ceremony (Kelly and Koldehoff, 1995).

[5] *The exact chronology of the Cahokia palisade is still debated, fluctuating between the Late Stirling and the beginning of the Moorehead phase.*

Figure 2.19 *Detail of residential buildings located in the West Plaza area during the Late Moorehead phase (Valese, 2017)*

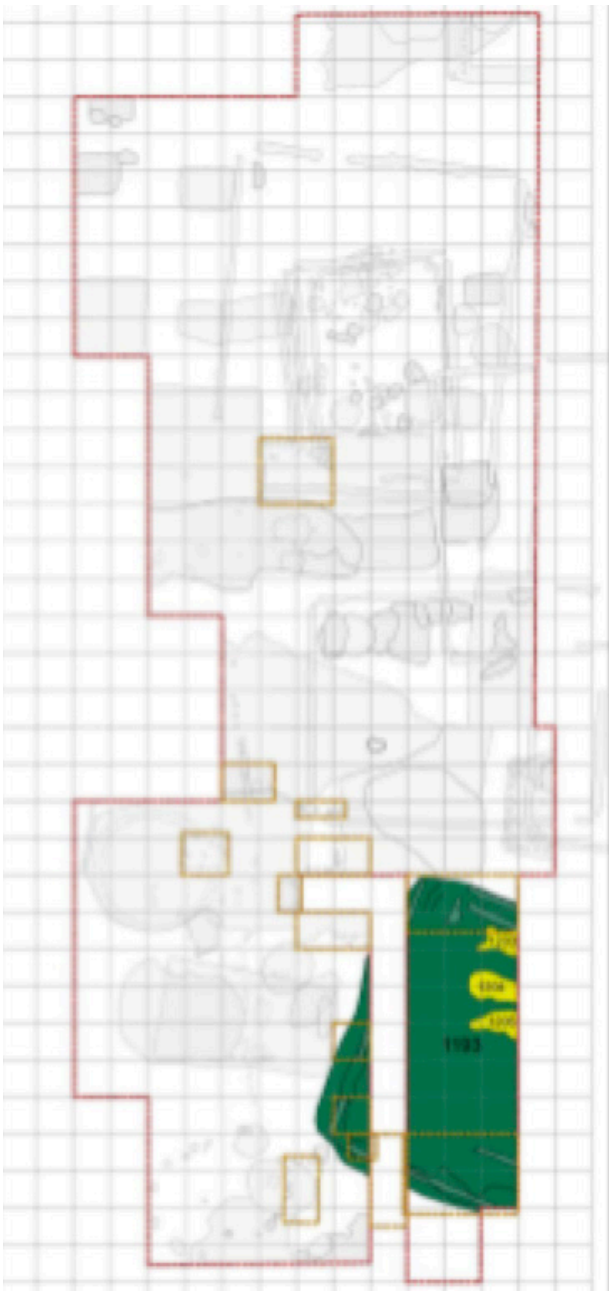


Figure 2.20 *General map of Sand Prairie's features located in the Merrell Tract–Unibo excavation (Valese, 2017)*

During the most recent excavation led in the Merrell Tract by the University of Bologna, another Sand Prairie phase building has been located and partially excavated (Mattioli, 2017; Valese, 2017).
It is quite clear that the Sand Prairie phase occupation of the West Plaza area involved both domestic and ritual activities. This is generally considered as a period of decline and demise (Dalan et al., 2003; Iseminger, 2010) that acted as a prelude to the abandonment of the site; however, the Sand Prairie phase occupation of the West Plaza area suggests a different picture, characterized by the performance of common and private rituals, the circulation of exotic and precious goods - no more an exclusive to the élites (Iseminger, 2010: 154), and a good degree of residential stability (Kelly and Koldehoff, 1995). Those characteristics could imply that some degree of social complexity was still maintained within Cahokia's community and possibly between Cahokia and its hinterland (Roger and Smith, 1995).

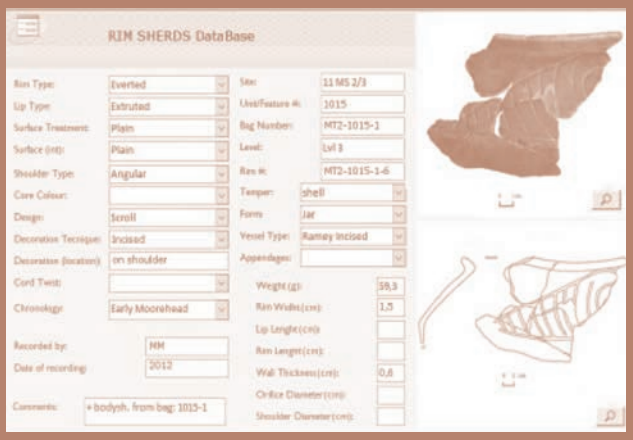
The causes of Cahokia's decline are still debated, but it is likely that a concurrence of many factors contributed to its demise and progressive abandonment (Iseminger, 2010: 148). Recent studies[6] have found evidences of repeated flood events starting from AD 1200 that might have led to the abandonment of the site (Muñoz et al., 2015). The magnitude of this event was sufficient to destroy agricultural fields and surpluses along with entire settlements scattered along the floodplain. Maintaining political authority in this time of crisis would have represented a significant challenge for a complex non-state society like Cahokia, which might have run into a predicament trying to control the fragmented hinterland resulting by the relocation of the destroyed settlement to the highlands (Munoz et al., 2015). Hence the recurring of large floods may have mined the stability of Cahokia's leaders and have been the active cause of the socio-political disintegration process that resulted in the complete dissolution of Cahokia by AD 1350 (Muñoz et al., 2015).

[6] *Studies led by a team of geographers from the Departments of Geography and Anthropology and Center for Climatic Research, University of Wisconsin Madison, Madison, and Department of Earth and Planetary Sciences, Washington University in Saint Louis.*

Regardless the role of Cahokia in the American Bottom during the Sand Prairie phase's unstable socio-political landscape, Cahokia's cultural influence was still felt in the flourishing far away centers of Moundville (Knight and Steponaitis, 1998), Etowah (King, 2003a) and Spiro (Brown, 1996).

The cultural and possibly political entanglement between these centers and Cahokia is evident both in their settling, based on the association of mounds and plazas (Lewis and Stout, 1998), and by the diffusion of Cahokia's myths and systems of belief, embodied in the Southeastern Ceremonial Complex, spread along with Cahokian traded or locally reproduced artifacts (Brown and Kelly, 2000; Pauketat and Alt, 2015).

Figure 2.21 *Detail map of Sand Prairie phase structures located in the West Plaza area (Valese, 2017)*


RIM SHERDS DataBase
Rim Type: Everted
Lip Type: Extruted
Surface Treatment: Plain
Surface (int): Plain
Shoulder Type: Angular
Core Colour:
Design: Scroll
Decoration Tecnique: Incised
Decoration (location): on shoulder
Cord Twist:
Chronology: Early Moorehead
Recorded by: MM
Date of recording: 2012
Comments: + bodysh. from bag: 1015-1
Site: 11 MS 2/3
Unit/Feature #: 1015
Bag Number: MT2-1015-1
Level: Lvl 3
Rim #: MT2-1015-1-6
Temper: shell
Form: Jar
Vessel Type: Ramey Incised
Appendages:
Weight (g): 59,3
Rim Width(cm): 1,5
Lip Lenght(cm):
Rim Lenght(cm):
Wall Thickness(cm): 0,6
Orifice Diameter(cm):
Shoulder Diameter(cm):

Chapter 3

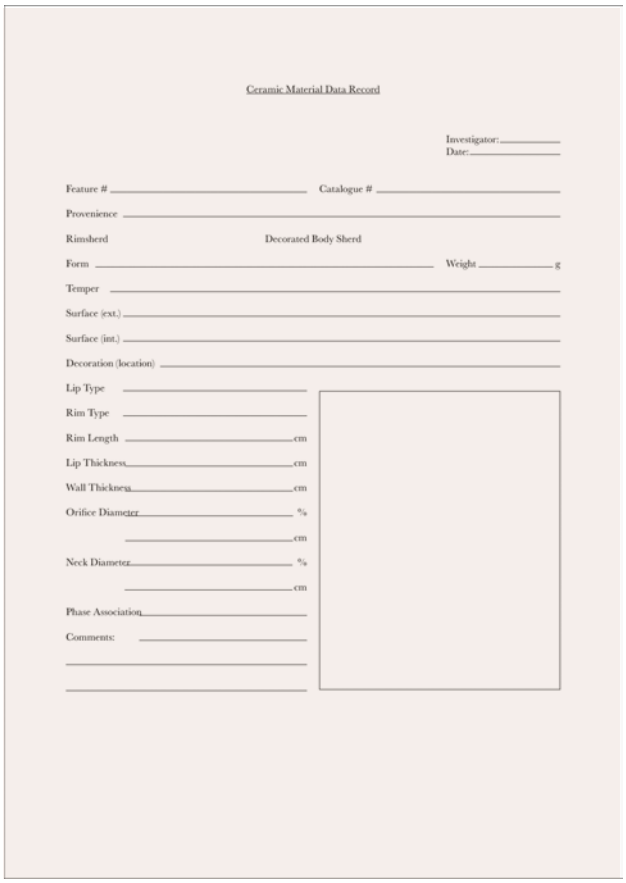
Merrel Tract - Unibo Ceramic Report

From 2011 to 2016 fieldwork seasons conducted at the Merrell Tract, different ceramic and lithic artifacts have been recovered by both plowzone and features along with botanical and faunal remains.
Complete reports of the materials recovered in the Merrell Tract's excavations have followed the analysis of both artifacts and organic residues. In the following chapter a summary of the ceramics report will be provided focusing the attention on the materials recovered from features.
Six years of excavations led in the Merrell Tract-Unibo yielded a good amount and variety of ceramic material. The author of this dissertation conducted the related analysis and supervised the laboratory operations from 2011 to 2016.

The materials recovered from the field were collected through trowel scraping or screening. Once transferred at the laboratory the materials were washed analyzed and sorted.
Information concerning count, weights and measures were recorded and at the end of each fieldwork season all the diagnostic items were photographed and drawn individually.
The ceramic materials were recorded using different forms provided by the Illinois State Museum (see Figure 3.1).

The first form was the "Inventory sheet" in which the materials were divided in: ceramics, chert, lithic other than chert, minerals, organic and miscellaneous & historic categories. For each of the previous mentioned category we took note of: bag number, date of excavation, feature/ plowzone, unit number, level and excavation year. For each material category the specialist in charge recorded specific information. Regarding the "Ceramic Form" the author recorded: bag number, body sherds number, body sherds weight, rims number, rims weight, decorated sherds number, decorated sherds weight, decorated rims number, decorated rims weight, handles number, handles weight, ceramic objects number, ceramic objects weight, potter clay number, potter clay weight and comments (Valese, 2017; Mattioli, 2017).
It follows the compiling of a more detailed form, the "Paste Form" concerned the description of tempers and surface treatment of each body and rim sherd recovered from the field. As in

the previous form, in this one, we firs took general note of: bag number, date of record, area, feature/ plowzone, unit number, level and excavation year. The "Paste Form" and associated database were divided in four temper categories (grog, grit, limestone and shell) plus the indeterminate temper category one. For each of the above mentioned category was recorded: body sherds number, body sherds weight, rim sherds number and rim sherds weight and they were distinguished as per external surface treatment: plain, cordmarked, red slipped, brown slipped, black slipped (Valese, 2017; Mattioli, 2017).


Ceramic Material Data Record

Investigator: _____
Date: _____

Feature # _____ Catalogue # _____

Provenience _____

Rimsherd Decorated Body Sherd

Form _____ Weight _____ g

Temper _____

Surface (ext.) _____

Surface (int.) _____

Decoration (location) _____

Lip Type _____

Rim Type _____

Rim Length _____ cm

Lip Thickness _____ cm

Wall Thickness _____ cm

Orifice Diameter _____ %

_____ cm

Neck Diameter _____ %

_____ cm

Phase Association _____

Comments: _____

Figure 3.1 *Basic data record sheet used in original analyses of unpublished ceramic assemblages.*

The last step consisted in the description of each rim sherd along with a sketch of the sherd, metric information and a more accurate description of the item was provided. The "Rim Form" was organized by: unit number, feature/ plowzone, excavation year, area, bag number, level, photo, drawing, rim number, weight, form, temper, vessel type, chronology, surface treatment, surface interior treatment, decoration technique, decoration location, appendages, design, core color, wall thickness, rim type, rim width, lip type, lip length, shoulder diameter, orifice diameter, cord twist, cord width, comments and date of record.

All these forms were digitized and another database was specifically designed for the recording of diagnostic items not contemplated in the above-mentioned forms. This last database, named "Diagnostics", was mostly used to record decorated body sherds and ceramic objects and provided both metric and qualitative description of the artifacts. Diagnostic ceramic elements were recorded using the following categories: unit number, bag number, excavation year, feature / plowzone, level, area, photo/ drawing, diagnostic number, weight, dimensions, definition, temper, form, vessel type, chronology, surface treatment, surface interior treatment, decoration technique, decoration location, design, core color, miscellanea, appendages, cord twist, cord width, worked sherds, comments, date of record (Valese, 2017; Mattioli, 2017).

3.1 Method

In this chapter, an overview about the ceramic material will be provided along with tables of synthesis compiled from data.
The basic data collection methods and attribute definitions that the author used in the following ceramic assemblage analysis have a long tradition in American Bottom Archaeology (e.g., Griffin, 1949; Holley, 1989; Kelly, 1980, 1997; Milner, 1984; Pauketat, 1998; Vogel, 1975).

Surface Modification

Surface finish and decorative modification, when present, of the exterior and interior surface of vessels were noted.

Surface Finish

A surface finish can affect both the appearance of a vessel and its mechanical properties.
Basically the types of surface treatment recorded were plain, cordmarked and slipped. Plain and slipped surfaces were noted as to whether they were polished or smoothed; their location on the vessel was noted too: interior or exterior; rim, shoulder or body (Kelly, 1982). Whenever possible, it was noted if slipping was present only on the interior rim and not on the entire interior (e.g., restricted to the neck as with some Cahokia Cordmarked jars). Due to breakage, however, some jars or vessels may have been recorded as having a slipped interior when, in fact, the slip was applied only to the upper interior rim or vessel surface.

Plain

Plain surfaces are unslipped and unpolished. Polishing was identified either by a shiny, bumished looking surface or by the shallow striations left by the polishing tool.

Cordmarked

Cordmarked impressions are left by the application of a cord-wrapped paddle or stick to the surface of a vessel. This treatment is almost exclusively present on exterior vessel surfaces.

Slipped

A slip is thin clay slurry or suspension of clay in water applied to the surface of a vessel before firing (e.g., Holley, 1989:12; Shepard, 1995:67). Shepard (1995:67, 191) notes that the application of a slip can improve both the surface color and texture of a vessel and render the vessel less permeable. Variations in mineral-enrichment and/or firing conditions (i.e., oxidizing or reducing) resulted in a variety of slip colors, including a spectrum from black to red to white (Holley, 1989; Shepard, 1995).

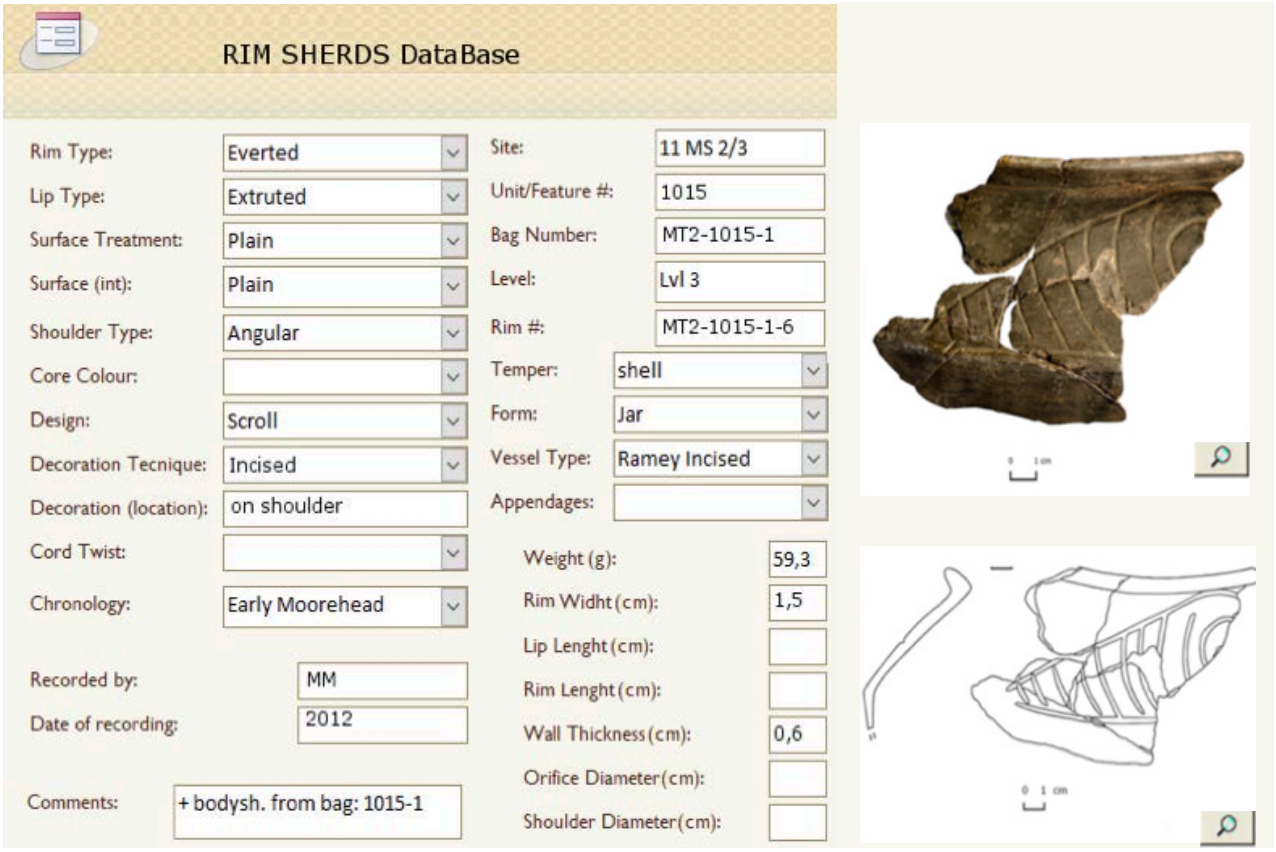


Figure 3.2 *Screenshot of the Ceramic Database (Mattioli, 2017).*

Decoration

Decoration, an intentional modification of the exterior and/or interior surface of a vessel, is, by definition, primarily aesthetic or stylistic rather than functional.

Techniques of decoration were minimal and generally limited to punctation, perforation, notching, engraving, incising or design motifs.

Incising

Incising is a decorative technique whereby linear and/or curvilinear impressions are cut or pressed into a ceramic surface to create a design (Holley, 1989:13; Shepard, 1995:195-198). This decorative technique is completed when the vessel surface is wet or leather-hard, prior to firing and slipping. Incised lines may be thin/ narrow like those decorating a typical Mound Place Incised bowl or the lines may be wide/ broad like those found on typical Ramey Incised jars. Wide/ broad incised lines may also be referred to as "trailed" lines.

Engraving

Engraving is like incising, a method of decoration whereby lines or designs are applied to the surface of a vessel. Unlike incising however, engraving is done "when the paste was hard, before or after the vessel was fired" (Holley, 1989: 13). When a slip is present, engraving is usually done after the vessel is fired, thereby removing the slipped surface and exposing the color of the vessel paste.

Punctation

Punctation refers to an impression, often circular, left on a ceramic surface by an implement. The impression is pushed in toward the interior surface from the exterior surface. Puncations may or may not pierce the vessel wall.

Perforation

A perforation is a hole, usually circular, that completely pierces the wall of the vessel or ceramic disk. If performed after firing or to a recycled potsherd to make a disk, such a hole is usually drilled and may be noted as a "drill hole."

Notching

Notching, related to punctation, involves the removal rather than the impression of a discrete portion of a ceramic surface to create a design, and is often performed on the lip of a vessel.

Strap Hole

Seed jars occasionally display paired holes or perforations on opposing sides of the vessel orifice. These holes, referred to as "strap holes," were presumably used to suspend the vessel (J. Kelly, 1980:350). Therefore, these holes may have been decorative and/or functional.

Tabs

Tabs are thickened or appliqued decorative elements on the vessel lip, neck, or body. They are usually formed from the clay of the vessel, although a tab may be formed separately and then attached as an applique.

Appendages

Most appendages were restricted to either lip lugs or tabs and handles. Tabs are considered as decorative additions while handles may be considered both functional and decorative additions to vessels.

Handles

Handles are loops of clay usually appliqued or riveted to the lip, neck, and/or exterior surfaces of ceramic vessels. Handles may be purely functional additions to a ceramic vessel, decorative elements, or both. We noted two different Handle types: Jar handles and Beaker handles. Beaker handles are usually longer than they are wide and circular or oval in cross-section. They are fashioned in a variety of shapes from a simple linear, tapered form to a linear form with the shape of a human fist modeled on the end. Beakers typically have single handles attached to the exterior surfaces of the vessels several centimeters below the lips (Hamlin, 2004).
Even when an actual appendage such as an effigy head, tail or appendage, a tab or a handle was missing, a thickening of the rim indicative of the lateral end of an appendage was identifiable.

Appliqué

An appliqué is a piece of clay added to the exterior surface or lip/ rim area of vessel. The appliqué piece can constitute a decoration and/ or can be decorated with punctates or notching.

Profile

Profiles sketch were initially traced on each card just to illustrate the correspondence with the name number of the fragment. In another paper we traced a precise profile providing the right orientation of each rim and diagnostic sherd and later all drawings were scanned and digitalized. This process was followed to record rim and diagnostic sherds pictures as well and both drawing and pictures were flanked by metric references (Valese, 2017; Mattioli, 2017).

Weight

The entire ceramic amount was weighed following the subdivision of the pertained temper and surface finish categories. The weigh for each rim or diagnostic sherd was recorded individually.

Provenience

The total of the ceramic amount was localized and recorded in the related database as per north-west 1 m2 localization. Each significant sherd was entered and named with his proper name number. In specific, each rim sherd is identifiable by the last number and, in the case of a diagnostic sherd, by the last number plus D, which define each fragment as unique through all the amount of material (Mattioli, 2017).

Temper

Temper is an aplastic material added intentionally to clay to prevent breakage, warping, and cracking during drying and firing, and to increase tensile strength and thermal shock resistance in the vessel wall or object and may make the clay less sticky and easier to work (Shepard, 1995:24-25).
Steponaitis (1983:35) suggests the cultural convention according to which fine paste vessels are "ceremonial" and coarse paste vessels are common "utilitarian" ware. "The utilitarian ware did not need to look as nice, and so the Indians did not take the trouble to grind up the shell as finely". He notes that little extra effort would have been needed to crush the heated shell to a fine texture, and refers to extensive ethnographic evidence of traditional potters consciously distinguishing between the paste composition of cooking and non-cooking vessels (e.g., Arnold, 1985; DeBoer and Lathrap, 1979). Steponaitis (1983) and other researchers have found that temper size, particularly shell temper effects the function of ceramic vessel. Research indicates that coarse shell temper provides resistance to thermal shock, the repeated heating and fast cooling of a cooking pot, while addition of fine shell temper creates a more plastic paste that can be fashioned into shapes with thin, durable walls. The fine shell temper also provides resistance to mechanical stress such as that resulting from dropping or kicking the vessel (Hamlin, 2004).
Termpering materials were identified with the use of a hand lens.
The basic categories of grog, grit, limestone and shell temper and combinations thereof were recorded and discussed below.
Merrell Trect-Unibo assemblages are characterized by a predominance of grog-tempered pottery with minor quantities of shell, limestone and grit tempered wares (see Table 3.1). The excavation yielded 3.889 g of grit-tempered pottery; 55.700,6 g of grog-tempered pottery; 4.053 g of limestone-tempered pottery; 26.167,8 g of shell-tempered pottery and 3.674,3 g of indeterminate tempered pottery sherds (Mattioli, 2017).

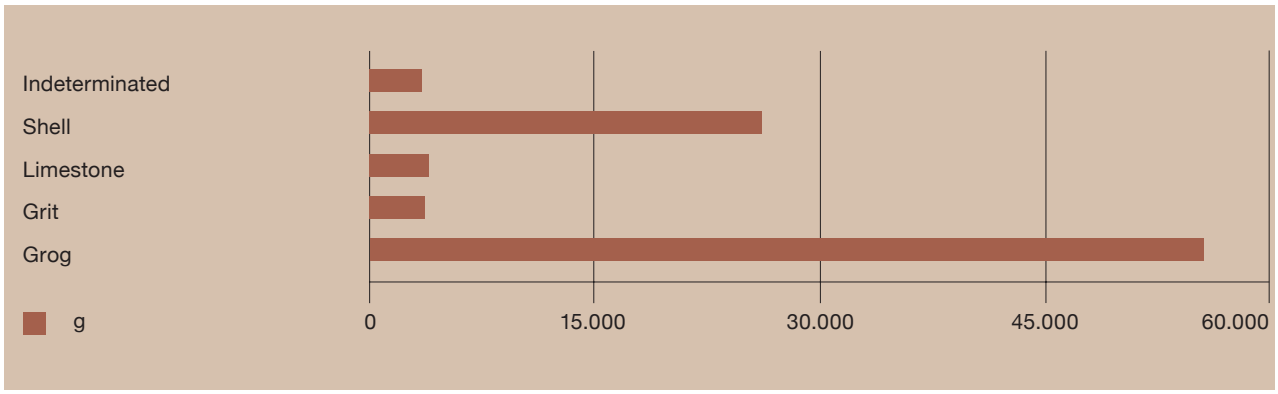


Table 3.1 *Percentage of tempers in the total amount of pottery sherds recovered from the excavated area (Mattioli, 2017).*

Grit

Grit tempering is characterized by the inclusion of coarsely crushed rock fragments. Grit tempering is primarily associated with Late Woodland and Emergent Mississippian vessels, although limited use of grit temper continued throughout the Mississippian period.

Limestone

Crushed limestone temper was identified primarily by its characteristic rounded or subangular shape. Like shell, even leached limestone tempering could be identified by the distinctively shaped voids (i.e., regular, cubical).

Shell

Crushed shell tempering is common in Mississippian period pottery. Due to the similar color and reaction to hydrochloric acid of shell and limestone, differentiation of shell tempering was confirmed by the unique shape- flat and angular- of crushed shell.

Grog

Grog, a clay temper presumably made from crushed potsherds, was also used by American Bottom potters.

Fine Grog

Holley's (1989: 11) research reveals that fine grog temper was distinguished by fine to medium-sized particles of grog occurring in a compact paste. This ware is typically associated with thin walled, and often decorated bowls and beakers. Grog with shell was used in most fine grog ware pastes and in some cases the temper is barely discernible to the unaided eye (Holley, 1989).

Fine grog ware has been previously designated as Type B (Collins, 1990). This group is also known in the literature as trade ware (O' Brien, 1972; Porter, 1974); yet, this label may include specimens that are not tempered with fine grog (Kelly, 1982).

Fine grog ware vessels and decorated sherds were identified according to provisional surface finish or decoration types (Holley, 1989). Fine grog wares are usually interpreted as "tradeware" from the south, particularly from the Caddoan area (Bareis and Porter, 1965; Holley, 1989; O'Brien, 1972; Porter, 1974). This ware has thin walls, fine textured, compact paste tempered with fine grog and occasionally miniscule shell fragments or shell tempered grog fragments and suggests that the ware is not entirely foreign to the Cahokia area (Holley, 1989).

A very low percentage of fine grog temper ceramic was discovered from the University of Bologna excavation.

Combination Temper

Tempering with a combination of aplastic materials is also relatively common in the American Bottom region. When a combination of tempering materials is noted, such as grit/grog, the potsherd in question exhibits identifiable pieces of both (or all) materials as inclusions in the paste. Many combinations are possible, such as shell/grog, limestone/grog, and shell/grit/grog.

Neck

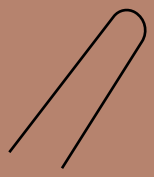
Neck refers to the portion of the upper body that is marked by a shift in the silhouette from an incurving body, beginning at the base, to a recurving upper body leading to the orifice plane.

Lip

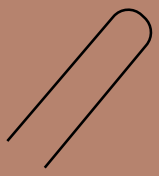
Lip type refers to the shape of the lip, the crest of the vessel spanning the exterior wall to the interior wall of a rimsherd (see Figure 3.3 a-d). Several types were identified: rounded, slightly rounded, flattened, square and indeterminate.

The Indeterminate category includes damaged, weathered or irregular rims.

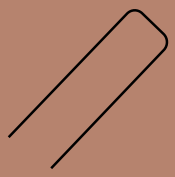
a) Rounded



b) Slightly Rounded



c) Flattened



d) Square

Figure 3.3 *a-d) Lip Types, adapted from Vogel, 1975.*

Rim

Rim refers to the exterior projection of the orifice as the lip crest meets the exterior vessel wall.
In few cases the orientation of each rim was recorded according to Vogel's categories of vertical, inslant, incurved, everted and so forth. The information recorded to describe each rim sherd followed those attributes used by Vogel (1975) in his study.
According to Holley (1989:15), rim shape variability constitutes the most sensitive feature for the Cahokia ceramic sequence (see Figure 3.4 a-f).

Rolled rims

Rolled rims possess clearly rounded exterior margins that are distinct from the exterior walls when seen in profile. The rolled appearance of this rim type may be due to the welding of an applique to the exterior surface (Holley, 1989), or to folding over of the lip.

Extruded (Pinched) rims

Extruded (Pinched) rims were defined by Vogel (1975:93) as a thickening of the lip by apparent extrusion outward of the lip area. The upper surface of the lip is generally flattened, and beveled inwardly.

Everted (Angled) rims

Everted (Angled) rims are characterized by sharply out-turned rim margins with a distinct break or juncture between the body and rim on the exterior and/or interior vessel surfaces. These out-turned rims may be oriented nearly horizontally to nearly vertically.

Bolstered (Thickened) rims

Bolstered (Thickened) rims are so named because of a thickening, usually on the exterior surface of the rim margin, created by folding or the addition of clay at the neck. This thickening presumably strengthens and stabilizes this relatively weak area of rim attachment.

Flared rims

Flared rims are characterized by a continuous arc from the vessel body to the lip. A break or juncture like that characterizing the everted rim is not present.

Unmodified rims

Unmodified rims have constricted orifices with little or no recurve. This rim form is typically associated with Late Woodland and Emergent Mississippian jars (e.g., Kelly, Finney et al., 1984)

Indeterminate rims

Indeterminate rims are so identified due to damage or breakage patterns that made a secure identification of a specific rim type impossible.

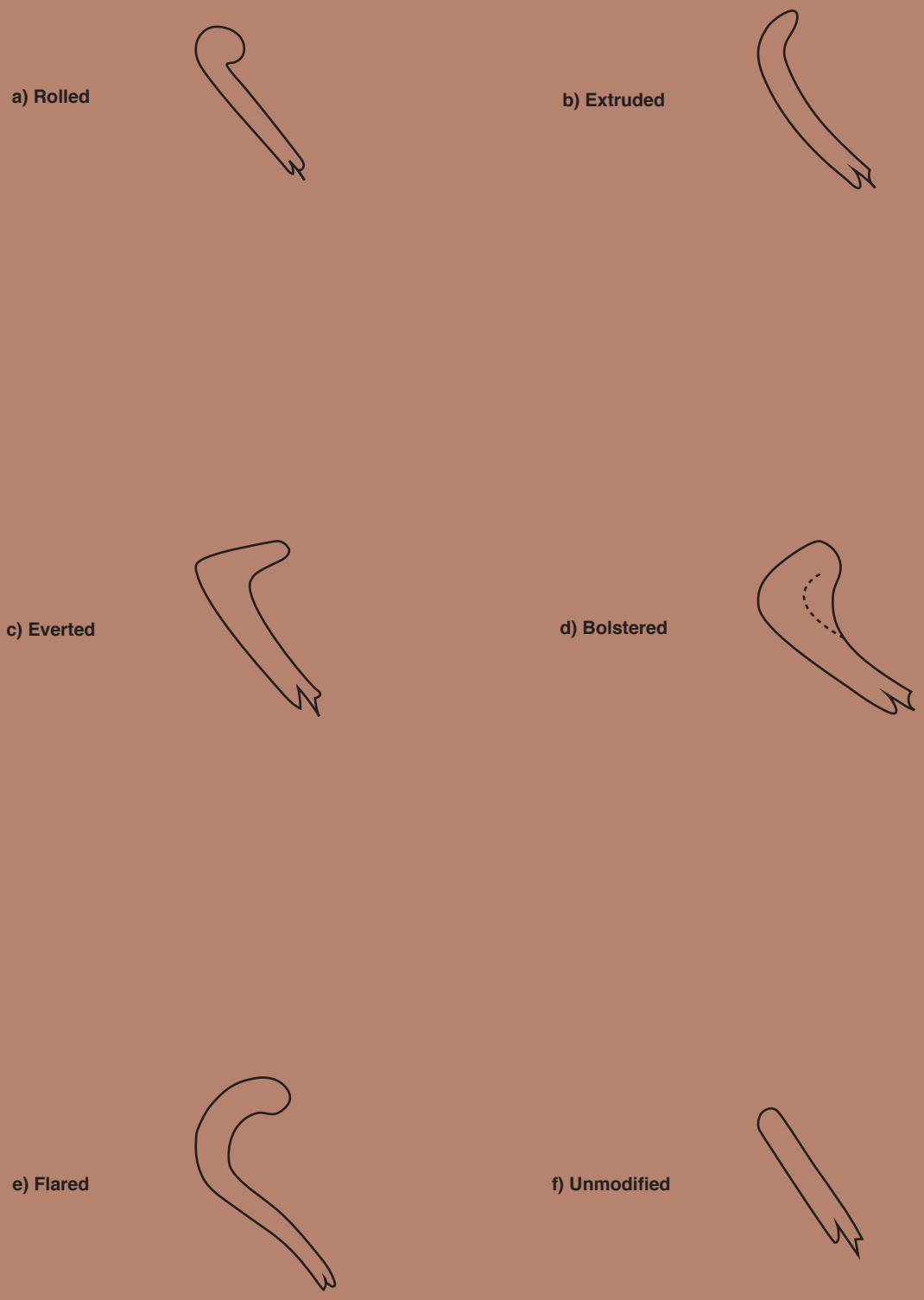
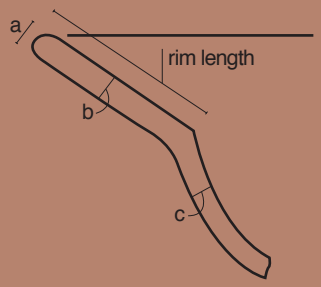


Figure 3.4 *a-f) Jar rim types, adapted from Milner, 1984.*

Rim Width

Rim width is, also known as Rim Length, measured from the interior neck inflection to the exterior lip edge (Kelly, 1997). This measurement was taken with hand calipers to the nearest 0.1 cm just for selected Ramey Incised rimsherds (see appendices Table A and B).

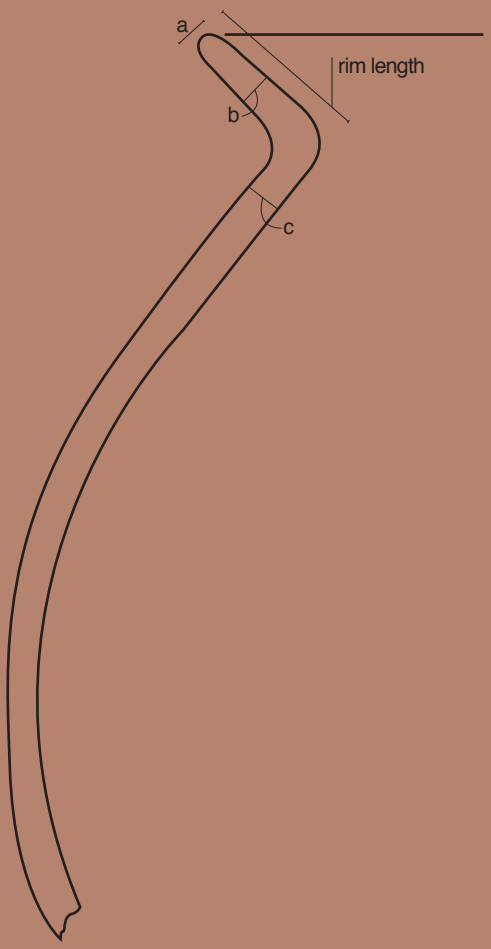
Plates



a. Lip thickness
b. Rim thickness
c. Wall thickness

$$\text{RPR} = \frac{\text{Wall thickness}}{\text{Rim length}}$$

Jars



Bottles

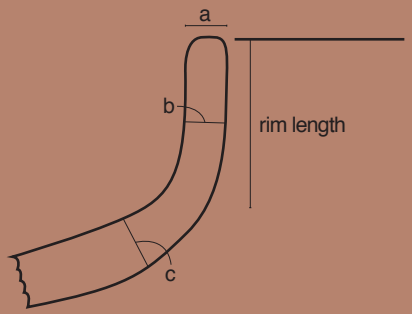


Figure 3.5 *Vessel measurements (adapted from Kelly 1997)*

Wall Thickness

Using hand calipers, I measured wall thickness to the nearest 0.1 cm at a point 1 cm below the junction of the rim and vessel body just for selected Ramey Incised rimsherds (see appendices Table A and B).

During the field work, the Italian team was able to identify 1207 rim sherds and 152 diagnostic sherds.

From Table 3.2. we can notice that from the excavation we brought to light a very high percentage of grog tempered and shell tempered rim and diagnostic sherds.

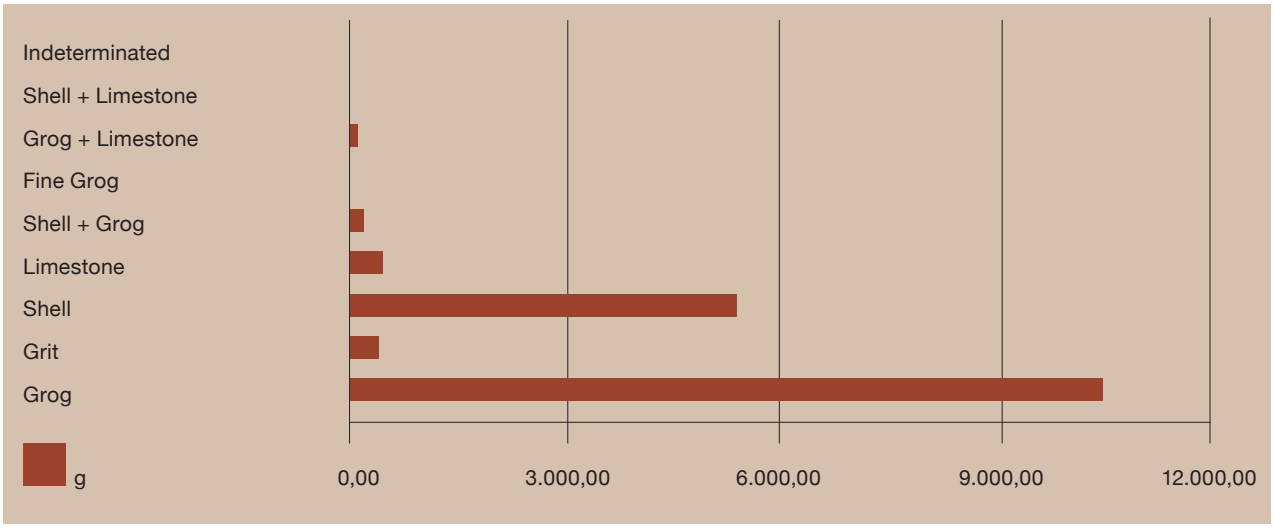


Table 3.2 *Percentage of temper categories among rim diagnostic sherds recovered from the excavated area (Mattioli, 2017).*

Vessel form

Whenever possible the vessel form of each ceramic piece was identified. Some pieces were too small, damaged, or difficult to identify as a particular form and were placed in the Indeterminate category.
Vessel form can be a crucial indicator of vessel function. A wide range of vessel forms in an assemblage, in other words an assemblage made up of more than simply jars and bowls, may indicate a wide range of social activity, particularly beyond the domestic sphere. More forms of cooking or serving vessels will be needed if increased social obligations warrant expanded hosting duties or group sizes at communal gatherings (Hamlin, 2004).

The morphological analysis of the rim and diagnostic sherds led to the identification of nine different vessel categories (see Table 3.3): jar (with an example of a miniature jar), seed jar, platter, bowl, bottle, beaker, plate, pan and funnel; and to the recognition of three types of miscellaneous ceramic objects: stumpware[1], ceramic disc and spindle whorl (Mattioli, 2017).

Here follows a brief description of the different vessel typologies identified during the Merrell Tract-Unibo fieldwork.

[1] *Although stumpwares are usually not considered as vessel forms, they are noteworthy since they are represented in high numbers among the Emergent Mississippian assemblage of the Merrell Tract-UNIBO. In this research they have been recorded as diagnostics in the Diagnostic Database.*

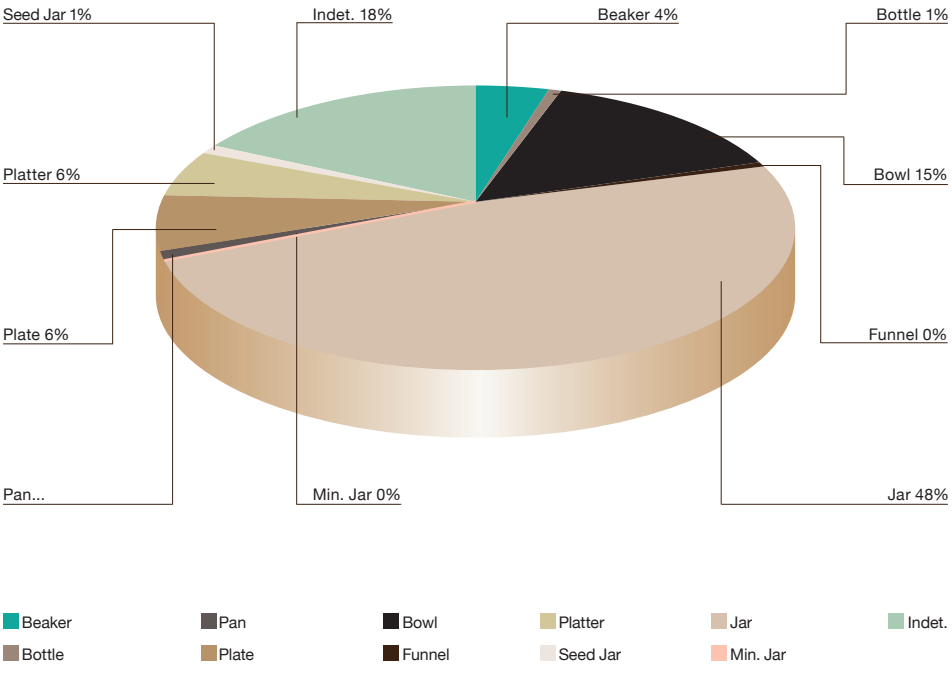


Table 3.3 *Vessel assemblages from Merrell Tract-Unibo's features (Valese, 2017 and Mattioli, 2017).*

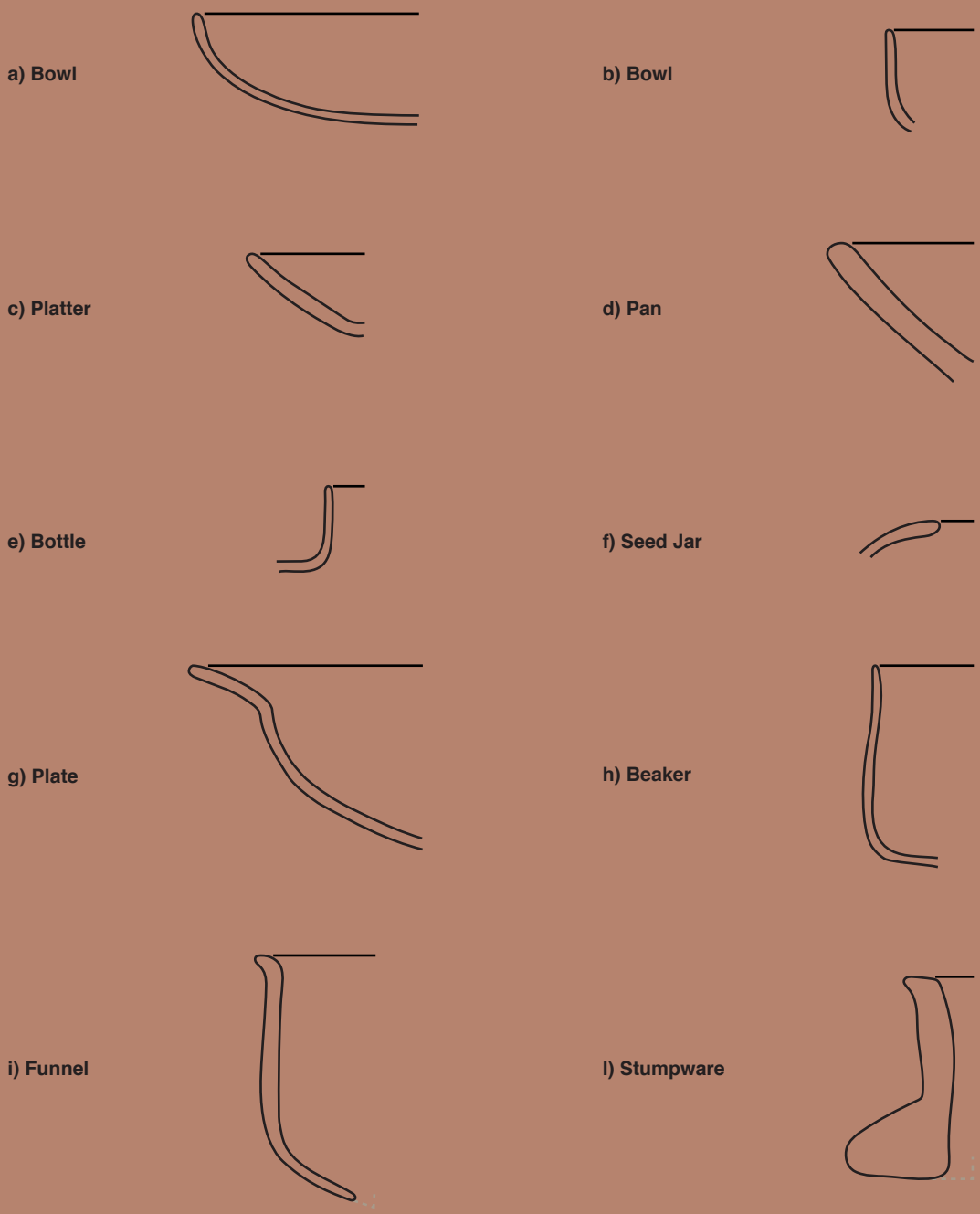


Figure 3.6 *a-l) Morphology of American Bottom ceramic vessels, adapted from Holley, 1989.*

Jar

Jars are generally defined as vessels with distinct necks and shoulder contours. Jar forms are additionally subdivided by rim morphology.
Among jar rim fragments it was possible to identify several jar varieties.

Ramey Incised

Griffin (1949) originally defined this shell tempered vessel type.
Ramey Incised represents the decorative counterpart to Powell Plain and is the primary decoration for the Early Mississippian period and iconographic representative of the entire Mississippian period (Holley, 1989). Ramey Incised jars are shell tempered vessels with slipped exterior surfaces. This type is decorated with medium wide, shallow incised lines done with a bold, free stroke in a variety of design motifs including concentric, arched semicircles and scrolls (Griffin, 1949). These broad- lined incised motifs are located on the shoulder of the jar. Ramey Incised jars are commonly associated with the Stirling and Moorehead phases in the American Bottom (e.g., Holley, 1989; Pauketat and Emerson, 1991).
Later on this dissertation more details will be provided related to this vessel typology, we will go deepen on iconographic, religious and politic meanings related to this symbolic item in charge of broadcasting community values.

St. Clair Plain

St. Clair Plain jar are globular, shell tempered vessels with plain exterior surfaces, defined by Griffin (1949) for the Mississippian period. Hall (1966) suggests that St. Clair Plain should be distinguished from Powel Plain on the basis of jar shape, although Griffin's descriptions and illustrations seem to imply this as a criterion (Holley, 1989).

Merrell Red Filmed

Merrell Red Filmed was defined by Vogel (1975) as red slipped, grog tempered bowls, seed jars and jars. The time span covered by this type is extensive, ranging from the Emergent Mississippian period through the Mississippian period (Holley, 1989).

Cahokia Cordmarked

Cahokia Cordmarked was defined by Griffin (1949) as globular, shell tempered jar with cordmarked exterior surfaces and everted plain rims. This jar type appeared during the Moorehead phase (Holley, 1989) for which it is a horizon marker and continues to be used during the subsequent Sand Prairie phase at Cahokia. J. Kelly (2001) defines a variety of this type, Cahokia Cordmarked Perino variety, distinguished by a red slipped interior surface.

Powell Plain

Defined by Griffin (1949), this vessel type is most common in Early Mississippian contexts. Powell Plain is shell tempered with slipped exterior surfaces and associated with undecorated jars and bowls, particularly early in the chronological sequence Lohmann- Stirling (Holley, 1989).

Monks Mound Red

Monks Mound Red was originally designed by Griffin (1949) for limestone tempered, red slipped and undecorated bowl, seed jars and jars. The time span covered by this type is extensive, ranging from the Emergent Mississippian period through the Mississippian period (Holley, 1989).

Cambered

This is a shell-tempered type, characterized by a plain and red slipped exterior surface. Investigating the area we brought to light one plain, shell tempered Cambered variety jar rim sherd which pertains to the early Moorehead phase.

Kersey Incised

During the field work we detected five fragments pertaining to this vessel variety that is typical of the South Missouri area, in details we found:
Two plain shell tempered Kersey Incised variety bodysherds dated to the late Emergent / early Mississippian phase and three plain grog tempered Kersey Incised jar rim sherds dated to the late Emergent / early Mississippian phase.

Maple Smiles

Between Merrel Tract- Unibo assemblages we recognized one grog tempered Maple Smiles variety jar rim sherd characterized by cord impressed decoration typical of the North Illinois area that can be dated to the early Emergent Mississippian phase.

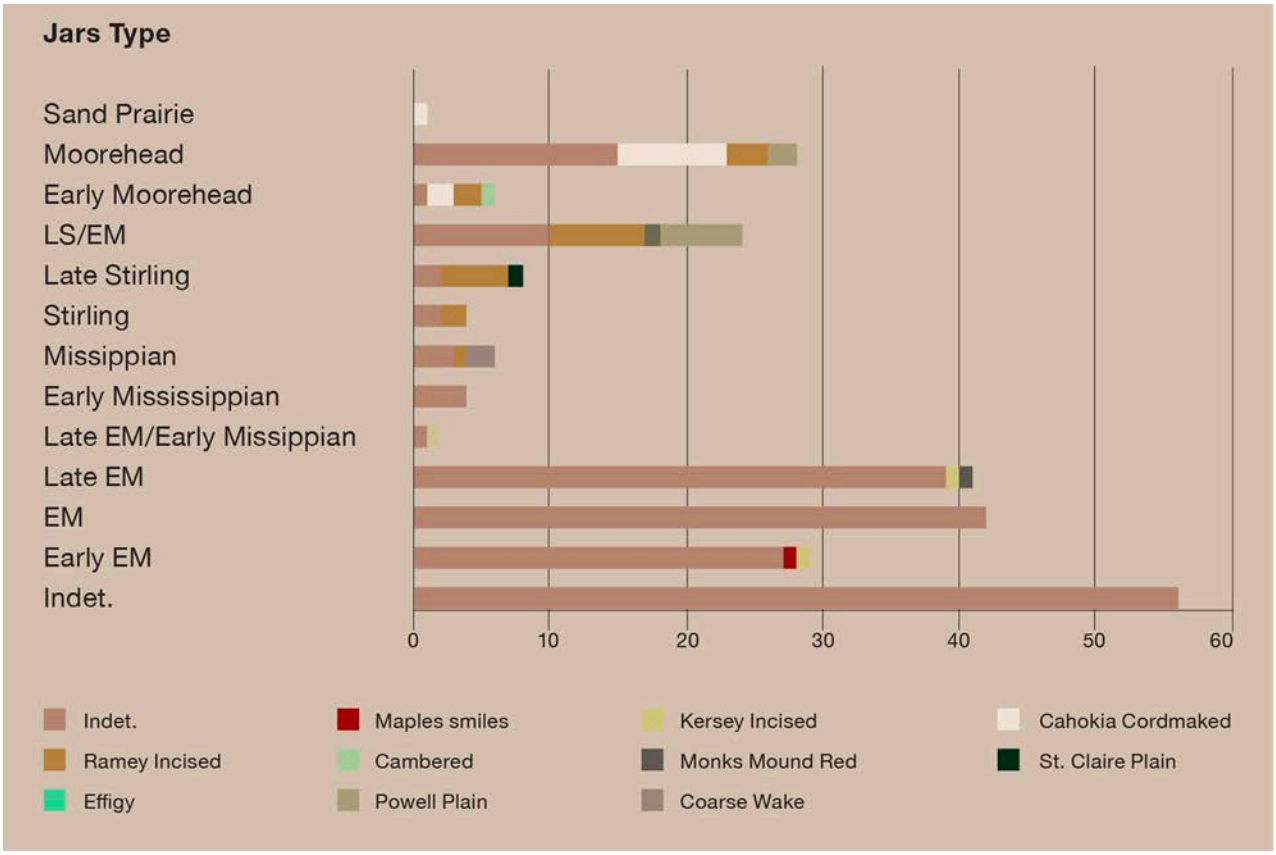


Table 3.4 *Graph showing Jars' types recognized in the assemblage, divided by phase (Valese, 2017 and Mattioli, 2017).*

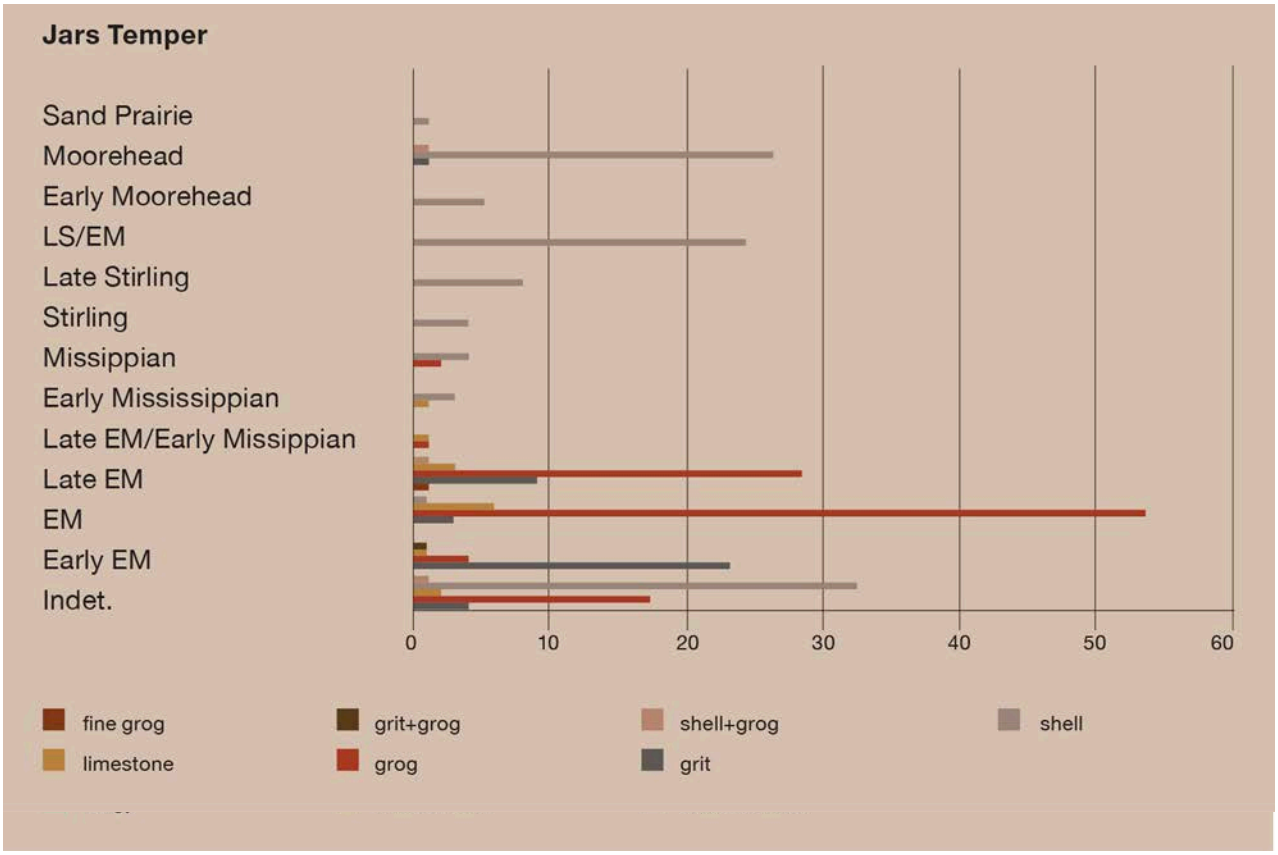


Table 3.5 *Graph showing frequency of Jars' rims from Merrell Tract, divided by phase (Valese, 2017; Mattioli, 2017).*

Miniature Jar

These vessels are simply miniaturized versions of the typical Mississippian jar (see Figure 3.7). The author followed Milner's (1983a:41, 44) size category of "small" or miniature jars as those with orifice diameters of 4-8 cm. The division between his "small" and "medium" categories is based on size and morphological differences. Milner (1983) notes that miniature jars are too small to have been of utilitarian use but rather were probably of ritual significance. Miniature jars are often slipped on the exterior surfaces and may have slips on the interior surfaces or just the interior rims. They are rarely decorated and may have recurved (i.e., everted, extruded, flared) or unmodified rims.

Kelly (1982) suggested miniature jars are children's toys or experiment to learn the art of ceramic manufacture in which there is not identifiable paste or temper.
This form is indicative of ritual or high status activity. These are very small vessel and have a long history of mortuary association particularly in Mississippian burials (Milner, 1983), as attested by the University of Bologna excavation as well.

Figure 3.7 *Examples of miniature Jar*
(adaped from Milner 1984:Figure 73)

Seed Jar

Seed Jars are neckless jars with sharply incurving walls resulting in the maximum diameter being located at the shoulder. Orifice diameter is quite small, equal to or less than one half the maximum vessel diameter (Kelly, 1980:350-351; Holley, 1989:16). Seed jars are often, red slipped and decorated with series of punctations or perforations on the upper shoulder area. Strap holes, presumably used to suspend the vessel may also be present (Kelly, 1980). Seed jars are interpreted by Kelly (1980) to be gourd and squash effigies, with strong fertility symbolism present in the red surface color and decorative motifs.

This is a closed form, a constricted orifice Bowl or Seed Bowl as suggested by Griffin (1949), or a simple and dependent restricted vessel with simple contour (Shepard, 1971).

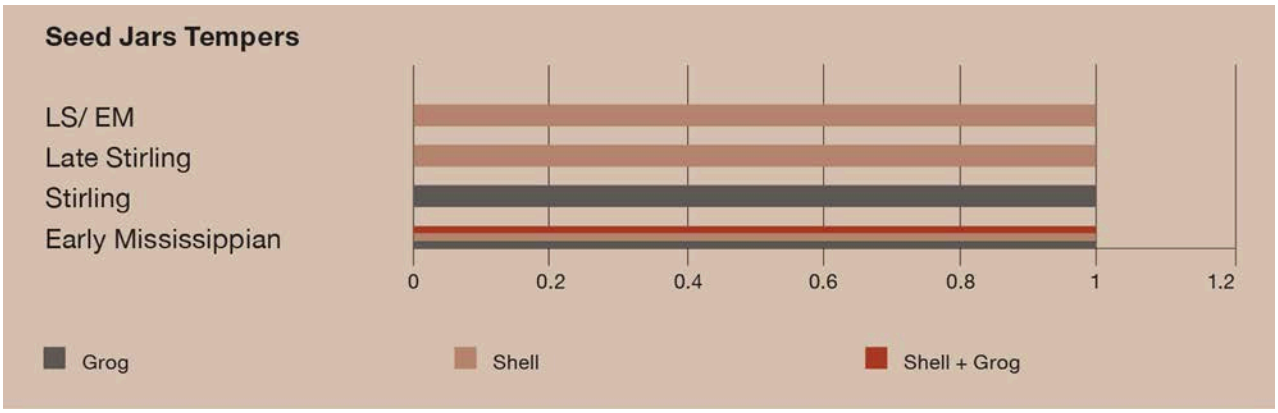


Table 3.6 *Chart showing the tempers of seed jars' rims from Merrell Tract's features. The rims have been divided by chronological affiliation (Valese, 2017; Mattioli, 2017).*

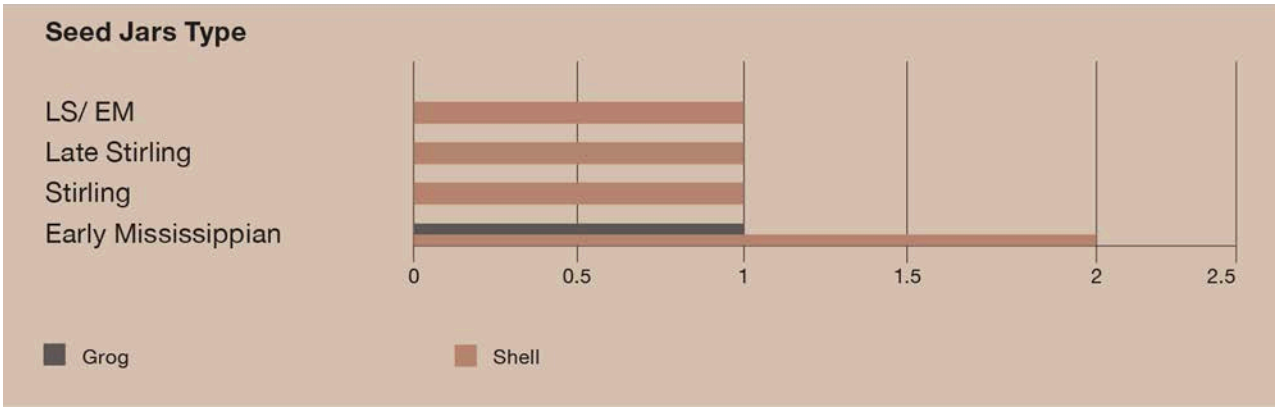


Table 3.7 *Chart showing the different types of seed jars' rims, located in the excavation, and divided by chronology (Valese, 2017; Mattioli, 2017).*

Bowl

Bowls are vessels characterized by an open, unrestricted orifice, having their maximum diameter near the orifice (Shepard, 1971). Bowls are defined as simple contour shapes with the height equal to or less than one third the size of the orifice diameter (Holley, 1989).
Bowls may also have composite or complex contour and while most have open or shallow shapes, some may have vertical to slightly inslanted or constricted orifices. Bowls are usually considered basic serving vessels. In several of the published analyses (ICT-II, Mitchell, Tract 15A) vessel forms such as everted-rim bowls, platters, plates, and pans were subsumed within the bowl category.

Effigy Bowl

This vessel form has an effigy - a modeled shape - attached to the lip, rim, or exterior surface of the vessel. These modeled clay forms are commonly zoomorphic in subject, but can be anthropomorphic. Often the zoomorphic effigy head is balanced by a tail effigy on the opposing side of the vessel; appendages (e.g., arms, legs) may also be present (see Figure 3.8).

Zoomorphic subjects include birds such as ducks and owls, as well as beavers, frogs, and fish. The bowl itself may also become an effigy by being modeled after an object such as a gourd or shell cup.
This form represent labor-and skill-intensive vessel forms due to production steps beyond those involved in manufacturing simple bowls or bottles. Effigy bowls would also have made unusual and special serving vessels (Wilson, 1999).
Few Effigy bowl fragments were detected in the Merrell Tract-Unibo excavation confirming that this form is not present in every ceramic assemblage from the American Bottom.

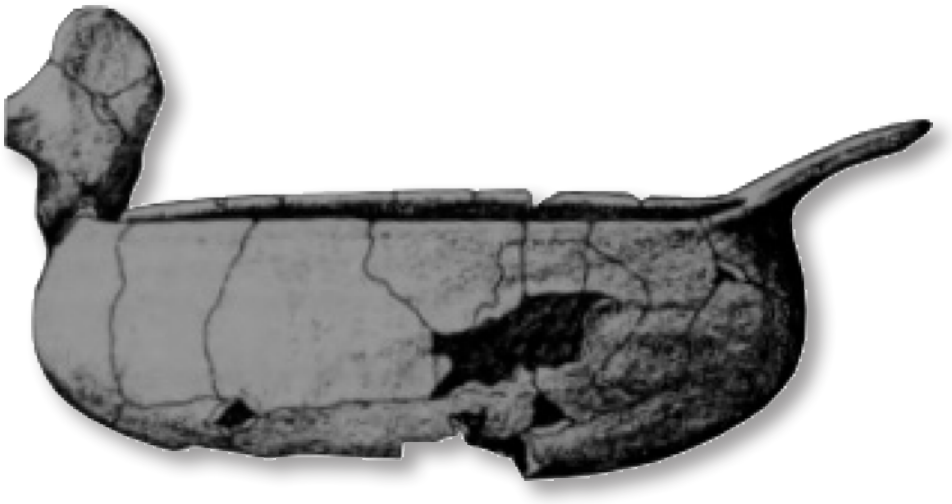


Figure 3.8 *Zoomorphic (duck) effigy bowl (from Vogel 1975:78).*

Mound Place Incised

Mound Place Incised is a variety defined by a finish paste and surface that is typical of the Lower Mississippi Valley. Two or more parallel lines are placed horizontally on the exterior rim, this is quite typical for rim effigy vessels. The technique of decoration varies from a broad incision to a fine engraving. This type is represented by a simple curved sided bowl form with vertical or slightly incurved rims (Phillips, Ford & Griffin, 1951).

The Mound Place Incised type was defined by Phillips et al. (1951) as a shell tempered bowl decorated with narrow to medium width parallel circumferential incised lines. According to Holley (1989:7), this type dates late in the Mississippian period, particularly the Moorehead phase, in the American Bottom.

Coarse Ware

An additional category, Coarse Ware, was identified.

These sherds derived from coarse ware bowls, funnels and lids. Except for the term stumpware, no formal nomenclature has been provided for the various coarse ware assemblages for the Mississippian period. A variety of researchers have referred to vessels, other than sumpware boots and funnels, as Crude Ware (Porter, 1974) and Cahokia Crud (Fowler and Hall, 1972).

Holley has opted to identify all coarse ware sherds with multi colored grog (and sometimes with additional shell temper) as Cahokia Crud. This is an informal designation for a variety which is lumpy in appearance but usually has an oxidized paste (Holley, 1989).

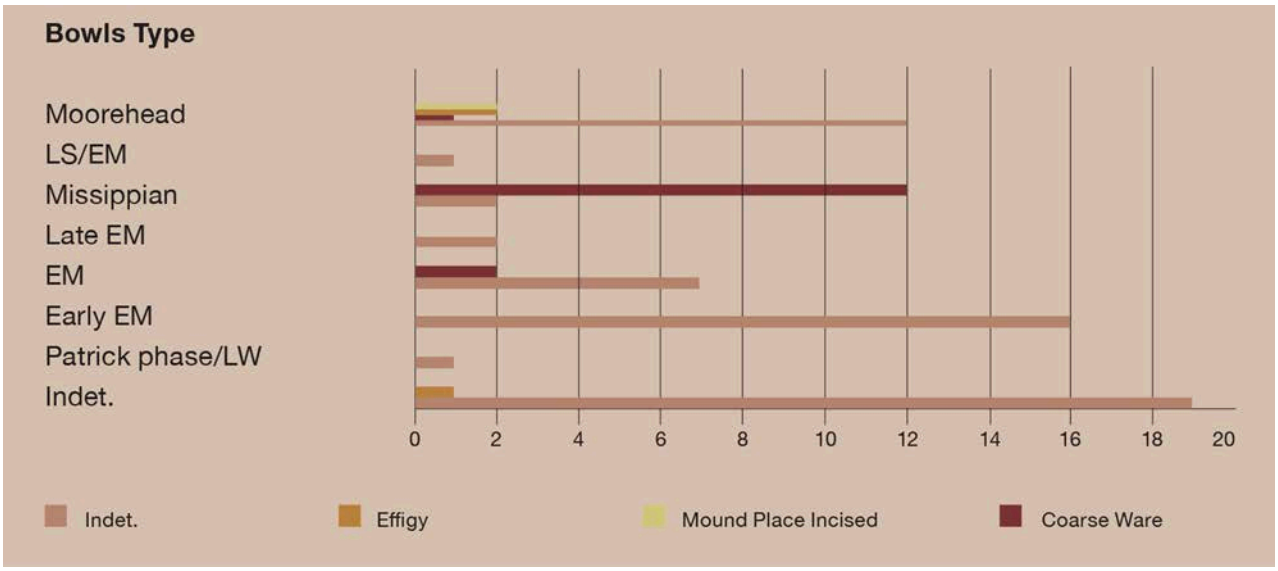


Table 3.8 *Chart showing frequency of bowls' rims divided by type and phase (Valese, 2017; Mattioli, 2017).*

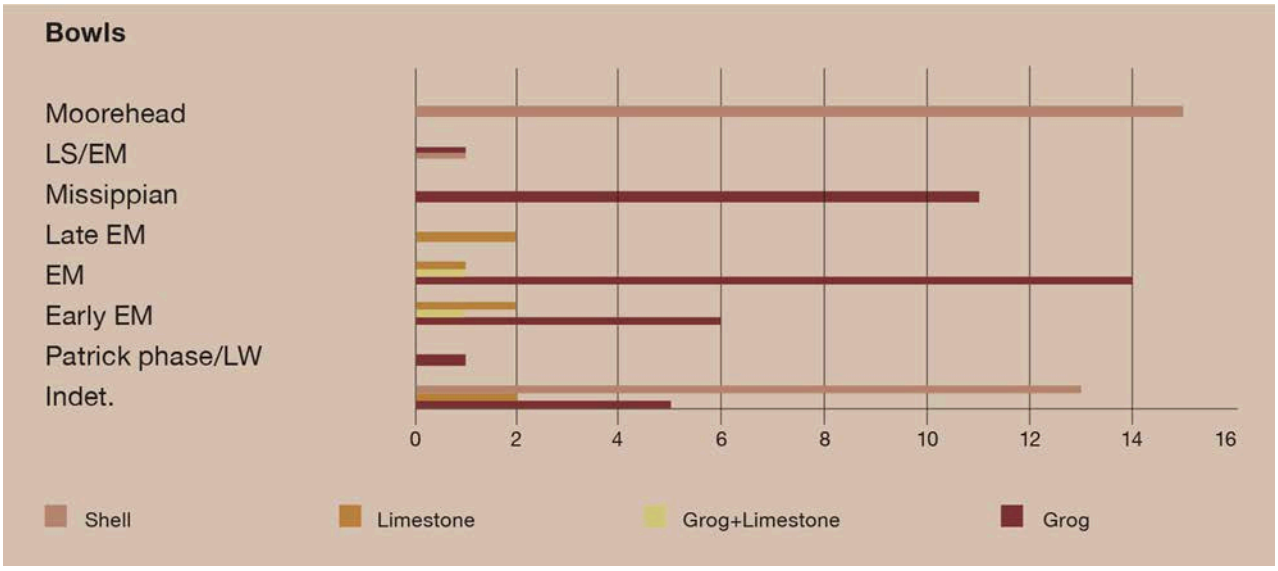


Table 3.9 *Chart showing the amount of bowls' rims from features considering tempers and chronological (Valese, 2017; Mattioli, 2017).*

Bottle

Bottles are composite silhouette vessels with a cylindrical neck and globular body.
Typical examples display a sharp juncture demarcating the neck from the body, although some do not have well-defined necks (Holley, 1989).
Bottles are composite vessels with constricted, cylindrical necks, vertical to slightly in or out-slanting rims, and globular bodies. Typically, a sharp break or juncture is present between the neck and body. Mississippian period bottles have been characterized as narrow/long-necked, wide/short-necked or jugs, or hooded/effigy (e.g., Kelly, 1995; Milner, 1984; Pauketat, 1987b).

Hooded Water Bottle

Hooded bottles are tall, irregularly shaped vessels lacking radial symmetry (Pauketat, 1998). A small, vertically-oriented orifice is present on one side of the upper neck area. Hooded bottles may be bottle gourd effigies, or the "hooded," upper portion may have zoomorphic or anthropomorphic features (Hilgeman 2000:73; Orr 1951:334-338; Pauketat 1998a:33). A hooded bottle may be considered as ritual-status ware and it shows a tall irregularly shaped vessel with a "hooded neck." A small, vertically oriented orifice is present and may be located at either the front or back of the "head." Wilson (1999: 103) proposes that hooded bottles were used as liquid-serving containers.
The Italian team detected a big neck sherd of a Hooded Water Bottle, shell tempered, with a red slipped surface treatment that is a characteristic form for the early Mississippian period, similar to those of the Stirling phase, confirming that this form is not present in every ceramic assemblage from the American Bottom.

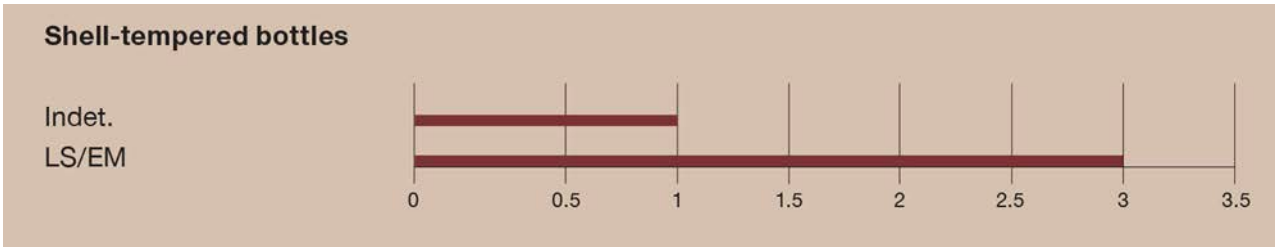


Table 3.10 *Shell-tempered bottles' rims from Merrell Tract (Valese, 2017; Mattioli, 2017).*

Plate

A plate is a composite form characterized by an open orifice, a rim with a slightly recurved or convex interior surface, and rounded, shallow lower body. A distinct break or juncture is present between the rim and body. In the absence of that identifying break, plates are identified by the slightly convex interior surface of the rim that contrasts with the typical slightly concave interior rim surface of a platter or pan. Like bowls, plates probably functioned as food serving vessels, perhaps in a more communal setting than bowls, a suggestion based on the less restricted orifice diameter of plates (Kelly, 1991).

Plates are typically shell tempered, composite forms with a shallow rim and rounded lower body.

Everted rim bowls may represent predecessors to the plate form and are found early during the Moorehead phase (Holley, 1989).

Wells Incised

Griffin's (1949) type Wells Incised is divided between two subtypes: Wells Broad Trailed and Wells Fine Incised. The antecedents can be found in trailed rim plates at the Loyd site. The paste is very fine and compact. The two Wells type encompass the range from wide line trailing to a finely incised line and from a simple linear design to a more complex pattern of combinations of straight line and curvilinear elements (Vogel, 1975).

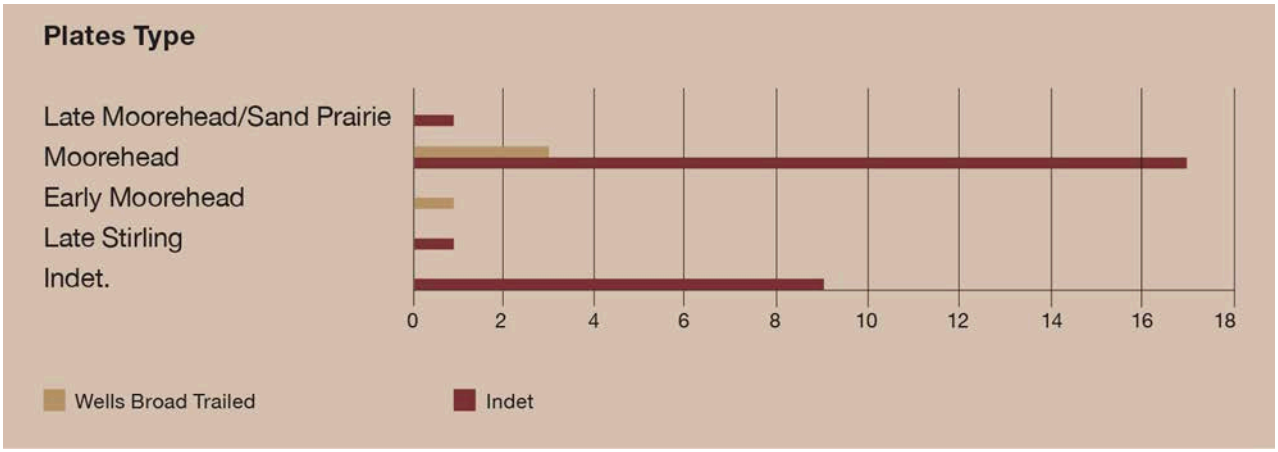


Table 3.11 *Frequency of different type of plates' rim located in the Merrell Tract divided by chronological association (Valese, 2017; Mattioli, 2017).*

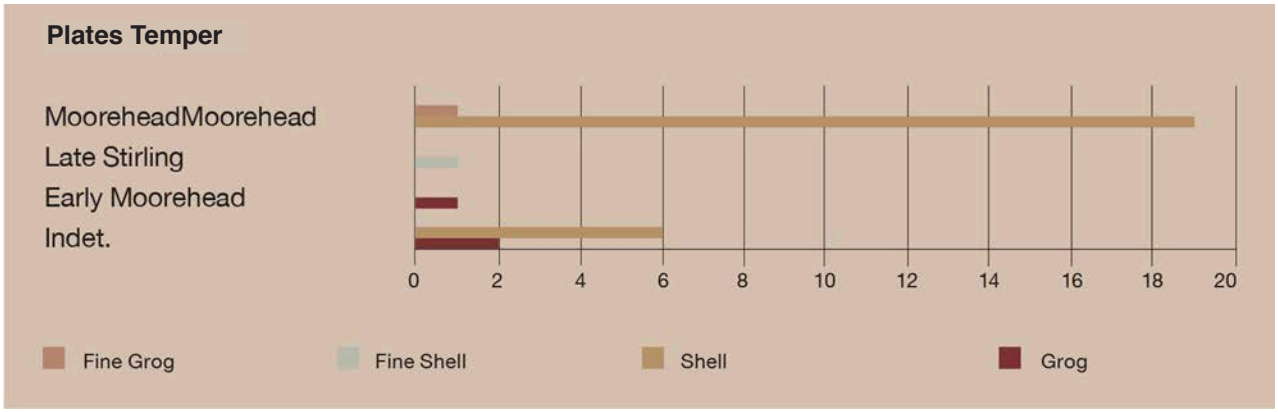


Table 3.12 *Chart showing the tempers of plates recovered in the Merrell Tract in the different phases of occupation. The majority is represented by shell tempered samples dated to the Moorehead phase (Valese, 2017; Mattioli, 2017).*

Platter

Platters, like pans, have open unrestricted orifices, differentiated from bowl by a shallower form and more outslanted walls. This vessel form, as defined by J. Kelly (1997b), is differentiated from a pan primarily by a thinner vessel wall, 0.4 -0.7 cm, and a mean orifice diameter. Platters are usually shell tempered, slipped, undecorated except for occasional lip tabs, and were presumably "used in the serving of food and were essentially plates without the everted rims" (Kelly 1997b).

During the field the Italian team discovered twenty- nine shell tempered platter rim sherds of which: eight plain Moorehead rim sherds, three red slipped rim sherds, eleven red slipped rim sherds dated to the Moorehead phase, one red slipped platter rim sherd dated to the late Stirling / early Moorehead phase, five black slipped Moorehead rim sherds, one black slipped platter rim sherd dated to the late Stirling / early Moorehead phase.

One polished and grog tempered rim fragment which pertains to the French Fork Incised vessel variety that shows the typical decoration of the Lower Mississippi valley.

French Fork Incised

French Fork Incised counts insufficient material for generalizations about vessel form.
The decoration is characterized by small zones of small spaced punctations enclosed by punctuate incised lines; parallel punctuate incised lines on rim or / and lip; incised lines interrupted by or terminating in shallow punctations (Phillips, Ford & Griffin, 1951).

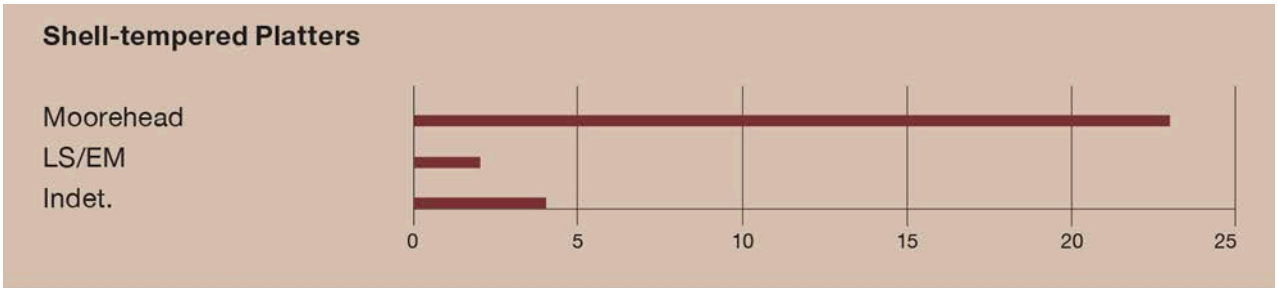


Table 3.13 *Shell-tempered platters divided by phase. The majority of this vessel type was recovered in Moorehead features (Valese, 2017; Mattioli, 2017).*

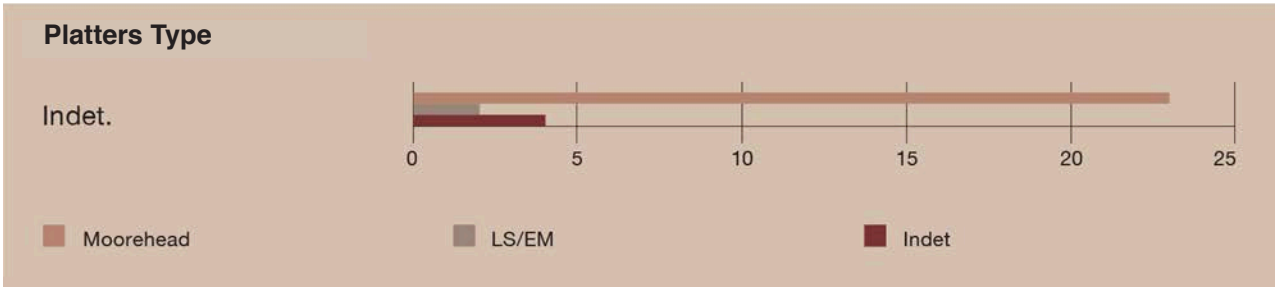


Table 3.14 *Chart showing the frequency in different phases of different types of platters located in the Merrell Tract (Valese, 2017; Mattioli, 2017).*

Beaker

Beakers, initially called "bean pots", are cylindrically shaped vessels. Beakers often display slipped exteriors and interiors, exteriors surface may also be decorated with incised lines. Beakers are usually thin walled with a flat base, flared rims are present and handles are assumed to have been present on all beakers (Holley, 1989).

Coles Creek Incised

Coles Creek Incised is characterized by a thin paste and a smooth surface treatment. In general a decoration of overhanging lines is characteristic of Coles Creek variety but sometimes we can notice variations including relatively narrow incisions made with a thin, pointed implement and relatively wide, smooth lines which do not overhang. The lines are placed parallel and horizontal to the rim. This variety is represented by vertical walled bowl or beaker, occasionally incurved rims suggest barrel shaped beaker. Usually Coles Creek vessels have vertical rims but sometimes they are incurved or inslanted. Lips are flattened but sometimes tend to be rounded. The major part of examples was found in the southern Yazoo Basin sub area (Phillips, Ford & Griffin, 1951).

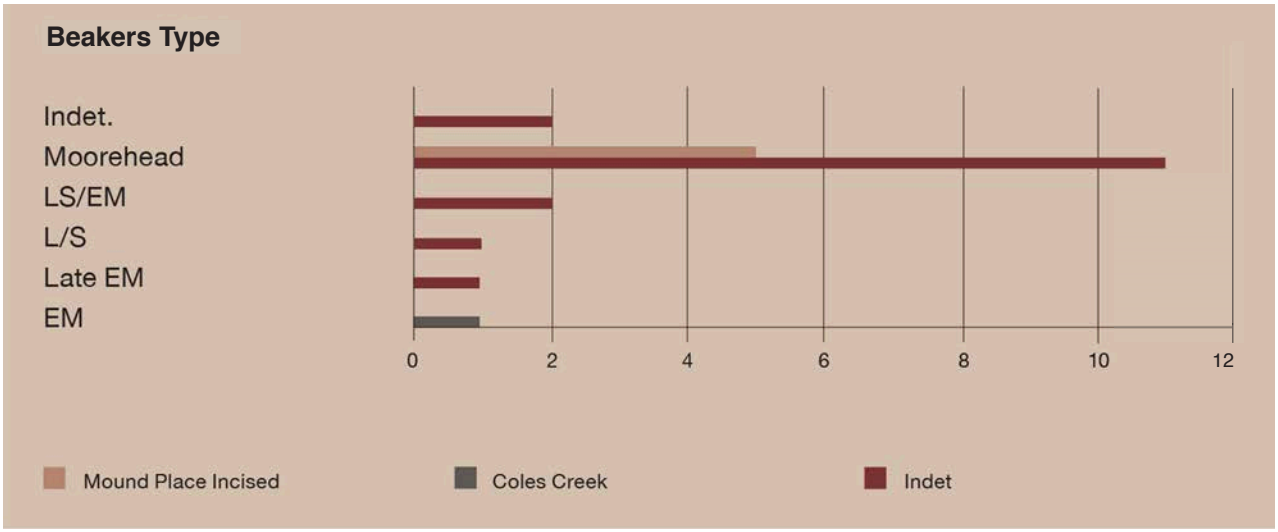


Table 3.15 *Column chart showing the type of beakers found in the Merrell Tract's features (Valese, 2017; Mattioli, 2017)*

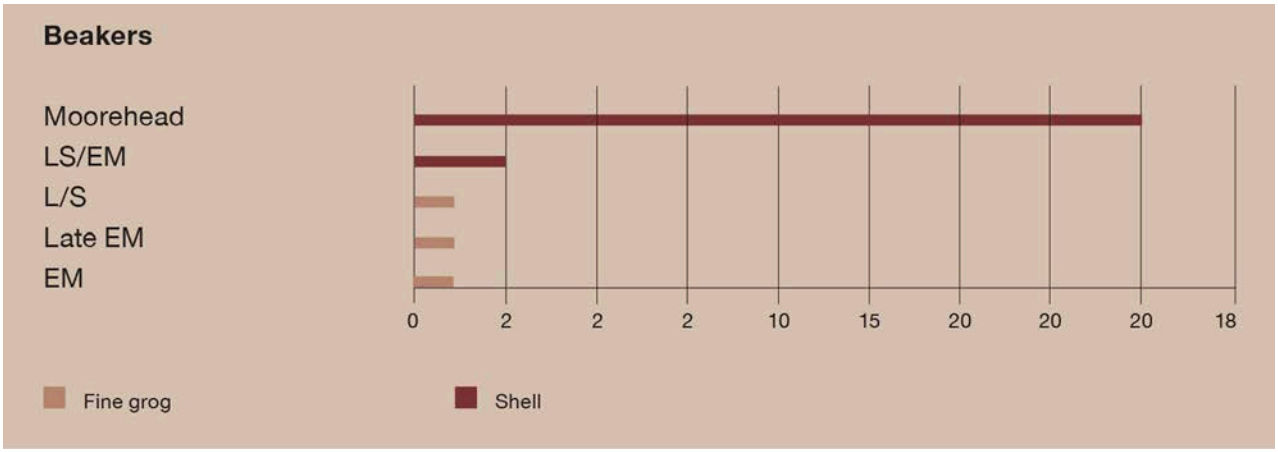


Table 3.16 *Chart showing the number of beakers' rims located in the University of Bologna's excavations. The highest frequency of shell-tempered beakers is attested for the Moorehead phase (Valese, 2017; Mattioli, 2017).*

Pan

Pans are large, ovular, shallow clay bowls (O' Brien, 1972).
A pan, also known as a "salt pan" in the Southeast (e.g., Brown, 1980; Morse and Morse, 1983) is a very shallow, gently rounded vessel form with an outcurved or outslanted rim. Surface modification in the form of slipping is relatively rare, and when a slip is present it is commonly restricted to the interior surface. Pans can be distinguished from platters and plates by generally greater wall thickness. J. Kelly (1997b:37) proposes that pans are cooking vessels, in contrast with the smaller bowls that were presumably used in a serving capacity, whereas Morse and Morse (1983) suggest that salt production was the primary function of pan.

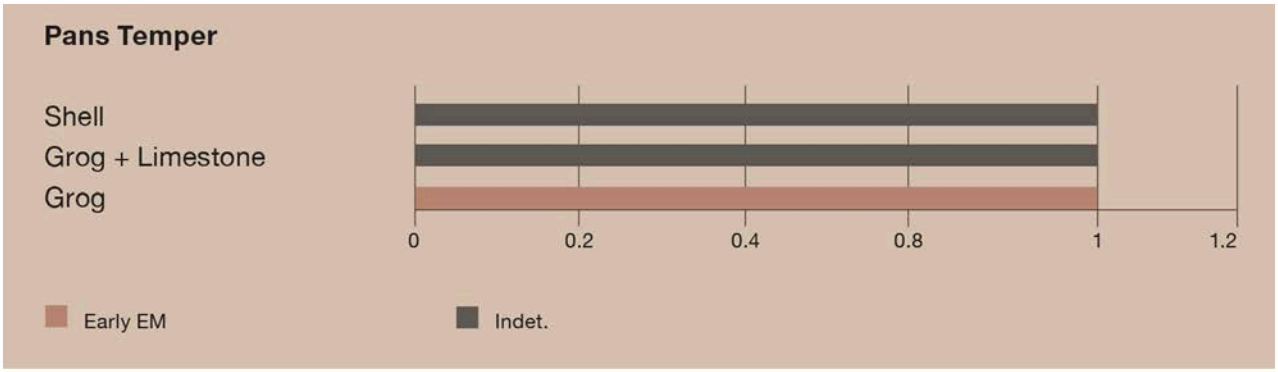


Table 3.17 *Tempers of the pans' rims recovered from the field divided by chronological association (Valese, 2017; Mattioli, 2017).*

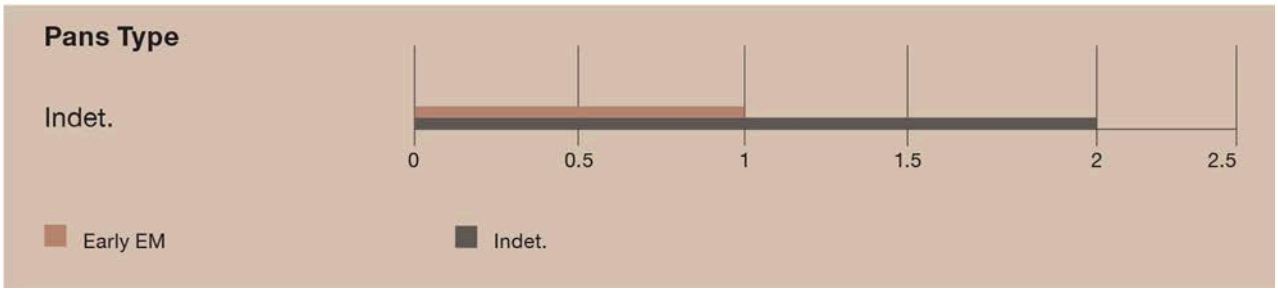


Table 3.18 *Chart showing the pans' type recognized among the Merrell Tract's ceramic assemblage (Valese, 2017; Mattioli, 2017).*

Funnels

Funnels have simple contours and conoidal, ellipsoidal or ovaloidal shapes (Pauketat, 1998). The rounded bases of funnels are pierced by a small, lower orifice diameter usually 2-5 cm. The rims may resemble those found on jars and the orientation vane from gently outslanting to gently inslanting. Surfaces are typically plain and may be decorated with multiple, parallel vertical incised lines (e.g., Holley, 1989) and the paste was oxidized in nearly all cases and tempered with a variety of non plastics. Funnels may have functioned as heat and cooking sources in Mississippian domestics contexts (Holley, 1989).

A white "wash" found on some funnel specimens may indicate exposure to greater temperatures (in firing or in use) (Holley, 1989: 16). This exposure to greater temperatures supports the hypothesis that funnels were used as vessel supports to prevent jars or bowls from being placed directly in the fire. This function may at least account for the coarse or crudely-made specimens. Because of their hollow bases, it has also been suggested that funnels were used to ease the filling of long-necked bottles (Porter, 1974:650) or as filters or strainers by placing ashes or limestone in the basal hollow to purify water or reduce acidity (Holley, 1989: 16).

According to J. Kelly (1997b:75), many funnel lids from Moorehead phase contexts are knobbed and are referred to as 'Moon-Maid' lids in reference to the Dick Tracy comic strip character.

Moon Maid

Excavating the area we discovered five plain, grog tempered knob sherds pertaining to Moon Maid variety of which: one can be dated to the Emergent Mississippian period and another one can be related to the Moorehead phase (see Figure 3.9).

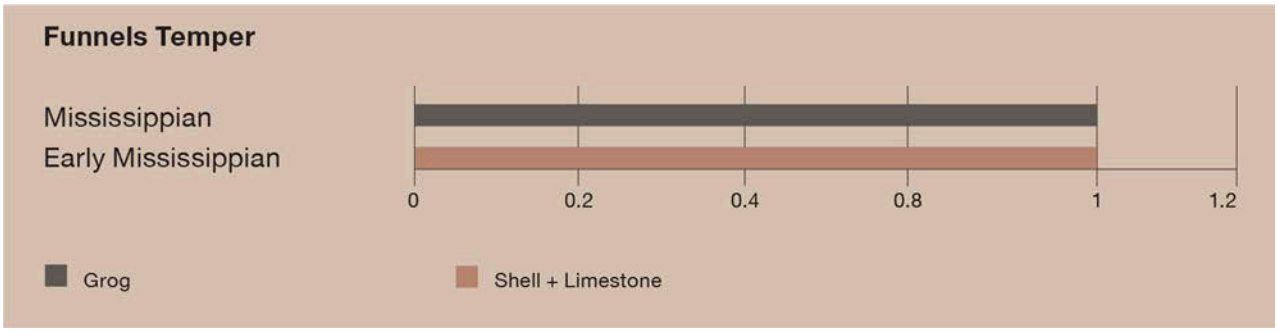


Table 3.19 *Tempers of funnels, divided by phase, recovered in University of Bologna's excavations (Valese, 2017; Mattioli, 2017).*

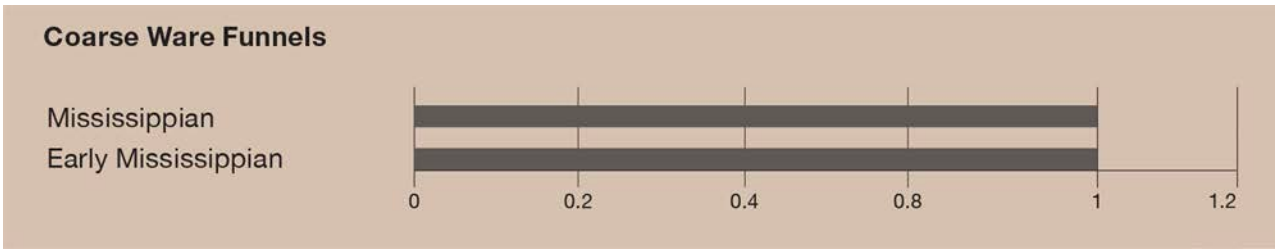


Table 3.20 *Frequency of coarse ware funnels in the different phases of occupation of the area (Valese, 2017; Mattioli, 2017).*

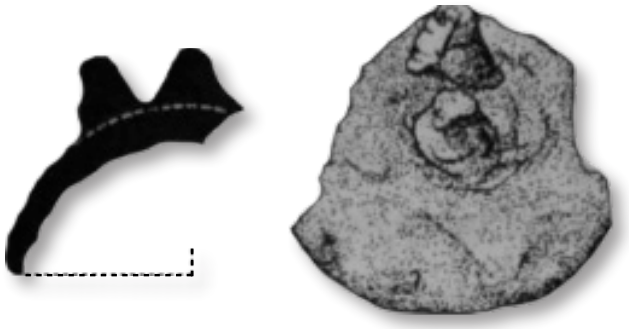
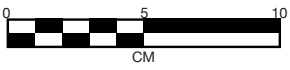


Figure 3.9 *Example of a funnel lid " Moon Maid" from ICT-II site (Holley 1989:243)*



Unidentified Type

Above all the amount of rim fragments recovered from the field, for a lot of them we were just able to recognize general information as temper, vessel form and in same case to provide chronological information. Unfortunately, due to poor preservation condition, we were not able to identify the specific vessel typology they pertain to (Mattioli, 2017).

Stumpware

Stumpwares does not constitute a type in the formal sense, since it is associated with a variety of tempers and surface finishes. It is represented typically by grog tempered, cone shaped vessels with two feet and a smaller chambered base (e.g., Holley, 1989; Pauketat, l998). They have thick walls, small interior cavities, and small orifice diameters. The previously mentioned whitened surface, possibly indicative of unusually high temperatures during firing or use, is also found on the exteriors of stumpware vessels suggesting they, like funnels, may have been used as vessel supports over fires (Kelly, 1990) or as heat/cooking sources eliminating the need for hearths (Holley, 1989: 16). The use suggested by Porter (1974) is that they served a number of functions related to cooking. He noted their use as fire dogs or supports in the vicinity of hearts (Kelly, 1982).
The time span covered by this "type" is extensive, ranging from the Emergent Mississippian period to the early portions of the Mississippian period (Holley, 1989).

Miscellaneous Ceramic Objects

Ceramic disc

From the field work we were able to identify two ceramic discs:
One is shell tempered, cordmarked on one surface and can be dated to the Moorehead phase; the other one is grog tempered, cordmarked and can be dated to the Emergent Mississippian Period.

Spindle whorl

We also brought to light one, grog tempered Spindle whorl;
One shell temperd Spindle whorl showing a cordmarked exterior surface and a red slipped interior surface treatment that can be dated to the Moorehead phase.

Diagnostic

A previously anticipated we decided to name Diagnostic sherds those vessel fragments, mostly decorated body sherds and ceramic objects not contemplated in the above-mentioned categories, which we were not able to relate to specific vessel typology they belong to.
During the excavation seasons we recorded a lot of diagnostic sherds but some of them presented so poor preservation conditions to allow me to identify only basic information such as the temper or the vessel form (Mattioli, 2017).

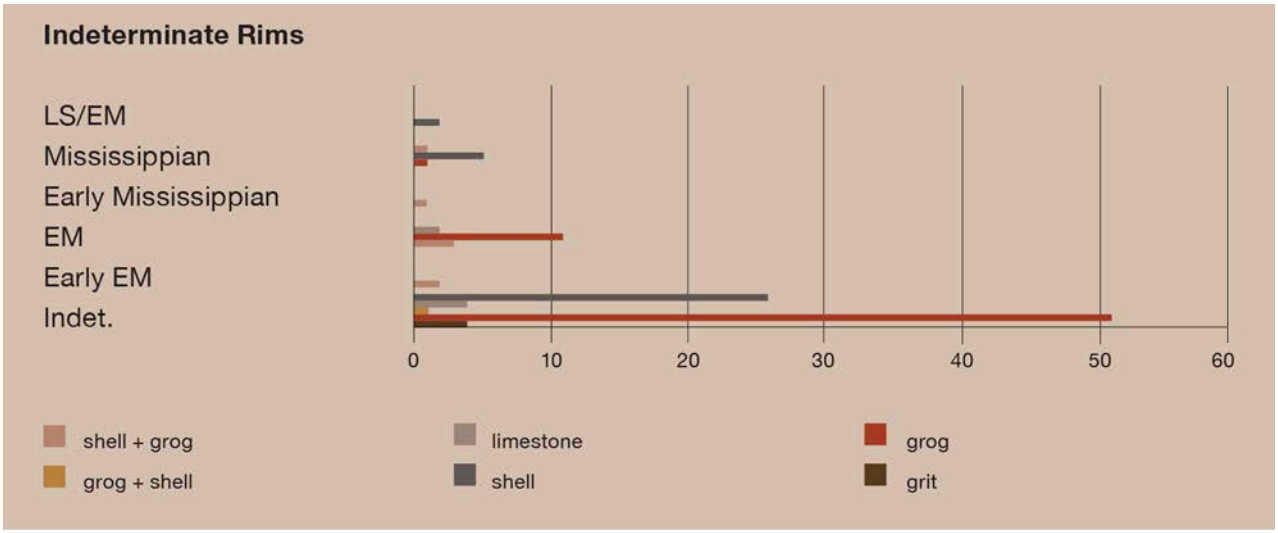


Table 3.21 *Chart showing the number of rims not associated to a vessel type located in unaffiliated features (Valese, 2017; Mattioli, 2017).*

3.2 Ceramic Assemblages from Excavated Plowzone Areas

Being that the rim sherds detected from plowzone were not studied in depth, we cannot provide here precise typological and chronological information, thus limiting ourselves to just few notes about tempers and some additional observations (Mattioli, 2017).
During the plowzone excavation a high amount of rim sherds were brought to light.
One plain fine grog tempered Coles Creek variety rim sherd;
Forty limestone tempered rim sherds, of which: nineteen plain rim sherds, two plain with lip lug rim fragments, two cordmarked rim sherds, fourteen red slipped rim sherds, one red slipped notched on lip rim sherd, one red slipped and incised rim sherd and one red slipped with lip lug rim sherd;
Sixty-five grit tempered rim sherds, of which: forty-four plain rim sherds, two incised fragments, fourteen plain and notched on lip sherds, two plain and notched on lip sherds dated to the Emergent Mississippian period and three plain with lip lug rim sherds;
One hundred forty-three shell tempered rim sherds, of which: ninety-two plain rim sherds, one plain rim sherd dated to the Moorehead / Sand Prairie phase, one plain and notched on lip sherd, three plain and incised fragments, two plain smudge rim sherds, twenty-three red slipped rim sherds, five red slipped and notched o lip rim fragments, two red slipped and incised pieces, one Cahokia Cordmarked variety rim sherd, eleven black slipped rim sherds, one black slipped Ramey Incised variety rim sherd and one black slipped rim sherd dated to the Moorehead phase;
Four hundred thirteen grog tempered rim sherds, of which: two hundred ninety-two plain rim sherds, one plain Emergent Mississippian piece, seven plain and incised rim fragments, nineteen plain with lip pug rim sherds, sixty-one plain and notched on lip rim sherds, one plain and notched on lip rim sherd dated to the Emergent Mississippian period, two plain and notched on lip rim sherd dated to the late Emergent Mississippian phase, one cord impressed rim sherd, seven cordmarked rim sherds, eight red slipped rim sherds, two red slipped and incised rim sherds, one red slipped and notched on lip rim fragment dated to the late Emergent Mississippian phase, one notched on lip Merrell Red Filmed variety rim sherd and one polished and punctated French Fork Incised variety rim fragment (Mattioli, 2017).

By screening the plowzone debris we identified fifty diagnostic sherds.
One decorated Cahokia Fine grog tempered sherd of a bowl or a bottle coming from the Lower Mississippi Valley;
One incised grit tempered body sherd;
Three decorated limestone tempered body sherds, of which two of them show a red slipped surface treatment and the third one is cordmarked;
Ten shell tempered diagnostic sherds, of which: one ceramic object, one black slipped body sherd, one jar incised sherd, four incised body sherds, two incised and red slipped fragments and one handle;
Thirty-five grog tempered diagnostic sherds, of which: two sherds are incised and cordmarked, eleven sherds show an incised decoration, one head, three handles, seven cordmarked stumpware fragments dated to the Emergent Mississippian period, six plain stumpware fragments, one cordmarked ceramic disc dated to the Emergent Mississippian period, one plain Ladle handle, one knob pertaining to a Moon Maid bowl and one Caddoan incised Coles Creek body sherds typical of the Lower Mississippi Valley (Mattioli, 2017).

Fill

As per the plowzone, the Italian team excavated and analyzed the area fill and they were able to recognize seventy-three rim sherds.
From the generic fill we brought to light:
One red slipped limestone tempered rim sherd;
Seven shell tempered fragments, of which: one black slipped tab, one red slipped rim sherd of a bottle, two black slipped sherd, one incised rim sherd of a bowl and two incised rim sherds of a plate;
Eleven grog tempered rim fragments, of which: one is cordmarked, one is red slipped and nine show a plain surface treatment and one of them pertain to a bowl (Mattioli, 2017).

For important features the related fill was separately noted as well as all the material in there located was separately studied.

From Feature 1177 fill we discovered a black slipped shell tempered piece of a decorated plate dated to the Moorehead phase;

From Feature 1193 fill we found:
Four red slipped limestone tempered rim sherds, of which one of them pertain to a jar;
Two plain grit tempered rim fragments;
Fifteen grog tempered sherds, of which: three plain rim sherds, one decorated Emergent Mississippian jar rim sherd, two rim sherds pertain to a jar, one is a bowl rim sherd, one is a red slipped plate sherd, one is a Kersey Incised jar fragment coming from the Lower Mississippi valley and dated to the Early Emergent Mississippian phase (Mattioli, 2017);
Twenty-five shell tempered rim fragments, of which: one plain jar rim sherd, one red slipped rim sherd of a platter, two black slipped Effigy beaver bowl rim sherds dated to the Moorehead phase, one incised black slipped Moorehead beaker, two plate rim sherds, eight red slipped fragments of which three of them belong to a jar and one to bowl, one plain bowl rim sherd, one red slipped decorated rim sherd of a beaker dated to the Moorehead phase, one black slipped head of an effigy duck bowl dated to the Moorehead phase, three black slipped jar rim sherds and one Cahokia Cordmarked jar fragment dated to the Sand Prairie phase (Mattioli, 2017);

From Feature 1213 fill we identified one grog tempered jar rim sherd and a cordmarked limestone tempered rim sherd of a decorated jar dated to the Emergent Mississippian period.

Excavating the fill we brought to light fourteen diagnostic sherds.
From the generic fill we found:
One shell tempered handle of a beaker and two black slipped shell tempered incised sherds;
Three grog tempered Emergent Mississippian stumpware pieces (Mattioli, 2017).

From Feature 1168 fill we discovered a big fragment of an Emergent Mississippian stumpware;

From Feature 1193 fill we identified:
One, red slipped, fine grog tempered sherd;
Four shell tempered sherds, of which: one black slipped and decorated fragment of a Ramey Incised jar, one red slipped head of an Effigy bird bowl, one brown slipped and incised body sherd and a black slipped decorated sherd dated to the Moorehead phase;
Two grog tempered sherds, of which: one knob of a Moon Maid bowl and an Emergent Mississippian fragment of a stumpware (Mattioli, 2017).

3.3 Ceramic Assemblages from Excavated Features

The ceramic material detected from features was deeply analyzed in order to allow us to provide precise typological and chronological information which enabled us to formulate some hypothesis concerning the settlement dynamics and use of space of the interested area (Valese, 2017 and Mattioli, 2017).
Here is to follow an overview description of the identified features during the Merrel Tract-Unibo field work and the associated rim and diagnostic sherds.

F 1001

In this rectangular wall-trenched building we discovered:
One Fine grog beaker rim sherd dated to the late Emergent Mississippian phase;
Four grog tempered sherds of which: one Mississippian rim sherd, two Emergent Mississippian jar rim sherds and one Kersey Incised jar fragment typical of the South Missouri area and dated to the late Emergent Mississippian period (Valese, 2017; Mattioli, 2017).

F 1004

Excavating this feature, identified as part of F 1015 midden, we brought to light:
Two limestone tempered Emergent Mississippian rim sherds;
Two grit tempered Emergent Mississppian sherds, of which one notched on lip jar fragment dated to the latest phase (Valese, 2017; Mattioli, 2017);
Two shell tempered Mississippian rim sherds;
Five grog tempered rim sherds, of which: one pertain to an Emergent Mississippian jar, one is a red slipped Mississippian rim sherd and three belong to a late Emergent Mississipian notched on lip jar.

F 1005

In this wall-trenched building we detected:
One shell tempered red slipped seed jar fragment dated to the late Stirling phase;
One Fine grog black slipped Emergent Mississippian jar rim sherd;
One limestone tempered red slipped bowl rim sherd (Valese, 2017; Mattioli, 2017).

F 1006

Investigating this feature, noted as part of F 1020 midden we found:
One grit tempered rim sherd;
One limestone tempered red slipped bowl sherd dated to the late Emergent Mississippian phase.

F 1007

In this feature, part of F 1019 midden we identified:
One grit tempered Emergent Mississippian jar rim sherd;
Three grog tempered Emergent Mississippian jar sherds, of which one show a red slipped surface treatment and is dated to the late phase of the Emergent Mississippian period (Valese, 2017; Mattioli, 2017).

F 1010

After the excavation of this L-shaped wall-trenched structure we discovered:
Two grog tempered rim sherds, of which: one belong to a late Emergent Mississippian jar and the other one show a cordmarked exterior surface treatment and belong to an early Emergent Mississippian bowl.

F 1011

Digging this circular pit we brought to light:
One decorated limestone tempered cordmarked Emergent Mississippian jar rim sherd;
One shell tempered Cahokia Cordmarked jar rim fragment dated to the Moorehead phase.

F 1013

In this Emergent Mississippian House Basin we discovered:
Two cordmarked limestone tempered Early Emergent Mississippian bowl sherds;
Three grog tempered Emergent Mississippian jar sherds (Valese, 2017; Mattioli, 2017).

F 1015

Excavating this irregularly shaped feature/midden we identified:
Two limestone tempered jar rim sherds dated to the early and late Emergent Mississippian phases;
Two grog tempered Early Emergent Mississippian sherds of which one is a jar rim sherd and the other one is a red slipped bowl rim sherd;
Six shell tempered jar rim sherds, of which: one early Moorehead Cahokia Cordmarked sherd, one Moorehead rim sherd, one black slipped early Morehead Ramey Incised fragment and three late Stirling / early Moorehead Ramey Incised rim sherds (Valese, 2017; Mattioli, 2017).

F 1016

Discovering this storage pit we found:
Four grog tempered jar rim sherds, of which three are plain fragments dated to the early and late Emergent Mississippian phases and the fourth one is an Emergent Mississippian cordmarked sherd.

F 1017 E

Investigating this refuse pit we detected:
One Fine grog tempered incised beaker sherd dated to the Lohman / Stirling phase;
One limestone tempered red slipped Monks Mound jar rim sherd dated to the late Emergent Mississippian phase;
Three grit tempered jar rim sherds, of which two are notched on lip and dated to the late Emergent Mississippian phase and the third one can be dated to the early Emergent Mississippian phase;
Seventeen grog tempered rim sherds, of which: four early Emergent Mississippian jar fragments, one red slipped late Emergent Mississippian jar sherds, nine cordmarked early Emergent Mississippian bowl rim fragments and three decorated jar rim sherds dated to the Emergent Mississippian period (Valese, 2017; Mattioli, 2017).

F 1017 W

From this refuse pit we brought to light:
One shell tempered jar rim sherd;
Four grit tempered jar rim sherds of which two are dated to the early Emergent Mississippian phase and two are dated to the Emergent Mississippian period;
Sixteen grog tempered rim fragments, of which: three cordmarked Emergent Mississippian bowl sherds, one Emergent Mississippian and decorated jar rim sherd, one Emergent Mississipian fragment, two Emergent Mississippian jar sherds and seven early Emergent Mississippian jar rim sherds (Valese, 2017; Mattioli, 2017).

F 1019

Digging this irregular pit we discovered:
Ten grog tempered rim sherds, of which: three red slipped Emergent Mississippian jar rim sherd, four Emergent Mississippian jar rim sherd, one red slipped Coarse ware seed jar rim sherd dated to early Mississippian period, one red slipped Emergent Mississippian bowl rim sherd, one red slipped pan rim fragment;
One grit tempered Emergent Mississippian jar rim sherd;
Two Fine grog tempered rim sherds, one of them pertain to an incised Moorehead plate and the other one pertain to a black slipped Moorehead beake;
Sixty-one shell tempered rim sherds, of which: one plain rim sherd, one black slipped rim sherd, two red slipped rim sherds, one decorated red slipped seed jar rim sherd dated to the early Mississippian period, one Moorehead platter rim sherd, ten red slipped Moorehead platter rim sherds, one black slipped Moorehead platter rim sherds, one bowl rim sherd, one red slipped bowl rim sherd, five black slipped bowl sherds dated to the Moorehead phase, two red slipped and incised beaker sherds dated to the Moorehead phase, two black slipped Moorehead plate sherds, one late Stirling plate sherd, eight plain jar rim fragments, one black slipped jar rim sherd, two red slipped jar rim sherd, one red slipped jar rim sherd dated to the Moorehead phase, one black slipped jar rim sherd dated to the Moorehead phase, one early Mississippian jar rim sherd, three late Stirling jar rim sherds, three jar rim sherds dated to the late Stirling / early Moorehead phase, four Ramey Incised variety jar rim sherds dated to the late Stirling phase, one Ramey Incised variety jar rim sherds dated to the late Stirling / early Moorehead phase, one black slipped Ramey Incised variety jar rim sherds dated to the late Moorehead phase, two red slipped Ramey Incised jar rim sherds dated to the late Stirling / early Moorehead phase, one Cahokia Cordmarked jar rim sherd dated to the early Moorehead phase, two black slipped Powell Plain variety jar rim sherds dated to the late Stirling / early Moorehead phase, one Cambered variety jar rim fragment dated to the early Moorehead phase (Valese, 2017; Mattioli, 2017).

F 1020

In this irregular pit we found:
One decorated grit tempered jar rim sherd dated to the late Emergent Mississippian phase;

Three grog tempered rim sherds, of which: one red slipped seed jar rim sherd dated to the Stirling phase, one bowl fragment and one red slipped jar rim sherd dated to the late Emergent Mississippian phase;
Sixteen shell tempered rim sherds: one red slipped platter sherd dated to the Moorehead phase, one red slipped plate sherd dated to the Moorehead phase, one black slipped plate sherd dated to the Moorehead phase, one Mississippian bowl fragment, one red slipped incised beaker sherd dated to the Moorehead phase, one black slipped Mound Place Incised variety beaker sherd dated to the Moorehead phase, three plain jar rim sherds, three red slipped jar rim sherds of which one is dated to the early Mississippian period and another one can be dated to the late Stirling / early Moorehead phase, one black slipped jar rim sherd dated to the Moorehead phase, one Ramey Incised variety jar rim sherd dated to the late Stirling phase, two black slipped Powell Plain jar rim sherds dated to the late Stirling / early Moorehead phase (Valese, 2017; Mattioli, 2017).

F 1023

After discovering this post pit we identified:
One limestone tempered Emergent Mississippian jar rim sherd (Valese, 2017; Mattioli, 2017).

F 1024

Excavating this is a small oval feature we detected:
One grog tempered early Emergent Mississippian bowl rim sherd.

F 1025

In this rectangular wall-trenched reconstructed building we brought to light:
One plain grog tempered rim sherd (Valese, 2017; Mattioli, 2017).

F 1027

Investigating this circular pit we excavated:
One grit tempered notched on lip late Emergent Mississippian rim sherd;
One cordmarked limestone tempered Emergent Mississippian fragment of a bowl;
Two Emergent Mississippian grog tempered jar rim sherds and two grog tempered late Emergent Mississippian notched on lip jar rim fragments.

F 1030

In this bastioned building we identified:
One cordmarked limestone tempered Emergent Mississippian jar rim sherd;
Three grog tempered rim sherds of which two are cordmarked and one is a notched on lip jar rim sherd dated to the late Emergent Mississippian phase (Valese, 2017; Mattioli, 2017).

F 1033

Digging this sequence of wall-trenched buildings we found:
One grog tempered early Emergent Mississippian jar rim sherd (Valese, 2017; Mattioli, 2017).

F 1037

In this wall-trench feature associated with F 1033 we detected:
One grog tempered Emergent Mississippian rim sherd;
One red slipped shell tempered early Mississippian seed jar rim fragment.

F 1040

After the discovery of this rectangular pit we recovered:
One grog tempered Emergent Mississippian rim sherd;
Two grit tempered late Emergent Mississippian jar rim sherds (Valese, 2017; Mattioli, 2017).

F 1046

Investigating this Emergent Mississippian House Basin we brought to light:
One red slipped limestone tempered late Emergent Mississippian jar rim sherd;
One shell tempered plate sherd dated to the Moorehead phase;
Thirteen grog tempered rim sherds, of which: four notched on lip late Emergent Mississippian jar rim sherds, one cordmarked bowl sherd dated to the early Emergent Mississippian phase, five Emergent Mississippian jar rim fragments, one cordmarked jar sherd and two red slipped notched on lip jar rim sherds dated to the late Emergent Mississippian phase (Valese, 2017; Mattioli, 2017).

F 1048

In this midden area feature we excavated:
One grog tempere notched on lip Emergent Mississippian jar rim sherd;
Eight shell tempered rim sherds of which one red slipped beaker dated to the late Stirling / early Moorehead phase, two early Mississippian rim sherds, one red slipped inside jar rim sherd dated to the late Stirling / early Moorehead phase, one red slipped bowl rim sherd dated to the late Stirling / early Moorehead phase, one red slipped Mississippian rim fragment, one black slipped plate sherd dated to the Moorehead phase and one black slipped Ramey Incised jar dated to the late Stirling / early Moorehead phase (Valese, 2017; Mattioli, 2017).

F 1049

Digging this big midden area we identified:
One Fine grog black slipped Coles Creek Incised variety beaker sherd dated to the Emergent Mississippian period;
One limestone tempered Emergent Mississippian jar rim sherd and one red slipped limestone tempered bowl rim sherd dated to the late Emergent Mississippian phase;
Three grit tempered jar rim sherds, of which: one dated to the Emergent Mississippian period and two notched on lip sherds dated to the late Emergent Mississippian phase;
Twenty-eight grog tempered rim sherds, of which: two plain sherds, two Emergent Mississippian fragments, three Emergent Mississippian bowl sherds, two early Emergent Mississippian jar rim sherd, three notched on lip late Emergent Mississippian jar sherds, one Emergent Mississippian jar rim sherd, one Coarse ware bowl rim

sherd dated to the Mississippian period, two Coarse ware jar rim sherds dated to the Mississippian period, two Coarse ware bowl rim sherds dated to the Moorehead phase, four Emergent Mississippian Coarse ware bowl rim pieces, one red slipped Coarse ware funnel rim sherd dated to the Mississippian period, six red slipped Coarse ware bowl rim sherds dated to the Mississippian period;
Seventy-one shell tempered rim sherds of which: one red slipped rim sherd dated to the late Stirling / early Moorehead phase, one Moorehead beaker sherd, five black slipped beaker rim sherds dated to the Moorehead phase, one red slipped beaker sherd, one red slipped decorated beaker sherd dated to the late Stirling / early Moorehead phase, four black slipped Mound Place Incised variety beaker rim sherds dated to the Moorehead phase typical of the Arkansas area;
One red slipped platter rim sherd dated to the Moorehead phase, four black slipped platter rim sherd dated to the Moorehead phase,two plain platter sherds, three black slipped Wells Broad Trailed plate fragments dated to the Moorehead phase, six black slipped Moorehead plate rim sherds, one black slipped incised bowl fragment dated to the Moorehead phase, one red slipped Mississippian bowl sherd, three black slipped Moorehead bowl fragments, one plain bowl sherd,;
One black slipped pan sherd, two red slipped bottle rim pieces dated to the late Stirling / early Moorehead phase, one red slipped bottle sherd, one Emergent Mississippian jar sherd, two plain jar rim sherd, one Mississippian jar rim sherd, one red slipped Moorehead jar rim sherd, one red slipped and decorated Mississippian jar rim piece, two plain Moorehead jar rim sherds, five black slipped Moorehead jar rim sherds, one red slipped Stirling jar rim sherd, one black slipped Ramey Incised jar rim sherd dated to the Moorehead phase, one red slipped Ramey Incised jar rim sherd dated to the Mississippian period, one Ramey Incised jar rim sherd dated to the late Stirling / early Moorehead phase, one Ramey Incised jar rim sherd dated to the Moorehead phase, six Cahokia Cordmarked variety jar rim sherds dated to the Moorehead phase, two Powell Plain variety jar rim sherds dated to the Moorehead phase, two black slipped Powell Plain variety jar rim sherds dated to the late Stirling / early Moorehead phase, one black slipped St. Clair Plain variety jar rim sherd dated to the late Stirling phase, two black slipped jar rim sherd dated to the late Stirling / early Moorehead phase, one red slipped jar rim sherd dated to the late Stirling / early Moorehead phase (Valese, 2017; Mattioli, 2017).

F 1052

Discovering this circular pit we brought to light:
One red slipped limestone tempered rim sherd;
One grog tempered jar rim sherd; Nine shell tempered rim fragments, of which: two Moorhead platter sherds, two Moorhead plate sherds, one red slipped Ramey Incised jar rim sherd dated to the Stirling phase, one red slipped coarse ware funnel dated to the early Mississippian period and three plain shell tempered rim fragments (Valese, 2017; Mattioli, 2017).

F 1054

Excavating this pit / basin we found:
One red slipped grog tempered jar rim sherd dated to Emergent Mississippian period;
Two shell tempered jar rim sherds, of which one of them can be dated to the late Emergent Mississippian phase and the other one show a black slipped surface treatment and it can be dated to the Moorhead phase (Valese, 2017; Mattioli, 2017).

F 1061

In this circular pit we detected:
One notched on lip grog tempered jar rim fragment dated to the late Emergent Mississippian phase.

F 1064

In this circular pit we brought to light:
One grog tempered Emergent Mississippian rim sherd (Valese, 2017; Mattioli, 2017).

F 1067

Investigating this wall trench we discovered:
One grog tempered early Emergent Mississippian jar rim sherd (Valese, 2017; Mattioli, 2017).

F 1070

Discovering this circular storage pit we found:
One red slipped shell tempered and decorated plate rim fragment dated to the late Moorhead / Sand Prairie phase;
Three grog tempered rim sherds, two of them are plain Emergent Mississippian fragments and the other one is a cordmarked Emergent Mississippian sherd (Valese, 2017; Mattioli, 2017).

F 1073

Investigating this Emergent Mississippian House Basin we identified:
One red slipped shell tempered jar rim sherd dated to the late Stirling / early Moorehead phase.

F 1079

In this wall- trench feature associated with F 1033 we brought to light:
Three shell tempered rim fragments, of which one red slipped jar rim sherd and two red slipped Moorhead bowl rim sherds (Valese, 2017; Mattioli, 2017).

F 1080

In this circular refuse pit we identified:
One shell tempered red slipped jar rim sherd dated to the late Stirling / early Moorhead phase;
Three grog tempered jar rim sherds, two of them show a notched lip decoration so they can be dated to the late Emergent Mississippian phase and the third one is dated to the early Emergent Mississippian phase (Valese, 2017; Mattioli, 2017).

F 1081

Digging this circular pit we found:
One grog tempered Emergent Mississippian rim sherd;

	One shell tempered jar rim sherd dated to the early Moorhead phase.
F 1082	Discovering this irregular feature we detected: Three grog tempered jar rim sherds, of which: two decorated sherds dated to the late Emergent Mississippian phase and one Kersey Incised variety rim sherd typical of the south Missouri area dated to the late Emergent Mississippian / early Mississippian Phase (Valese, 2017; Mattioli, 2017).
F 1086	In this Emergent Mississippian House Basin we found: Three grog tempered rim sherds: one Emergent Mississippian jar rim fragment, one cordmarked Emergent Mississippian pan sherd and one cordmarked bowl rim sherd dated to the Patrick phase / late Woodland period; Three shell tempered rim sherds, of which: one black slipped Moorhead jar rim sherd, one Cahokia Cordmarker jar rim sherd dated to the Moorhead phase and one black slipped Mound Place Incised variety rim fragment dated to the Moorhead phase coming from the Arkansas area.
F 1087	Investigating this pit we discovered: Two grog tempered rim sherds, of which: one notched on lip jar fragment dated to the late Emergent Mississippian phase and one cordmarked bowl sherd dated to the early Emergent Mississippian phase (Valese, 2017; Mattioli, 2017).
F 1088	Discovering this circular feature we identified: One Mississippian shell tempered rim sherd (Valese, 2017; Mattioli, 2017).
F 1089	Digging this circular feature we brought to light: One notched on lip grog tempered rim sherd of a Coarse Ware dated to the Emergent Mississippian period (Valese, 2017; Mattioli, 2017).
F 1112	In this circular refuse pit we found One early Emergent Mississippian grog tempered jar rim sherd; Three shell tempered rim sherds, of which: one black slipped platter rim fragment dated to the Stirling / Moorhead phase and two jar sherds dated to the Stirling / early Moorhead phase (Valese, 2017; Mattioli, 2017).
F 1130	In this circular refuse pit we detected: Two shell tempered jar rim sherds: one Mississippian sherd and a Stirling / Moorhead rim sherd.
F 1132	Excavating this oval refuse pit we found:

One Wells Broad Trailed shell tempered plate sherd dated to the early Moorhead phase.

F 1158

In this circular pit we discovered:
One black slipped shell tempered platter sherd dated to the Moorhead phase.

F 1165

After detecting this circular pit we brought to light:
One red slipped shell tempered seed jar rim sherd dated to the late Stirling / early Moorhead phase;
One notched on lip grit tempered jar rim sherd dated to the late Emergent Mississippian period;
One decorated grog tempered jar rim sherd dated to the late Emergent Mississippian phase (Valese, 2017; Mattioli, 2017).

F 1167

Investigating this Emergent Mississippian features we identified:
One grit tempered jar rim sherd;
Four grog tempered rim sherds, one of them is a notched on lip jar rim fragment and the other three are plain rim sherds (Valese, 2017; Mattioli, 2017).

F 1168

In this irregular Emergent Mississippian feature we brought to light:
One cordmarked grog tempered jar rim sherd dated to the Emergent Mississippian phase;
One decorated red slipped shell tempered jar dated to the Mississippian period which probably pertains to the Vardy variety (Valese, 2017; Mattioli, 2017).

F 1177

In this burial pit we detected:
One red slipped limestone tempered jar rim sherd dated to the early Mississippian phase;
Two grog tempered rim sherds, of which one decorated jar rim sherd and one plain bowl rim sherds;
Fourteen shell tempered rim sherds, of which: one plain rim sherd, one plate rim sherd, three Moorhead platter rim sherds, one black slipped miniature jar rim sherd dated to the Moorhead phase, one red slipped Mound Place Incised bowl rim sherd dated to the Moorhead phase, two jar rim sherds, one red slipped Moorhead jar rim sherd, one black slipped decorated plate rim fragment dated to the Moorhead phase, one red slipped incised bowl rim sherd and two decorated red slipped rim pieces (Valese, 2017; Mattioli, 2017).

F 1193

Digging this rectangular wall-trenched reconstructed building we excavated:
One decorated grit tempered jar rim sherd;
Ten grog tempered rim sherds, of which: two notched on lip jar rim sherds, two plain rim sherds, one cord impressed

Maple Smiles variety jar rim sherd dated to the Emergent Mississippian period coming from the north Illinois area, one red slipped plate fragment, one cordmarked bowl rim sherd, one decorated jar sherd dated to the Emergent Mississippian period and two plain jar rim sherds;
Twenty shell tempered rim sherds, of which: one red slipped incised plate sherd, three red slipped rim sherds, two plain plate rim sherds, three plain bowl fragment, five red slipped jar rim sherds, two plain jar pieces, three plain rim sherds, one red slipped plate rim fragment and one black slipped bowl rim sherd (Valese, 2017; Mattioli, 2017).

F 1195

Excavating this pit or fill part of F1193 we identified:
One red slipped shell tempered platter rim sherd (Valese, 2017; Mattioli, 2017).

F 1196

Discovering this historic feature we detected:
Two grit tempered jar rim sherd.

F 1199

In this historic feature we brought to light:
One plain grog tempered rim sherd and one plain grit tempered rim sherd.

F 1208

Investigating this Emergent Mississippian fill we found:
One plain grog tempered rim sherd (Valese, 2017; Mattioli, 2017).

F 1211

In this Emergent Mississippian house we discovered:
One plain grog tempered rim sherd;
Two shell tempered rim sherds, of which a red slipped bowl rim fragment and a red slipped bottle rim fragment (Valese, 2017; Mattioli, 2017).

F 1212

Digging this clay layer we excavated:
Five plain grog tempered rim sherds of which only one of them pertain to a jar.

F 1213

Discovering this Emergent Mississippian house we identified:
One limestone tempered jar rim sherd and one decorated grog tempered jar rim sherd (Valese, 2017; Mattioli, 2017).

F 1215

In this dark fill we found:
One decorated grog tempered jar rim sherd (Valese, 2017; Mattioli, 2017).

F 1216

Excavating this dark fill we detected:
One plain grog tempered rim sherd (Valese, 2017; Mattioli, 2017).

F 1217 In this clay layer we brought to light:
One plain grog tempered rim sherd.

F 1222 Investigating this Emergent Mississippian basin we excavated:
One red slipped shell tempered bowl rim sherd.

F 1225 In this Emergent Mississippian fill we identified:
Two decorated grog tempered jar rim sherds dated to the Emergent Mississippian period;
Two limestone tempered rim sherds, of which: a red slipped bowl fragment and a red slipped jar rim sherd dated to the Emergent Mississippian period (Valese, 2017; Mattioli, 2017).

F NO1005 Digging this fill close to F1005 we found:
Two limestone tempered rim sherds, of which: a Coarse ware bowl rim sherd dated to the Emergent Mississippian period and a red slipped jar rim sherd dated to the Emergent Mississippian period too.

During the features excavation we discovered some significant Diagnostic sherds as well.

F 1001 In this rectangular wall-trenched building we identified:
One grog tempered sherd of a stumpware dated to the Emergent Mississippian period;
One Fine grog body sherd dated to the Lohman / Stirling phase (Valese, 2017; Mattioli, 2017).

F 1005 Discovering this wall-trenched building we brought to light:
One grog tempered spindlewhorld;
Four incised, shell tempered, red slipped beaker sherds dated to the late Stirling / Moorehead phase.

F 1007 In this feature, part of F 1019 midden, we detected:
One grit tempered Emergent Mississippian handle;
One grog tempered, Emergent Mississippian stumpware sherd (Valese, 2017; Mattioli, 2017).

F 1009 Investigating this wall-trenched structure we found:
One grog tempered Emergent Mississippian stumpware sherd (Valese, 2017; Mattioli, 2017).

F 1013 In this Emergent Mississippian House Basin we discovered:
One grog tempered Emergent Mississippian cordmarked stumpware sherd.

F 1015 In this irregularly shaped feature/ midden we identified:

	One grog tempered, coarse ware sherd of a funnel dated to the Early Mississippian phase; Two Ramey Incised jar body sherds dated, one of them to the late Stirling / Early Moorehead phase and the other one to the Moorehead phase (Valese, 2017; Mattioli, 2017).
F 1017 E	Excavating this refuse pits we found: One shell tempered incised fragment; Eight grog tempered Emergent Mississippian stumpware sherds of which two of them show a cordmarked surface treatment (Valese, 2017; Mattioli, 2017).
F 1017 W	In this refuse pits we brought to light: One grog tempered effigy jar head dated to the Emergent Mississippian period and one cordmarked grog tempered Emergent Mississppian stumpware (Valese, 2017; Mattioli, 2017).
F 1019	Investigating this irregular pit we excavated: One cordmarked unclassified tempered sherd dated to the Middle Woodland period; One grog tempered coarse ware funnel fragment dated to the Mississippian period, one grog tempered foot dated to the Late Emergent Mississippian phase, one Emergent Mississippian stumpware sherd; Nine shell tempered diagnostic sherds, of which: one incised black slipped beaker sherd dated to the Moorehead phase, two Ramey Incised jar sherds dated to the Moorehead phase, four Moorehead decorated fragments, one incised black slipped plate sherd dated to the Moorehead phase and one incised tail of an Effigy bowl dated to the Late Stirling / Early Moorehea phase (Valese, 2017; Mattioli, 2017).
F 1020	After discovering this irregular pit we brought to light: One grog tempered knob of a Moon Maid bowl, one incised grog tempered sherd; One shell tempered incised and black slipped plate fragment dated to the Moorehead phase, one incised black slipped shell tempered sherd, one shell tempered red slipped sherd of a Ramey Incised jar dated to the Late Stirling phase and one shell tempered and red slipped fragment of an Early Mississippian hooded water bottle (Valese, 2017; Mattioli, 2017).
F 1034	In this irregularly shaped feature we identified: One shell tempered Cahokia Cordmarked jar sherd dated to the Moorehead phase.
F 1038	In this wall-trench feature associated with F 1033 we discovered: One grog tempered knob of a Moon Maid bowl (Valese, 2017; Mattioli, 2017).

F 1040

Digging this rectangular pit we found:
One grog tempered Emergent Mississippian stumpware fragment (Valese, 2017;Mattioli, 2017).

F 1046

In this Emergent Mississippian House Basin we brought to light:
Four grog tempered Emergent Mississippian stumpware fragments and one grog tempered head of an Emergent Mississippian Effigy bowl (Valese, 2017; Mattioli, 2017).

F 1048

Discovering this midden area we identified:
One red slipped shell tempered Moorehead Ramey Incised jar decorated sherd.

F 1049

In this midden area we detected:
One grog tempered Funnell base dated to the Mississippian period, one grog tempered knob of a Moon Maid bowl;
Twelve shell tempered diagnostic sherds, of which: one cordmarked ceramic disc dated to the Moorehead phase, two jar handles dated to the Moorehead phase, two black slipped beaker handles pertaining to the Mound Place Incised variety, three red slipped beaker fragments dated to the late Stirling / Moorehead phase, one cordmarked and red slipped spindlewhorl dated to the Moorehead phase, one node / hear pertaining to a Moorehead Effigy bowl and one Ramey Incised body sherd dated to the late Stirling phase (Valese, 2017; Mattioli, 2017).

F 1052

Digging this circular pit we found:
One shell tempered Ramey Incised jar sherd dated to the Moorehead phase;
One incised Fine grog fragment dated to the Lohman / Stirling Phase.

F 1056

In this basin we excavated:
One shell tempered black slipped Ramey Incised jar sherd dated to the Moorehead phase;
One decorated grog tempered Emergent Mississippian jar sherd (Valese, 2017; Mattioli, 2017).

F 1067

In this wall trench we brought to light:
One grog tempered Emergent Mississippian stumpware fragment (Valese, 2017; Mattioli, 2017).

F 1069

Investigating this wall-trenched structure we identified:
One shell tempered Ramey Incised jar sherd dated to the late Stirling / Early Moorehead phase.

F 1070

In this circular storage pit we found:
One grog tempered Emergent Mississippian stumpware

fragment (Valese, 2017; Mattioli, 2017).

F 1079 In this wall-trench feature associated with F 1033 we discovered:
One fine grog tempered fragment dated to the Lohman / Stirling Phase.

F 1080 Digging this circular refuse pit we found:
Two grog tempered Emergent Mississippian stumpware base fragments.

F 1082 In this irregular feature we brought to light:
Two shell tempered Kersey Incised variety body sherds dated to the late Emergent Mississippian / early Mississippian phase and typical of the South Missouri area (Valese, 2017; Mattioli, 2017).

F 1112 Excavating this circular refuse pit we identified:
One shell tempered red slipped incised seed jar sherd dated to the Lohman / Stirling phase (Valese, 2017; Mattioli, 2017).

F 1168 In this irregular Emergent Mississippian feature we found:
One grog tempered Emergent Mississippian stumpware fragment (Valese, 2017; Mattioli, 2017).

F 1177 Discovering this burial pit we detected:
One red slipped shell tempered bottle base fragment dated to the Moorehead.

F 1189 In this Emergent Mississippian house we excavated:
One grog tempered Emergent Mississippian stumpware fragment (Valese, 2017; Mattioli, 2017).

F 1193 Investigating this rectangular wall-trenched reconstructed building we found:
Three shell tempered diagnostic sherds, of which: one decorated black slipped plate sherd dated to the Moorehead phase, one incised body sherd and one red slipped Effigy handle in shape of a hand pertaining to an Effigy beaker and dated to the Moorehead phase (Valese, 2017; Mattioli, 2017).

F 1208 In this Emergent Mississippian fill we identified:
One grog tempered Emergent Mississippian stumpware fragment (Valese, 2017; Mattioli, 2017).

F 1212 Digging this clay layer we brought to light:
One grog tempered Emergent Mississippian stumpware fragment (Valese, 2017; Mattioli, 2017).

3.4 Ceramic Assemblages Results and Conclusions

After a detailed presentation of the ceramic assemblages detected during the entire Italian excavation took place in the Merrell Tract-Unibo, in the following paragraph the author, supported by archaeological data, will offer general interpretation and reflection about what occurred during specific timeframe in the above mentioned area of interest.

Combining field work conclusions with laboratory analysis, in specific with the information provided by the ceramic detected in place, we were able to elaborate new hypothesis concerning settlement dynamics and use of space of the interested area.

The ceramic assemblage for the Emergent Mississippian phase, recovered in the Merrell Tract-Unibo, is representative of domestic context. The analysis of the paste showed a majority of grog-tempered items followed by limestone and grit; while concerning the vessel forms, the Emergent Mississippian assemblage includes the usual range of jars, bowls and stumpwares (see Figure 3.10 a-d).

Figure 3.10 *Emergent Mississippian vessels a-b) and stumpwares c-d) reconstructed from fragments retrieved in F1017E.*

Among the rim sherds recovered a complete rim of a Monks Mound Red limestone-tempered jar (see Figure 3.10 a) has been reconstructed using the fragments found inside an Emergent Mississippian pit (F1017E); this vessel type is typical of the Late Emergent Mississippian Edelhardt phase, usually underrepresented in the West Plaza Area (Pauketat, 2013: 224). Evidence of shell tempered pottery associated with Emergent Mississippian features has not been attested for the material recovered in the Merrell Tract-Unibo; this could be determined by the superimposition of features and the following mixing of materials. According to Pauketat (2013: 224), the presence of shell-tempered pottery in Emergent Mississippian assemblage could be related to a differentiation possibly based on status, identity (i.e. foreign potters) or function; contrarily Kelly (1991) suggests that the shell-tempered vessels retrieved in Emergent Mississippian contexts can be considered as foreign items. A few rim sherds have been recognized, among the Merrell Tract-Unibo Emergent Mississippian assemblage, as actually exotic: several sherds of Kersey Incised variety, typical of the southern Missouri area were retrieved from the excavation along with a specimen of Maple Smiles variety, characterized by the typical cord impressed decoration of the northern Illinois area. Finally, a few sherds of Coles Creek Incised, a vessel variety usually found in the southern Yazoo Basin sub area (Phillips, Ford and Griffin, 1951), have been located in both plowzone and features.

The Early Mississippian phase is barely represented by the ceramic materials recovered from excavation. A few rim sherds have been assigned to the Lohmann and Stirling phases: one fine grog-tempered beaker, one grog-tempered funnel, three shell-tempered and one limestone-tempered jar, one grog-tempered seed jar, seven Ramey Incised jars and one St. Clair Plain jar. The scarcity of material during the Early Mississippian phase is consistent with the destination of the area to public activities, between the end of the Emergent Mississippian and the span of the Lohmann phase the area was designed to be the West Plaza (Valese, 2017). It is conceivable to think that the area was constantly cleaned and that the debris was deposited elsewhere. The non-domestic activities carried in the plaza area are suggested by the presence of Ramey Incised Jars. This vessel type, used in public rituals (Emerson, 1989; Pauketat and Emerson, 1991), is characterized by an orifice diameter larger than normal, a peculiar decoration placed on the shoulder and a highly specialized production. The Ramey Incised pottery has been used as a marker of Cahokia's influence all over the Midwest and at the base of the hypothesis of possible Cahokian migrations and interactions (Kelly, 1991; Pauketat and Emerson, 1991).

A high number of Ramey Incised jars is attested for the Late Stirling/ Early Moorehead phase (see Figure 3.11 a-f). Midden areas (F1015, 1019, 1020 and the slightly later F1049) located in the Merrell Tract-Unibo yielded a considerable amount of Ramey Incised jars' rim sherds; suggesting the persistence of the performance of ritual activities in the West Plaza Area.

Figure 3.11 *a-f) Ramey Incised Jar rims found in Merrell Tract-Unibo area.*

Starting from the Moorehead phase, a change in the ceramic assemblages is attested along with an increasing number of serving wares (Valese, 2017). The earliest open forms dated to the Early Moorehead phase were the Wells plates, divided between Wells Broad Trailed and Wells Fine Incised (Holley, 1989; Milner 1984; Pauketat, 1998). The decoration of these types of open vessels was Ramey-like and consisted in series of single, short, carved dash elements set diagonally around the rim suggesting, when looked from above, a sunburst pattern (Pauketat, 2013: 229). Another decorated Late Mississippian vessel type, represented in the ceramic assemblage of the Merrell Tract-Unibo is the Cahokia Red Engraved beaker. This kind of beakers consists in a variant of the more common undecorated beakers highly represented in all phases of Cahokia's ceramics, it is characterized by the quartered circle motif surrounded by radiating lines possibly representing symbols related to the world, sun and stars (Pauketat, 2013: 231). The Cahokia Red Engraved beakers were possibly related to the consumption of the Black Drink during purification rituals as suggested by the analysis led on some vessels found at Cahokia, which shown evidence of the presence of biomarkers for species of Ilex, such as the obromine, caffeine, and ursolic acid, involved in the preparation of the purifying beverage (Crown et al., 2012). As for the Ramey Incised jars, Well Trailed plates and Cahokia Red Engraved beakers showed some degree of standardization in their production (uniformity and limited range of decorative motives), even though a simplification from the first type to the last is evident (Pauketat, 2013: 232). It is still evident that the production of these wares' type is still linked to the ritual sphere, although, at the same time is clear that vessel production become increasingly decentralized through time, as for the increment of the quotidian and undecorated Cahokia Cordmarked and St. Clair Plain jar forms (Baltus, 2014: 271). Another highly represented form in the Late Mississippian ceramic assemblage in the Merrell Tract-Unibo is the Mound Place incised bowl defined by a finish paste and surface typical of the Lower Mississippi Valley. It showed a simple decorative treatment consisting in two or more parallel lines placed horizontally on the exterior rim, quite typical for effigy vessels' rims. The technique of decoration varies from a broad incision to a fine engraving (Phillips, Ford and Griffin, 1951).

The changes that affected the ceramic assemblage attested during the Late Mississippian phase have been associated as being part of the large-scale social changes that interested this period. The ceramics present were all fragments of vessels that had been broken and discarded. The lack of whole vessels in direct association with the burials can be viewed as evidence of the lack of importance attributed to such items by the elite at this time (Kelly, 1991).

The increasing simplification and reduction of the decorative motives along with the increasing usage of serving (i.e. plates and platters) and common wares (i.e. Cahokia Cordmarked) was probably the result of slow dismantling of specialized manufacture of pottery and to the return to local more domestic pottery-making. These trends have been interpreted by Baltus (2014: 271) as an intentional rejection to the previous political and religious ways materialized through the creation of new kind of pottery production as well as for food and drink consumption.

To conclude, in accord with Valese (2017), the Merrell Tract-Unibo ceramic assemblages reflect the settlement dynamics that occurred in the West Plaza area which involved the performance of domestic activities during the Emergent Mississippian and the Late Mississippian (Moorehead and Sand Prairie) phases and public ritual ceremonies during the Lohmann and Stirling phase; the Late Stirling/Early Moorehead can be considered as some sort of transitional period, in which a ritual activities were still performed even though in a more "domestic" context.

Figure 3.12 *Photo of Ramey Incised rim sherd found in the midden area (Mattioli, 2017).*

Chapter 4

Iconography

Before deepening the Mississippian and the Ramey Incised iconography topic, the author would like to provide to the reader a brief introduction about the general concept of iconography.
In 1939 Panofsky defined "iconography" as the study of subject matter in the visual arts, and he distinguished it from the concept of "iconology", which is defined as an attempt to analyze the significance of that subject matter within the culture that produced it.
Iconography is that branch of the history of art which concerns itself with the meaning of works of art, as supposed to their form. If in one case the form represented is understandable at first look, in the other one to understand the significance, the observer must be familiar with the world of customs and cultural traditions peculiar to a certain civilization. The human being connects artistic motifs and combinations of artistic motifs (compositions) with themes or concepts. Motifs thus recognized as carriers of a secondary or conventional meaning may be called images (Panofsky, 1939).

The identification of such images is the domain of Iconography. When we speak about subject matter as opposed to the form, we mean the sphere of secondary or conventional subject matter, the specific theme or concepts manifested in images, as opposed to the sphere of primary or natural subject matter manifested in artistic motifs. The discovery and interpretation of these "symbolical" values is the object of what we may call iconography in a deeper sense: of a method of interpretation which arises as a synthesis rather than as an analysis. As the correct identification of the motifs is the prerequisite of a correct iconographical analysis in the narrow sense, the correct analysis of image is the prerequisite of a correct iconographical interpretation in a deeper sense.
Iconographical analysis, dealing with images, stories and allegories instead of with motifs, presupposes, of course, much more than that familiarity with objects and events which we acquire by practical experience. It presupposes a familiarity with specific themes or concepts as transmitted through literary sources, whether acquired by purposeful reading or by oral tradition, but it does not guarantee its correctness (Panofsky, 1939).
The concept of iconography can be defined as a shared form of thought, which purpose is to broadcast a specific propaganda through the repetition of a model. The aim is to decode the dialogue established between the image and the observer of that time.
The separation made between Iconography and Epigraphy should be considered as one within the pre- Columbian culture, it was in fact in the modern studies that experts divided the two concepts in different investigation areas.

Through several studies experts attested the connection between the content, the support and the iconography displayed on it, as to say, an individual or a group of individuals, by sharing a specific item and the relative iconography, is able to recognize himself as a community member, within a certain social context. For this reason is undeniable that each society should express and elaborate a proper representation of community beliefs as to make it true expression of its social identity.

The image creeps into the human being as into the group thoughts and model ideas and vice versa, the actor and the society are the ones who create images and link it to specific meanings. The relationship between the actor and the image is bidirectional: the human being acts on the image as well as this one affects the actor ideas.
The image is defined as a concept located halfway between the physical and spiritual state. The aim of the image is to emotionally touch the observer through the message physically and figuratively represented. In every history period, the image used different available kinds of support to spread a certain and predetermined message. The human being aim is to unify a message through the creation and diffusion of an image but at the same time the actor is the first one to be affected by this process. The elaboration of

a unified concept is a powerful statement for a community, through the circulation of the support it can be spread through religious, political and geographic borders and it can be contextualized and adapted to a specific region in order to reflect the community identity (Panofsky, 1939).

The image is fluid, constantly changing and adaptable. It depends on the actor who manipulates it and on the context that interprets it, on the community background, on the social space in which it moves. An image effects emotionality if the representation fits into a local imagery, when it refers to geographically local contexts and meanings (Panofsky, 1939).

The representation, the drawing and the sign can be viewed as code. These are form of written representation and transmission of a specific concept with its own rules and meaning. The image, on the contrary, is not a written form. It can be seen as a language, as a form of communication in fact it is not transversal and it is necessary to learn the language of the code to be able to penetrate the full meaning. For this reason the meaning of the image does not have an immediate impact on the observer who does not have the required instruments to understand the image significance. The image can be approached individually and, at the same time, it can be seen as a collective experience for the community. The support as well can be experienced both individually and collectively: during the act of the creation of the support with the consequent impression of the image, as during the act of the reception of the item with the image and its related meaning (Panofsky, 1939).
The act of the creation, the elaboration of the image and of the related message to carry on triggers an act of creativity that places the actor above all those who receive it. Being the creator and the actor of the diffusion of a message places specific people in a privileged condition, as the owner of a certain faculty and worthy of being closer to the higher divine spheres (Panofsky, 1939).
From a society point of view, the main purpose of a common propaganda message is to spread as far as possible and to impose itself on other propagandas by taking in consideration what human beings and community needs are: to be part of a society and to share its message and values. The human being necessity is to recognize him-self in a social group and to recognize those who are not part of it, so when a community is reached by a foreign message, the general community behavior is to try to re elaborate it, to adapt it to his territory and community beliefs.

4.1 The Ramey Incised Pottery

As previously anticipated, the Mississippian culture is defined on the basis of a set of cultural traits: the construction of earthworks, cultivation of maize, wall trenched structures, shell tempered pottery, lithic technology and the development and diffusion of a system of religious beliefs known as South-Eastern Ceremonial Complex (Brown and Kelly, 2000). The SECC, which later will be discussed in details, is defined as a set of Mississippian iconographic motifs and the corresponding cosmological narratives they reference (Galloway, 1989; Lankford et al., 2011; Phillips and Brown, 1984; Townsend 2004; Waring and Holder, 1945).

Figure 4.1 *Reconstructed Ramey Incised jar (image courtesy of Cahokia Mounds State Historic Site).*

Within all the ceramic amount of six years lasted excavation project, now the author will focus the attention on the Ramey Incised pottery variety.

As previously mentioned ceramic are important social indicators, so in this chapter the author will introduce the general criteria of this pottery variety with the intent to acknowledge the reader about this vessel characteristics and later to provide iconographic and socio political implications.

Griffin (1949) originally defined this vessel type but through the years many experts focus their studies on the Ramey Incised typology, discovering its archaeological relevance in the understanding of the society which shared this symbolic item.

These jars were dark slipped and shell tempered with sharp angled shoulders, they were characterized by an orifice diameter larger than normal, generally rounded lips and incised motifs of political and religious significance (Emerson, 1989; Emerson, 1997a; Griffin, 1949; Griffith, 1981; Pauketat, 1997; Pauketat and Emerson, 1991).

Ramey Incised represents the decorative counterpart to Powell Plain ceramic typology and is the primary decoration for the Early Mississippian period and iconographic representative of the entire Mississippian period (Holley, 1989).

They began to be produced and distributed during the early twelfth-century AD at Cahokia, the era during which Woodland groups to the north were adopting aspects of Mississippian culture.

Ramey Incised gained his most popularity during the Stirling phase (AD 1100 – 1200), from their first creation at the end of the Lohman phase (AD 1050 – 1100) till their gradual decline during Moorehead phase (AD 1200 – 1275). According to Pauketat (2013: 224), the presence of shell-tempered pottery in Emergent Mississippian (AD 750 – 1050) assemblage could be related to a differentiation possibly based on status, identity (i.e. foreign potters) or function, contrarily Kelly (1991) suggests that the shell-tempered vessels retrieved in Emergent Mississippian contexts can be considered as foreign items.

These jars were realized through a complicated "chaine operatoire": the lower part of the vessel was made by pressing the clay into a mold, probably derived from a broken jar, while the upper part, to which the typical "rolled" or "everted" lip was added, was realized separately. Once slightly dry, the two hemispheres were joined together and the decorative motives, placed on the shoulder, were added by carving part of the clay out. Then, before firing the pot, the surface was slipped and burnished with a pebble (Holley, 1989; Pauketat, 1998, 2005).

The thin Ramey vessel wall and lack of soot and surface pitting suggest the vessel was not used as a cooking vessel, but instead as a storage container due to the large size and impracticality (French, 2009).

Cahokians tended to produce large volume vessels, but Pauketat's 1991 article brings up evidence that cahokians Ramey Incised vessels decreased in size as distance from Cahokia increased. The reasoning behind this being that a large amount of the Ramey Incised vessel originated in Cahokia were traded outwards into neighboring communities and the smaller and more portable vessel were able to travel further, testifying the important role that Ramey ceramics played in the American Bottom (French, 2009).

The Ramey Incised pottery has been used as a marker of Cahokia's influence all over the Midwest and at the base of the hypothesis of possible Cahokian migrations and interactions (Kelly, 1991; Pauketat and Emerson, 1991).

4.2 The Ramey Incised Iconography

Thanks to archaeological investigations it was possible to recover a large amount of diagnostic Ramey Incised ceramics form several Mississippian sites and to approach a compared iconographic study in order to deepen artistic and socio- political meanings. Ramey Incised pots were embellished with cosmological imagery related to Native American notions about the organization of the cosmos (Friberg, 2017).

Figure 4.2 *Ramey Incised Iconographic Cosmograms representation (image courtesy of Cahokia Mounds State Historic Site).*

This symbolism is present on a wide variety of Mississippian artifacts found both at Cahokia and in the hinterland, which may have played a role in interactions between these groups.
The Mississippian cosmological model, built on archaeological data and oral traditions from multiple sites and Native American groups with related belief systems (Edwards, 2010:16), includes upper (sky) and lower (earth/water) worlds represented in multiple levels around a central axis, or axis mundi (Emerson, 1989:58– 59; Lankford, 2004:208, Lankford, 2007; Pauketat, 2004:111; Pauketat and Emerson, 1991:929).
As we already mentioned, in the American Bottom, the "centered quadripartite world view" even is embodied in community organization, as seen in villages oriented to cardinal directions, with mounds and houses (many of which are four-sided) surrounding a plaza with a central pole, or axis (Emerson, 1997a:222; Emerson and Pauketat, 2008:173–175).
The four corners of the cosmos, or cardinal directions, were guarded by Upper World thunder deities, iconographically represented as birdmen using falcon imagery (Brown, 2003:94–95; Brown, 2007; Brown and Kelly, 2000; Emerson, 1989:78–80; Knight et al., 2001:134–136; Lankford, 2004:209–210). Opposing these Upper World forces is the serpent monster of the Under World, depicted in more consistently zoomorphic forms than the thunders (Lankford, 2004:214; Lankford, 2007).

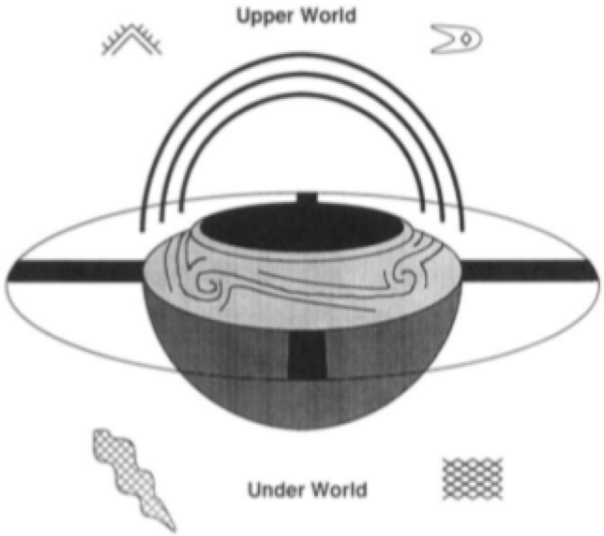


Figure 4.3 *Mississippian cosmograms: illustration of the Ramey Incised pot as a Mississippian cosmogram, showing quadripartitioned design layout and use of cosmological imagery (Pauketat and Emerson, 1991)*

Ramey Incised jars were cosmograms through which Cahokians attempted to frame relationships among different social groups and the broader cosmos.
The typical decorative motif proper of the Ramey Incised jars is the scroll motif that possibly represented the section of a conch shell, the movement of the wind or a human dance (Pauketat and Alt, 2015: 30), even though falconoid eyes, tail and chevrons are also represented (Pauketat and Alt, 2015: 30). The scroll motif featuring suspended vertical lines may be considered "feathered" and thus associated with a wing/bird Upper World theme, relating to the mythological birdman character; the forked-eye motif fits with this narrative as well.
Hall suggested that Ramey motifs generally relate to water, rainbows, and bird symbolism (Hall, 1991). Griffith further suggests that Ramey Incised motifs reference the sun and moon in addition to possible anthropomorphic representation (Griffith, 1981).
Later, Emerson separated group motifs by theme (Emerson, 1989, 1997b). Emerson's typology is based on the principle of visual symmetry, whereby nine basic categories of

Figure 4.4 *Ramey Incised iconographic motifs used in Emerson's typology, after Richards (1992).*

Ramey design elements are recognized (see Figure 4.4): chevron (I), arc (II), trapezoid (III), scroll 1 (IV), scroll 2 (V), wing (VI), spiral (VII), forked eye (VIII), and circle (IX) (Emerson, 1997b:209). Emerson also identifies the use of certain basic elements in combination as separate motif categories; for example, category X combines the trapezoid with either the spiral or circle elements, category XI combines the wing and spiral elements, and category XII combines the scroll and chevron elements. These popular combinations, however, are considered one complex motif on a vessel and were rarely used by Ramey potters in conjunction with other motifs or combinations. Within categories I–XII, there are elaborations of the design elements. While it is possible that each elaboration of one type of motif held different meanings for Mississippian peoples, they are considered here as variations of one overarching theme.
Two additional motifs were added to the typology used in this study: undifferentiated straight, trailed lines (XIII) and undulating, wavy lines (XIV), both with nested elaborations.

As mentioned in the previous chapter, these incised pots were widely distributed outside the American Bottom and are commonly found in both ceremonial and domestic contexts, highlighting their value in all Mississippian communities (Emerson and Pauketat, 2008; Griffith, 1981; Pauketat and Emerson, 1991).
Based on the similarity among the specimen recovered in different localities, Pauketat (2013; Pauketat and Emerson, 1991) suggested that this vessel type was manufactured by specialized artisans possibly affiliated to clans devoted to the preservation of sacred bundles, suggesting the persistence of the performance of ritual activities.
Ramey Incised ceramics decoration is a high status marker. Pauketat and Emerson argue that, although Ramey Incised jars may have been manufactured under the control of high status individuals, the vessels served as a communication medium between elites and commoners, an "iconographic indicator of an elite ideology espousing the supernatural qualities of Mississippian high office" during communal, agricultural rites of intensification (Pauketat, 1994). They suggest that the use of Ramey Incised jars for the distribution and redistribution of foods or medicines following centralized ritual events resulted in the dispersal of these pots throughout the American Bottom where they are found in nearly all contexts, mound center to isolated farmsteads and even in rock shelters above the floodplain (e.g., Arntzen 1998; Emerson and Jackson, 1984; Hanenberger 1990; Milner 1984; Pauketat, 1994; Galloway, 1998). Puketat and Emerson (1991) posit that "the subsequent use of the pot in the domestic activities of non-élite or rural household may have served to remind these commoners of the relationship between earth and sky, Under and Upper world, female and male, commoner and elite".
Ramey Incised pots were in charge to convey Cahokians religious and political meanings, so the presence of Cahokia-style cosmograms outside of the American Bottom surely suggest an interregional desire to participate in the Cahokian cultural phenomenon (Mattioli, 2020). If Cahokian political and religious influence "conquered" northern hinterlands communities thanks to the diffusion of Ramey Incised pottery and the iconographic message displayed on it, a similar bigger event interested the Southeastern Mississippian communities of the United States.
In the next paragraph, we will better understand the South-Eastern Ceremonial Complex phenomenon (Brown and Kelly, 2000), a socio-political interregional Mississippian system based on shared religious beliefs and practices, possible thanks to the spread of meaningful items and the symbolism displayed on it (Galloway, 1989; Lankford et al., 2011; Phillips and Brown, 1984; Townsend 2004; Waring and Holder, 1945).

4.3 The Southeastern Ceremonial Complex

The Southeastern Ceremonial Complex is a concept that refers to artistic styles, motifs, and symbolic themes and it is an important part of Mississippian studies. To fully exploit the SECC's potential for creating a more detailed understanding of Mississippian societies, we must not only have a clear idea of who made those materials, where they were made, and how they were used, we must also understand when they were made. Placed in its proper chronological context, the SECC has the potential to help us explore exchange, ranking systems, style, workshops and craft production, the meaning and function of art, religion, and the intersection of all of these with social structure, politics, and power in all Mississippian societies (King, 2007).

As we mentioned in Chapter 1, we were used to refer to the Moorehead phase as a period of decline for Cahokia. Recently experts are more inclined to think the Moorehed phase as a time for socio political change.

J. Kelly, Brown, and Trubitt (2001) present a situation for the Moorehead phase at Cahokia in which the structure and organization of the Cahokia site underwent many significant changes, some of them related to increased warfare. Kelly et al. (2001) propose that during the Moorehead phase at Cahokia "there is a reconstitution and florescence of this community on a different order and magnitude," referred to by Brown (2001) as the "Moorehead Moment." Perhaps the clearest indication for their assertion concerning the importance of the Moorehead phase is their reference to this time period as "Cahokia's Second Climax" (Kelly et al. 2001).

At that time, simultaneously to the collapsing of the Cahokia chiefdom, the area may also be the place of origin for the iconography of the Southeastern Ceremonial Complex, which subsequently spread throughout the southeastern United States (Brown and Kelly, 2000; Kelly et al., 2001).

This "international art style" (SECC), became an elaborate, pan-regional iconography, appearing on a variety of media including shell, copper, and pottery (e.g., Galloway, 1989; Knight et al., 2001). Artifacts bearing this imagery have been recovered from Mississippian sites throughout the Southeast, from Oklahoma to Georgia and Illinois to Florida.

While Cahokia was the largest and most complex prehistoric polity in the Eastern Woodlands (e.g., Emerson, 2002), it was also part of the larger, southeastern, Mississippian cultural and sociopolitical phenomenon. Although evidences does not support a scenario of Cahokia as dominating or even directly influencing the development or operation of other Mississippian centers, Anderson (1997: 262) argues that: "events in the American Bottom between ca. A.D. 900 and 1250 profoundly shaped the character and evolution of Mississippian societies throughout the Southeast."

The Southeastern Ceremonial Complex (SECC), succinctly defined by Brown and Kelly (2000:470) as an "archaeological complex of artifacts and motifs," was first codified by Waring and Holder (1945). Using archaeological material primarily from the Mississippian centers of Moundville, Etowah and Spiro, Waring and Holder (1945) formulated a trait list for the SECC, divided into four categories: motifs, god-animal representations, ceremonial objects, and costume; which subsume 51 traits, lately revised in 38 traits.

The SECC does not include "all Mississippian representational art, nor even all Mississippian art of ritual use or religious reference" (Knight et al. 2001: 132).

Since the publication in 1945 of "A Prehistoric Ceremonial Complex in the Southeastern United States" by Antonio Waring and Preston Holder, understanding of the objects, themes, and artistic styles associated with the Southeastern Ceremonial Complex (SECC) has changed a great deal, and it is equally clear that this complex is much more complex than once thought, the SECC was not a single, monolithic ceremonial complex, artistic tradition, or belief system (King, 2007).

In their influential article, Waring and Holder (1945) proposed several key points that were to define the understanding of the SECC for many years to come, and to some extent that influence is still felt today.

Using a trait list approach they argued that there was a high degree of similarity in the motifs and artifact forms used over a wide area, suggesting to them the existence of some kind of cult or cult complex. That complex was formulated in a single or a small number of communities in the Mississippi Valley late in prehistory. Elements of the complex were introduced from Middle America and they spread rapidly from center to center, where they were altered somewhat to fit local ceremonial practices and economies.

This study fostered the notion that the SECC was intimately connected to the development of historically precedent Mississippian cultures.

Krieger (1945) suggested the SECC reflected the "beliefs in ritualism, in supernatural creatures and their magic powers, division of the universe into quarters or 'winds' and perhaps also matters of social status, rank, heraldry, and other aspects of the mental life of the times (King, 2007).

The importance of Cahokia during this formative period is reinforced by the antiquity of birdman iconography in the Late Woodland Midwest and by the clear connection of the Akron Grid motif with the Red Horn theme, a Siouan Family myth cycle of midwestern associations that accounts for the Long Nosed God maskettes as well.

The very nature of the SECC is at stake, whether it is a "cult" that comes into existence late in the Mississippian Period or whether it is a material manifestation of ancient cultic practices in new social and political contexts (Brown and Kelly, 2000).

Before the SECC was named, Philip Phillips (1940) called it the "Eagle Warrior Complex." He had reference to representations of the falcon or hawk, human-hawk combinations, and various avian elements standing for the hawk, often in aggressive poses and brandishing weapons and severed heads. Currently, this material goes under the name of the birdman theme, without any implication that the eagle is specifically a member (Phillips and Brown, 1978). All birds represented are hawks, and where detail is sufficiently diagnostic the bird that is depicted is invariably the falcon.

This does not mean that birdman always refers to this species, or that it necessarily refers to any one single species at all. We have to recognize the syncretic, multi-vocal aspect to this very important cultural theme. Birdman is just "hawkish" undoubtedly in more than one sense (Brown, 1975, 1976).

Iconographically, the birdman is only one of several themes now recognized as part of the large body of rich figurative artwork known to have been created in the prehistoric Southeast (Phillips and Brown 1978, 1984). The original exemplars of this theme are the famous copper repousse plates (see Figure 4.5 a-b), discovered in a stone box grave within Mound C found at Etowah, named after John P. Rogan, under whose supervision the pieces were originally uncovered (Phillips and Brown, 1978:187-8; Thomas, 1894).

The two Rogan plates were interred as a pair and are very similar to one another. Plate a) is approximately 51 cm and plate b) is 41 cm. The head of the birdman faces the raised hand. The shoulders are in frontal (or dorsal) view, while the torso is seen in profile and shows definite breasts (or pectorals) and a prominent abdomen. The raised hands hold a mace form like the chipped stone maces found in several Mississippian sites (e.g., the Duck River cache). The opposite hand is held low and, in the two Rogan plates, holds a head. All the figures have prominent mouths and lips surrounded by a forked motif and a beaded forelock. In addition to posture and physical characteristics, the figures also have many common elements of costume. They all wear a necklace of massive beads with a large pendant (usually interpreted as a Busycon shell). They have a large disc shaped ornament on the ear and they each wear a broad belt (that I assume was beaded) around the waist and similar bands around each leg just below the knee and around the wrists. Descending from the belt are what appear to be a fringed sash and an element that has been described as a bellows-shaped apron. The beings are wearing cloaks in the shape of wings (or, alternatively, they have wings). The figures are depicted with complex headdresses that include a bilobed arrow element (King, 2007). It has long been assumed that these headdress plates were badges of high status and political office. The birdman does not just represent a great warrior but instead represents a supernatural hero who fought to help humans and represents the triumph of life over death. The "core" Cult elements are drawn from the Rogan Plates: displaying the mace, hi-lobed arrow, bellows-shaped apron and other distinctive elements (Phillips and Brown, 1978: 188; Thomas, 1894).

a)

b)

Figure 4.5 a-b) *The two Repoussé copper plate from Etowah depicting the bird-man theme, excavated by John P. Rogan.*

The classic expression of the Southeastern Ceremonial Complex (SECC) at Etowah, Moundville, and Spiro forms a distinct period in the early fourteenth century in which paraphernalia reached a peak in elaboration with heavy use of copper. The copper repousse plates represented the essential features of the SECC, Waring underline that birdman iconographic elements (forked eye surround) may have existed as early as the beginnings of the Mississippian Period.

Griffin suggests the SECC is at a minimum intrinsically connected with the material representation of ritual throughout the duration of the Mississippian Period (Griffin, 1985). Key to Griffin's position is his dependence upon the operation of trade and exchange to explain the appearance of similar artifacts in far-flung archaeological contexts. Brown (1976) argued that SECC made sense only as a manifestation of a political economy based on a system of social relations characteristic of the Mississippian Period (Brown and Kelly, 2000).

Brown suggested that most of the motifs and artifacts included in the SECC could be related to three organizational networks of social power operating in Mississippian hierarchical society. The first of these he referred to as "cult paraphernalia," which encompassed symbols, badges, and other art motifs including sociotechnic artifacts like ceremonial maces, celts, and chert blades. The second organizational network of power focused on the "Conceptual Core" of the SECC, which focused on the association of the falcon with warfare and possibly the specific role of the war captain at Spiro. Symbolically, it included representations of the falcon, the falcon impersonator of the famous Rogan plates from Etowah, and the associated trappings of these individuals. The third network of power centered on the mortuary temple and included the stone figurines and skeletal art motifs, human masks, and head pots.

The general idea was that the SECC essentially was a regional interaction network intimately associated with elites and ranking, made up of a series of different styles, each with its own geography and history (King, 2007).

Some artifacts linked with the SECC where found at Cahokia: masses of shell beads are conspicuous in mortuary contexts, a chunkey stone fragment, coppers heathed artifacts and sandstone tablets. The Ramey Tablet (see Figure 4.6 b) was recovered from the field east of Monks Mound in the late nineteenth century from probable Moorehead-Sand Prairie Phase contexts. On one face a cruciform of striped poles frames two bird heads, and on the other a similar cruciform frames severed human heads with beaded forelocks. The Birdman tablet (see Figure 4.6 a) that came from an excavated context in the east lobes of Monks Mound that has been assigned to the Sand Prairie Phase, this rectangular sandstone tablet bears a birdman on one face in somewhat abbreviated form, only a beaked human head with a portion of one wing. The reverse sides of each of these tablets bear a diagonal crosshatch pattern that is an important snake-marking device in the SECC lexicon, geometrically simple though it might be (Phillips and Brown, 1978). Shell gorgets are quite rare at Cahokia (see Figure 4.6 g-h), on one of them the surface is decorated entirely by a pattern of fenestrations (Brown and Kelly, 2000).

Four engraved marine shell gorgets have been recovered from the bluffs overlooking the American Bottom (see Figure 4.6 c-f), these Spider gorgets (Brain and Phillips 1996: 107-110), apparently come from mortuary contexts. The spider was an important symbol to people of the Mississippian culture. The body of the spider forms a cross, with four groups of two legs each coming out of the body. The spider symbol was especially associated with women and it is thought that the spider symbolized weaving, fertility, the center of the earth, balance, and harmony. Archaeologists think that the cross on the reverse side is a symbol of fire, the sun, and the center of the earth, or possibly the four directions.

So far, the kind of ritual objects falling into the classic definition of the SECC from Cahokia and neighboring sites in the American Bottom can be ascribed mainly to Sand Prairie Phase contexts, which we have placed within the Copper-Dominated Horizon (see Table 4.1).

To reassume, SECC very important sources to Phillips (1940) and Waring and Holder (1945) are: engraved shell gorgets, the chunkey player, the copper plate, the long nosed god maskette, the square-cross gorget theme, the perforated earspool, and the falconid symbolism.

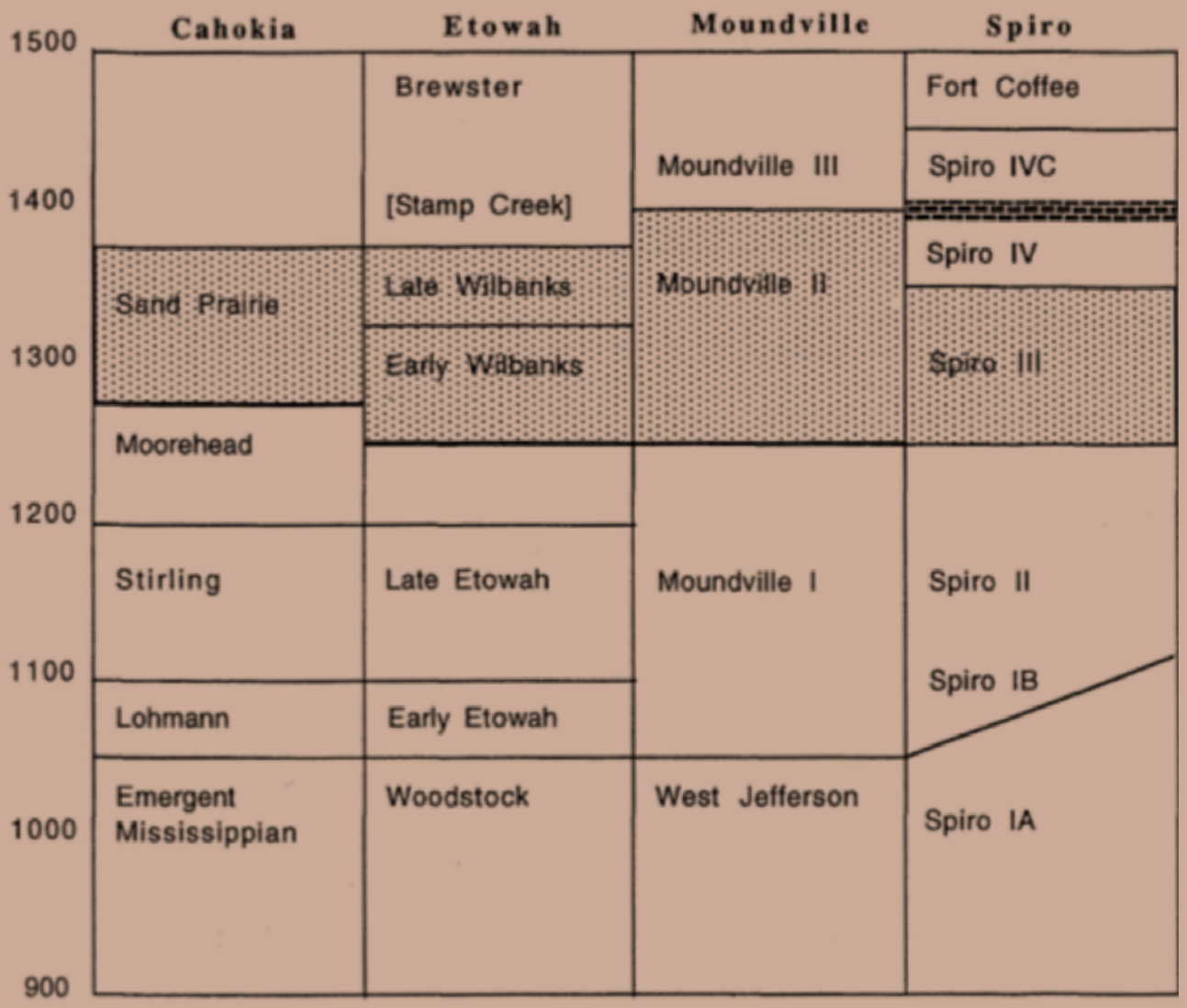


Table 4.1 *Chronological correspondences of SECC Sites. Stippled phases represent the period of the Copper-Dominated Horizon. Sources: Cahokia (Hall 1991; Etowah (Hally and Rudolph 1986; King 1991, 1994); Moundville (Steponaitis 1983; Welch 1990); Spiro (Brown 1996).*

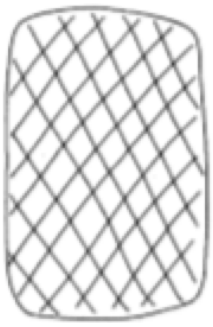
Figure 4.6 *Sandstone tablets and shell gorgets. a) Birdman Tablet; b) Ramey Tablet; c-f) Spider gorgets; g-h) Fenestrated gorgets.*

c)

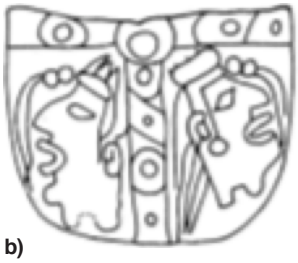
d)

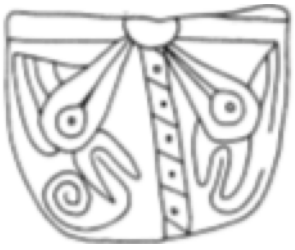
e)

f)



a)





b)

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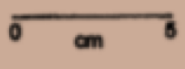


The religious system was made up of a set of cult institutions, each with its own constituency and associated key artifacts or objects known as sacra. By recasting core elements of the SECC in this way, Knight focused attention on how those elements were integrated into different Mississippian societies.

The stylistic similarities apparent across regions and through time likely had much more to do with generalized shared belief systems and long distance exchange than with any presumed overall unity in the SECC.

Emerson's (1989) interpretations on motifs found on Ramey Incised pottery suggest that iconography associated with Cahokia tends to have more to do with fertility and the Underworld than with warfare or the supernatural depicted at Etowah, Moundville, and Spiro. It also makes clear the point that themes emphasized in the SECC varied through space and time just as styles did (King, 2007).

While it is clear that there are temporal and regional variations, they are historically and functionally related and therefore warrant consideration as part of the same concept, the SECC. That thematic unity is focused on otherworldly representations, particularly those of the celestial realm. The depictions of people, animals, and their activities, such as warfare, found in the SECC are not depictions of real- world events or historical figures but instead the doings of supernatural in the Above World.

To clarify, not all Mississippian art is part of the SECC, nor are all elements of material culture associated with Mississippian ritual and religious practice. What we do know about these phenomena is that they were part of a widespread system of exchange of material items (King, 2007).

Figure 4.7 *Artifacts from Mound 34 and environs.*
a) engraved plate fragment (inner surface on left with crass-in-circle; outer on right with eyes);
b) Cahokia Red-filmed conch effigy engraved with amphishaena serpent.
c) engraved Powell Plain jar with rayed concentric oval;
d) negative painted sherds of a large shell-tempered platter with a Davis Rectangle-like motif.
Items a and b from Mound 34; c from adjacent areas; d--j from the Ramey Borrow Pit.
e) shell cup fragment with Akron grid motif;
f) repousse copper fragment;
g) engraved sherd with blocked line scroll;
h-i) engraved sherds with heads in profile;
j) engraved bottle sherd with Braden B head;

The Southeastern Ceremonial Complex (SECC) is just one central and particularly spectacular episode in a long series of cultural events associated with Mississippian and other late prehistoric groups from A.D. 800 on. Of course, the origins of many thematic components of this complex have roots in even more ancient forms.

Southeastern societies in particular and in general are and were multiethnic communities composed locally and regionally as a result of internal and external events. The diversity of many locally made ceramic wares, once thought to be trade sherds, suggest the same kind of process in the prehistoric societies.

There are clear precedents for the Cult in earlier Mississippian and even earlier times. The cross theme, for example, is essentially universal and its combination with the circle form is common everywhere, so a simple cross gorget or copper item may be only a very poor chronological or symbolic "marker" for archaeologists. There are elements in the SECC, however broadly defined, that may very probably be derived from earlier Middle Woodland forms.

Some of these common and universal symbols may have suggested to early cult authors iconographic Mexican connections (see, for example, Ford and Willey, 1941; Griffin, 1944; Phillips, 1940; Waring, 1945). Krieger (1945) was the first to proffer an argument against that perspective. We are aware that till present days, similarities of any Southeastern artistic materials to those of Mesoamerica always dissolved on closer examination of either end of the supposed connection (King, 2007).

However, encouraged by the results of the iconographic investigation obtained across the Mississippian area, the author was interested to reopen the debate regarding the cultural contact between the Mississippians and the Amerindians. In paragraph 4.4.2, we will deepen this topic by providing some iconographic similarities examples of the two interested areas.

Figure 4.8

a) Powell Plain perforated disc with engraved human heads (East Stockade);
b) Powell Plain bottle rim with engraved cross-in-circle (Edwards Mound);
c) reworked St. Clair Plain bottle with engraved motif (Edwards Mound);
d) Tippets beaker with cross-in-circle motif (Tract 15A);
e) Powell Plain beaker with block lined scroll motif.

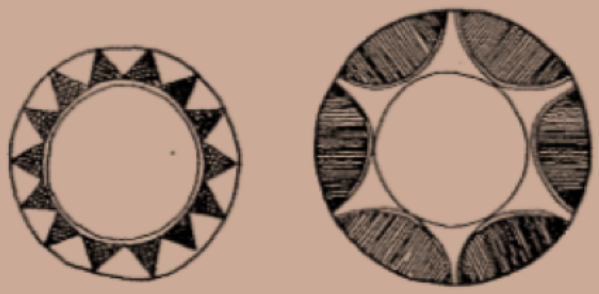
THEMES

Figure 4.9 Themes. *a) Birdman (Gerson/forked-eye on Ramey Incised and Wells Incised); b) Red Horn (Mound 34 shell fragment, Akron cup, Gottschall site figure); c) Sunburst (Ramey Incised and Wells Engraved); d) Crass-in-circle (Late Woodland discoidals, Monks Mound Red seed jar, and Ramey Incised jars.*

THEMES

c) **Sunburst**

Ramey Incised jars



Wells Incised plates

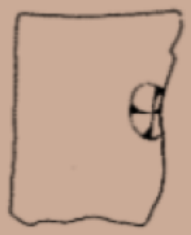
d) **Cross-in-circle**

Late Woodland discoidal

Monks Mound Red seed jar

Ramey Incised jar

Wells Broad Trailed plate with engraving



Powell Plain bottle with engraving

McAdams style shell gorget

As James B. Griffin (1952a:105) advised many years ago, the SECC is basically "the artistic expression of the socio- religious pattern of Mississippian culture."
He argued that the SECC was an expression of elite southeastern culture (Brown 1976a; Griffin 1952a, 1961; Knight 1986), signifying the emergence of elite control of supernatural forces in an increasingly hierarchical social environment. Thus the emergence of the SECC as a codified, canonical, iconographic system is related intimately to the rise of hierarchical societies.
The artifacts and iconographic images contributed to the identification of select individuals and societies. Each Mississippian complex was the creation of local people and each complex necessarily possessed its own divergent cultural history. But then again, these later Mississippians could draw from the integrated set of Cahokian things in constructing their Mississippian realities (King, 2007).
The history of key iconic themes reveals change and transformation in a tradition characterized by long-term ideological stability.
From a number of different perspectives the SECC has a multi-century and multi-cultural history, for example certain basic iconographic themes-such as the Birdman and the chunkey player, at least, has roots extending into the Emergent Mississippian Period (Brown and Kelly, 2000).
As we discussed, for several reasons, many elements of material culture and iconography are shared between different Mississippian communities and there are also clear similarities in the ways those items and iconography were used and interpreted. We believe that regardless of their culturally specific meanings (that we may never be able to decipher), they had similar discursive meanings (that we can discern).
A lot of iconographic evidences confirmed the cultural contact between Cahokia and northern hinterland regions. In the next paragraph we will deepening how Cahokia's culture spread across these northern territories, not really because of trade network or due to bigger polity imposition, but most likely because of a local active desire to be part of that culture by producing and adapting Cahokia's ideology to local circumstances (Mattioli, 2020).

4.4 Iconographic Interpretation

The purpose of the next paragraph is to understand if whether hinterland Mississippian peoples adopted a Cahokian understanding of the cosmos wholesale, or reinterpreted it based on local understandings and histories. We will start by examining interregional stylistic variation in the iconographic Ramey Incised jar by developing an Iconographic analysis comparing Cahokia's Ramey Incised sherds to those recovered from northern hinterland sites (Mattioli, 2020).

Before deepening the topic and in order to understand Cahokia's development and role, it is necessary to provide a brief introduction regarding Cahokia's interaction with other areas, in particular with the Lower Mississippi Valley.

Around AD 1050, American Bottom populations consolidated into a complex settlement hierarchy consisting of the paramount multi mound center of Cahokia and the nearby multi mound complexes East St. Louis and St. Louis mound groups.

During this period Cahokia's influence was spreading to the north where the local communities were still considered culturally Woodland.

After this contact, some northern hinterland settlements intensified their production of maize, and selectively adopted some of the material manifestations of Cahokian religion, such as ceremonial architecture (e.g., L-shaped and cruciform buildings), religious paraphernalia (e.g., flint clay figurines, long nosed god maskettes, shell cups, and ornaments), and mortuary practices (Emerson, 1991a; Hall, 1991; Kelly, 1991; Stoltman, ed. 1991).

In many respects Cahokia's rise to dominance is related to its role in a number of different webs of exchange that operated both locally and externally. The establishment of the intraregional exchange network was a result of at least two primary factors: first, the distribution of raw materials, such as chert and salt, and Cahokia's geographic location; second, the high population density increase at the initial part of the Emergent Mississippian occupations (Kelly, 1991).

By the latter half of the Emergent Mississippian occupation this network was expanded to include a large area centered about the confluence of the Ohio and Mississippi rivers. Subsequently it was extended farther south into the Lower Mississippi river valley and the Gulf of Mexico and ultimately encompassed a larger portion of the Mississippi river drainage north of Cahokia. During the Stirling phase Cahokia's influence is widespread especially to the north and northwest directions. Cahokia rose to dominance as the largest Mississippian site in Eastern North America by providing evidence for extra regional exchange to northwest Iowa, southwest Wisconsin, central Illinois and east central Illinois. This represents the first stage in Cahokia's development as a Gateway centre (Kelly, 1991).

Prior to this, evidence for Cahokia's influence outside the American Bottom was minimal, especially in the Lower Mississippi Valley (Kelly, 1991).

Through time there was a de-emphasis on the exchange of utilitarian products and increased emphasis on decorative items whose distribution was related to the elite and a prestige goods economy (Kelly, 1991).

As previously discussed, by Cahokia's peak, according to Pauketat (1994) and Emerson (1995), maintenance of authority by the elites depended on mobilization of tribute and public labor, control of prestige and exotic goods, and socio-ideological reinforcement through the iconography of the Ramey Incised pottery. These vessels were being directly imported to a central location such as Cahokia and then presumably "redistributed" through this intraregional exchange network. They may represent gifts presented to or obtained by local elites during ceremonies.

In many respects these ceremonies may have served as an integrative mechanism not only for social and religious reasons, but also as a means of reaffirming exchange relationships with trade partners outside the region (Kelly, 1991).

Such interactions may have been more directly under the control of the elite at Cahokia and a reflection of the ongoing interaction among the various elite up and down the Mississippi river valley.

Ramey vessels were in charge to carry the ideological message able to legitimize the rela-

tionship between the elite, non-elite, and the cosmos, was presented to Cahokians during calendrically- based, community-forced rites of intensification, and through distribution of the vessels, following such ceremonies (Pauketat, 1994; Emerson, 1995).
Emerson suggests that in studies of complex societies, elite manipulation of ideological power is evidenced in the presence of a unified symbolic pattern (Emerson 1997b:40).
While elites at Cahokia may have manipulated religious symbolism for political purposes, religion also was practiced by individuals who had the agency to resist or selectively reinterpret the ideological content. It means, the newly introduced religious practices and symbolism are interpreted and incorporated through the lens of existing traditions (Friberg, 2017).
Holley (1989) started to feel that many of these "exotic" vessels are in fact of local manufacture, thus they may represent an attempt by local potters to emulate similar types. Moore recently a lot of experts agreed that although, for the pre mentioned reasons, some Ramey Incised vessels may have been traded outside of Cahokia, the reality is that most of them were produced locally. In fact, these items show a significant interregional variation in the ways Cahokian-introduced religion was localized and practiced.
In the following pages we want to support the theory, as we also demonstrated by providing information regarding the SECC phenomenon, that inhabitants of peripheral settlements may have resisted the dominant influence or negotiated it on their own terms and in reference to their own histories and existing worldviews (Dietler, 2010:49; Lightfoot and Martinez, 1995; Pauketat and Alt, 2005; Silliman, 2005; Stein, 2002).

4.4.1 The Iconographic Transmission and Adaptation Theory

Friberg (2017) investigated variation in Ramey Incised iconographic motifs and design fields by using original researches from the Lower Illinois River valley (Delaney-Rivera, 2000), the Central Illinois River valley (Conrad, 1993; Meinkoth, 1993); the Apple River valley (Mollerud, 2005; Emerson et al., 2007; Finney, 1993; Millhouse, 2012); and the Aztalan site in southeastern Wisconsin (Richards, 1992; Mollerud, 2005) (see Figure 4.10).

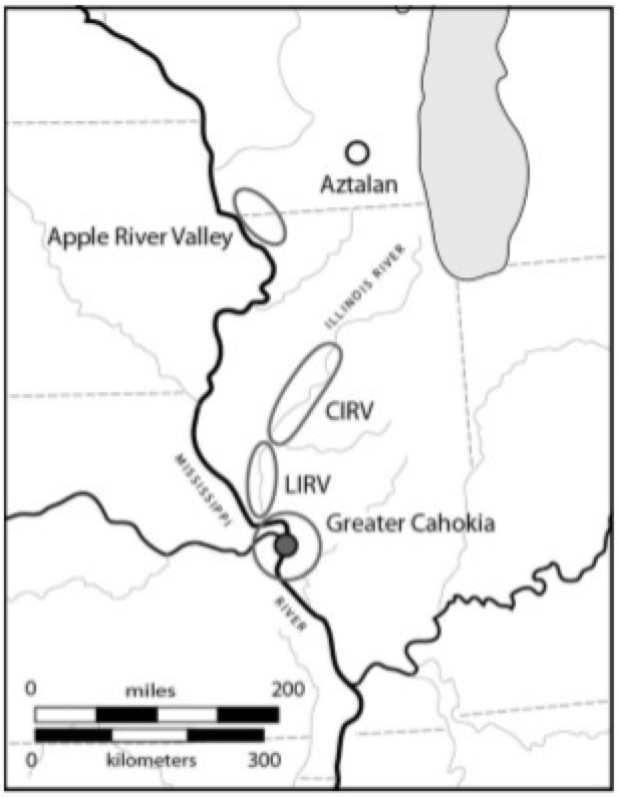


Figure 4.10 *Map of Cahokia and the northern hinterland regions (adapted from Friberg, 2017)*

The study of the patterns analyzed suggests regional differences in the perceived composition and structure of the cosmos and reveals the power of local worldviews in culture contact scenarios.

Later the Iconographic analyses were compared with Emerson's (1989, 1997b) Ramey Incised typology for the American Bottom with additional data from the Sponemann site (Jackson et al., 1992). This study highlighted ground-level patterns of material variation which can be used to explore the ways in which Mississippian populations throughout the Midwest incorporated understandings of Cahokian religion within local contexts.

The Iconographic results show the arc motif is the most popular motif in the American Bottom and all hinterland regions other than Aztalan, where the chevron is by far the most favored and the frequency of use of the other 12 motifs also varies among regions (Mattioli, 2020).

Aztalan potters seem to have drawn on chevron motifs significantly more than any other motif class. In fact, Aztalan's most common motif is the barred triangle, a version of the chevron class of motifs that is extremely rare in the American Bottom.

Mollerud (2005:154) suggests that Aztalan's most common motif was not a Cahokian import, but more likely represents a continuity of certain Woodland traditions at Aztalan. Its frequent appearance on local cord and fabric impressed Woodland pottery in hinterland regions suggests the chevron is a Woodland-derived motif that locals were already accustomed to using.

Looking at the North area, they noticed, the frequency of chevron motifs increases with distance from Cahokia, so we might say that distance is an important factor in understanding the spread of Cahokian religious ideas and practices in these hinterland communities.

Figure 4.11 shows several examples of Woodland motifs executed on Ramey Incised vessels in the northern hinterland, confirming that many of these pots differed stylistically from those found in the greater Cahokia area (Conrad, 1991; Delaney-Rivera. 2000; Emerson, 1991a; Mollerud, 2005). The jars are less often highly burnished or slipped than their Cahokian counterparts, and their pastes were sometimes of mixed temper rather than the standard crushed mussel shell. Northern Ramey pots also frequently feature handles and lip notching, and are sometimes even cordmarked below the shoulder (Delaney-Rivera, 2000:130, 139; Emerson, 1991b:173; Esarey, 2000).

These evidences confirmed that northern communities are considered as culturally Woodland prior contact with Cahokia.

Inhabitants of these hinterland settlements maintained many earlier local style traditions, so the patterns reveal that different communities generated distinct local flavors by mixing Woodland and Cahokian religious practices and material culture (Friberg, 2017).

The Iconographic analysis not only looks at the motif realization itself, we also have to take in consideration the spatial organization of the design. If we consider both iconographic elements, motifs and organizational schemes, it looks like that the local tradition may have influenced the way Ramey Incised jars were decorated in the CIRV and LIRV regions.

It seems the Mississippian pottery in Cahokia's northern hinterland exhibits patterns of Woodland-Mississippian hybridity (Bardolph, 2014:76; Delaney-Rivera, 2000:94, 205–208; Delaney-Rivera, 2004; Emerson, 1991b:177; Finney, 1993:135–136; Millhouse, 2012:140; Richards, 1992:297; Wilson, 2015; Wilson et al., 2017; Zych, 2013:27, 123). As to say, hinterland groups selectively adopted aspects of Mississippian life ways, but incorporated and made them meaningful with local contexts.

The experts noticed that while individual Cahokian iconographic motifs on Ramey Incised jars could have been easily adopted by northern groups, the spatial organization of the design fields on these jars is more likely to reflect a local production process.

Northern hinterland Ramey Incised pottery show some fundamental design layout deviations from the Cahokian prototype organizational layout. This is a particularly cogent point as the use of the quadripartition layout has been demonstrated to have religious significance for American Bottom potters and consumers (Friberg, 2017).

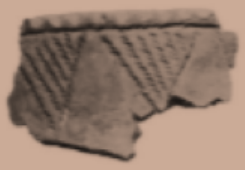
A high amount of Ramey Incised vessels from the CIRV and from the LIRV show in fact a tripartite layout consisting of six motifs, rather than the typical four or eight found at Cahokia. In addition, Aztalan and Apple River valley pots bear mostly "continuous" design layouts in which the entire rim is filled with incising (Mollerud, 2005:153).

MISSISIPPIAN

WOODLAND

a)

b)



c)

d)

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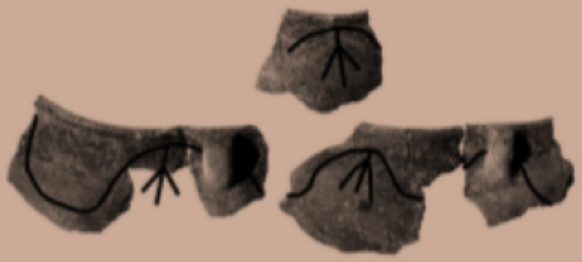


f)

g)

h)

Figure 4.11 *Mississippian Ramey Incised and Woodland pottery motifs.*
(a) Barred triangle motif from Aztalan (Richards,1992);
(b)Madison Cord Impressed from Iowa (Benn, 1995:Figure 2);
(c) barred triangle from John Chapman site in the Apple River valley (Mollerud, 2005);
(d)Maples Mills Cord Impressed from the Audrey site in the LIRV(image courtesy of Colleen Delaney);
(e) bisected angle and undulating line motif from CW Cooper site in the CIRV;
(f) Maples Mills Cord Impressed motifs (not to scale) (Sampson, 1988:Figure 11B, C [top], Figure 15 [bottom]);
(g) barred triangle in continuous design layout from Aztalan (Richards, 1992);
(h) Madison Cord Impressed from Iowa (Benn, 1995:Figure 3)

Further deviance in Ramey Incised design layout is seen at Aztalan, where Mississippian motifs like the spiral and circle are often inserted in the blank spaces within these continuous Woodland-style design fields (see Figure 4.12 a-c), rather than side-by-side separated by blank areas, which is the most common practice in the American Bottom (Friberg, 2017).

These patterns of variation in Ramey Incised pottery provide new insight into the nature of interaction between the influential Cahokia polity and the northern Mississippian hinterland and the entanglement of local and nonlocal ideas, values, and practices (Friberg, 2017).
We cannot be sure whether variation in Ramey Incised design layouts represents a conscious choice to perpetuate local cosmological interpretations or simply an incomplete understanding of the importance of quadripartition within the Cahokian cosmological context. Regardless, this variation indicates that these groups did not adopt Mississippian religion wholesale, but renegotiating their identities and social relationships in the process.

Just to stress the research topic, the author would like to invite the reader to focus the attention on Figure 4.12 (sequence a, second element and sequence b, third element). On these Ramey Incised pots from north of the American Bottom, in specific the b sequence which is from the LIRV, we can see represented the forked-eye motif, as shown on Figure 4.9, one of the most relevant iconographic elements of the SECC, coming from the Southeaster of the United States.
Thanks to a variety of evidences we were able to proof that, for several reasons, Cahokias hinterlands regions, from north Illinois to the Southeastern area, were surely in contact between them, a contact demonstrated by artifacts showing a cultural and religious common idea, adapted to local circumstances.
Thanks to the information and the results obtained, the author had the idea to try to involve into the discussion a bigger area, to extend the same inquiries to more distant geographic realities.
In the next paragraph, the author will continue to reflect about the cultural contact topic by bringing to the reader attention some iconographic symbols examples detected across the Mesoamerican and Andean area, which remind to Ramey Incised and SECC iconographic motifs.

Figure 4.12
American Bottom vessels showing:
a) quadripartite design layout (Pauketat and Emerson, 1991: Figure7);
b) ripartite design layouts from the LIRV (adapted from Perino, 1971);
c) tripartite design layouts from the CIRV

4.4.2 Iconographic similarity between Mississippian, Mesoamerican and Andean areas

In this paragraph, the author will start by bringing to the reader attention a specific iconographic symbol used in the Amerindian area, with the intent to underline its iconographic similarity to a Mississippian motif in order to re-open the debate regarding the cultural contact topic between the pre mentioned areas.
In specific, we are speaking about the Mississippian Ramey Incised iconographic motif "Scroll 2" (V), from the previously mentioned Emerson's typology design elements (Figure 4.4) and the Mesoamerican and Andean "Horizontal S-shape" symbol.

Figure 4.13 *Particular of the Scroll 2 motif, taken from Ramey Incised iconographic elements used in Emerson's typology, after Richards (1992).*

Thanks to several researches and a huge amount of data, we can find many examples of the Scroll, or Horizontal S-shape symbol as called across the Amerindian communities, in both areas. Mostly on textiles if we speak about the Andean area and, in Mesoamerica, we can find it mainly represented on figurines, wall paintings and codes.
The Horizontal S-shape motif was widley used and meaningfully charged for the Amerindian communities. Here it follows a passage taken from the Florentino Code, "De la cuarta manta" in which is provided a breif description about Figure 4.14, an indigenous blanket decorated by the repetition of the Horizontal S motif.

"Usavan también otras mantas que se llamavan itzcoayo tilmatli, que tenían seis sierras como hierros de aserrar, dos en un lado y otras dos en el otro, y otras dos en el medio, todas contrapuestas en un campo leonado. Entre cada dos estavan unas esses sembradas con unas oes entrepuestas. Tenían dos vandas del campo leonado más desocupadas que lo demás; tenía una franja por todo el rededor, con unos lazos de pluma en unos campos negros".

Since the Mesoamerican and the Andean were cultures that had agriculture as their main livelihood, the experts confirmed that the indigenous used this motif to refer to clouds and it is logical to think that with this symbol the local populations asked their gods, the arrival of rain to fertilize their fields. An example is taken from the 632 glyph of the Trocortesian Code (Dupiech Cavaleri, 2016:201) which states that the "S" also appears as a glyph prefix of the sun and sky, it says they are clouds that train rain and fertilize the earth.
We can find other proofs in Classic Period monuments (Montoya, 2008:113), one of these is in the "Bandas Celestes" appearing on the edges of the "Huipiles" along which various design elements are displayed including the cloud motif. We can see other examples, if we look at the steles and lintels of Yaxchilán, in which the cloud symbol in fact is organized to form the frame of a scene. Another case could be the Pakal's burial tombstone, on this monument the images that form the edge, adorn the body of the cosmic snake, they were divided into segments decorated with various symbols among which the clouds (Schele and Miller, 1992:282).
More examples of the use of the Horizontal S-shape symbol across the Andean area come from textiles (Figure 4.16 a-c); from the Mayan glyph "muyal" which also, starting from the Mayan Middle Preclassic period, it is used by natives to refer to clouds (Figure 4.15); other examples come from Maya codex (Figure 4.18 a-c); from Moche culture fabrics (Figure 4.19 a-c), from Uxmal building facades, Yucatan (Figure 4.20 a-b); from Chachapoyas constructions, Peru.

Figure 4.14 *Horizontal S Symbol, "Itzcoayo Tilmatli" (Solanilla, 2020).*


a)

b)

c)

Figure 4.15

a) Cotton warp slotted tape and polychrome camélid fiber weft. Measurements: 245 x 1.5 cm Inventory 316-2013. Huaca Malena, platform C. layer A. Horizon Mid-Time Period 2 B-3;

b) Horizontal S-shape Symbol, Motif n. 423. (Dupiech Cavaleri, 2016)

c)) Horizontal S-shape Symbol, Textile from Chichén Itzá Cenote;

Another proof is testified by Figure 4.17 which is a representation of the "Señor de la Tierra" or "Señor del Cerro" (Montoya, 2003:110). This is a life-size engraving representing a man sitting inside a cave. The point of view of the scene is lateral, the cavern is shown by a cross-section which also aim at represent the jaws of a jaguar. The entrance to the cave is located in front of the seated character, to the right of the image. Volutes come out of it, perhaps indicating that the man is talking or alluding to the wind. Above the cavern are depicted stylized objects that appear to be clouds, from them droplets of water fall. In the cave, a person with a large headdress is placed on a stone throne holding a rectangular object with both hands, facing the chest. On both, the throne and the object, is representated Horizontal S-shape symbol.

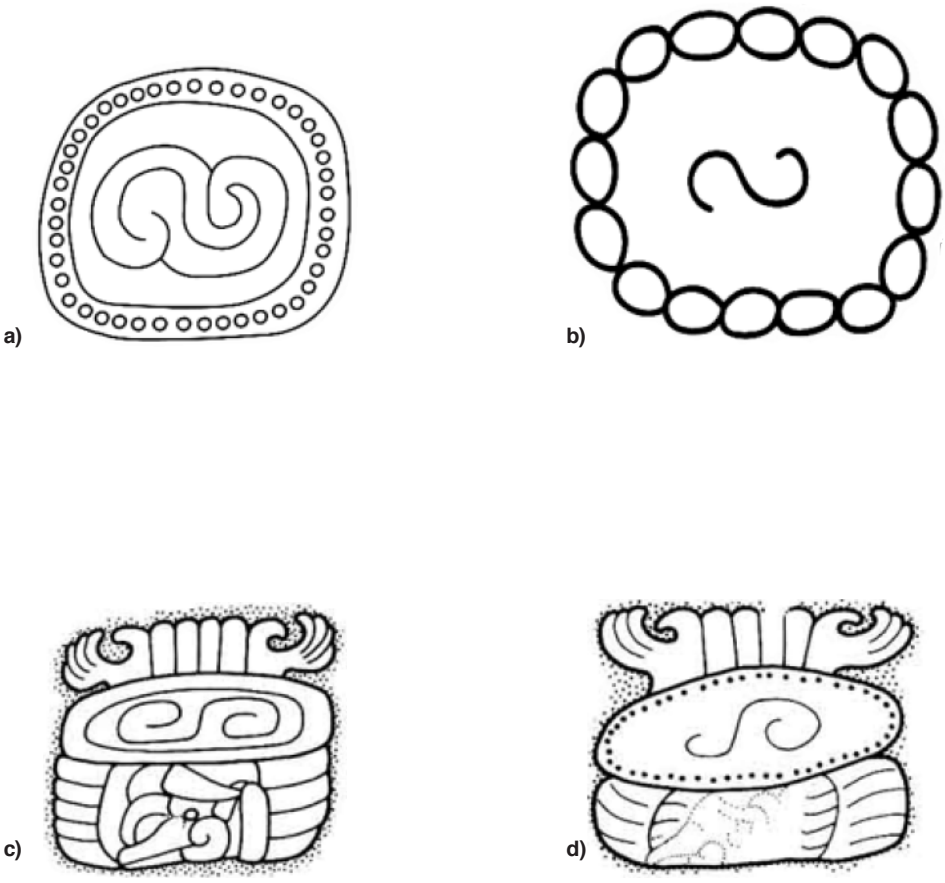


Figure 4.16 *a-d) Horizontal S-shape Symbol, Representations of the Mayan Gliph "muyal"*

Figure 4.17 *Representation of the "Señor de la Tierra" or "Señor del Cerro", Relieve 1. Chalcatzingo, Morelos.*

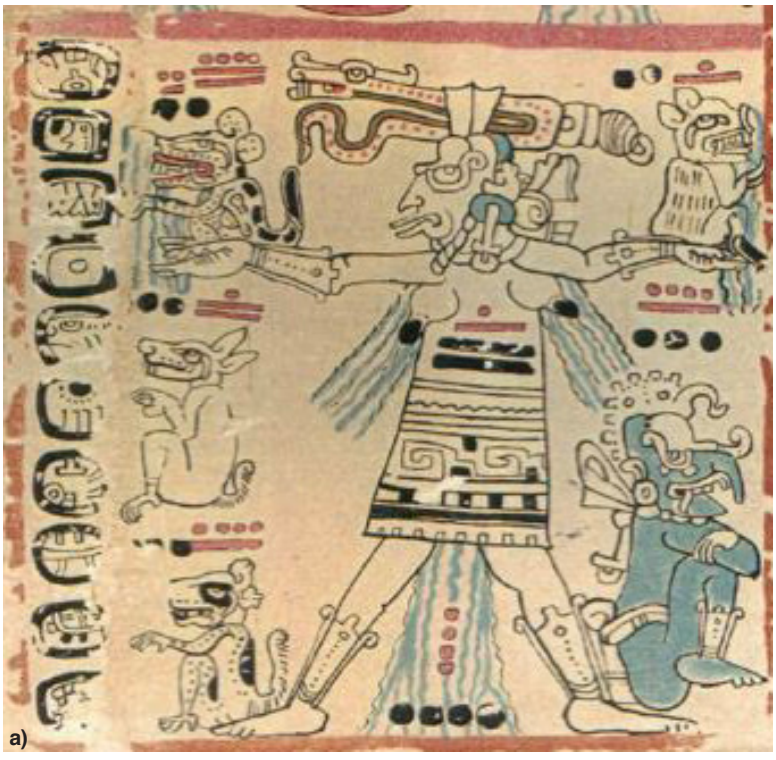


Figure 4.18
a) Detail f.30, Codex of Madrid.Goddess Chak Chel, with snake in the headdress and aquatic motives;
b) Dresde Code detail, p. 68[a] Table of Planet Venus;
c) Jar Detail, Justin Kerr K2772.

c)

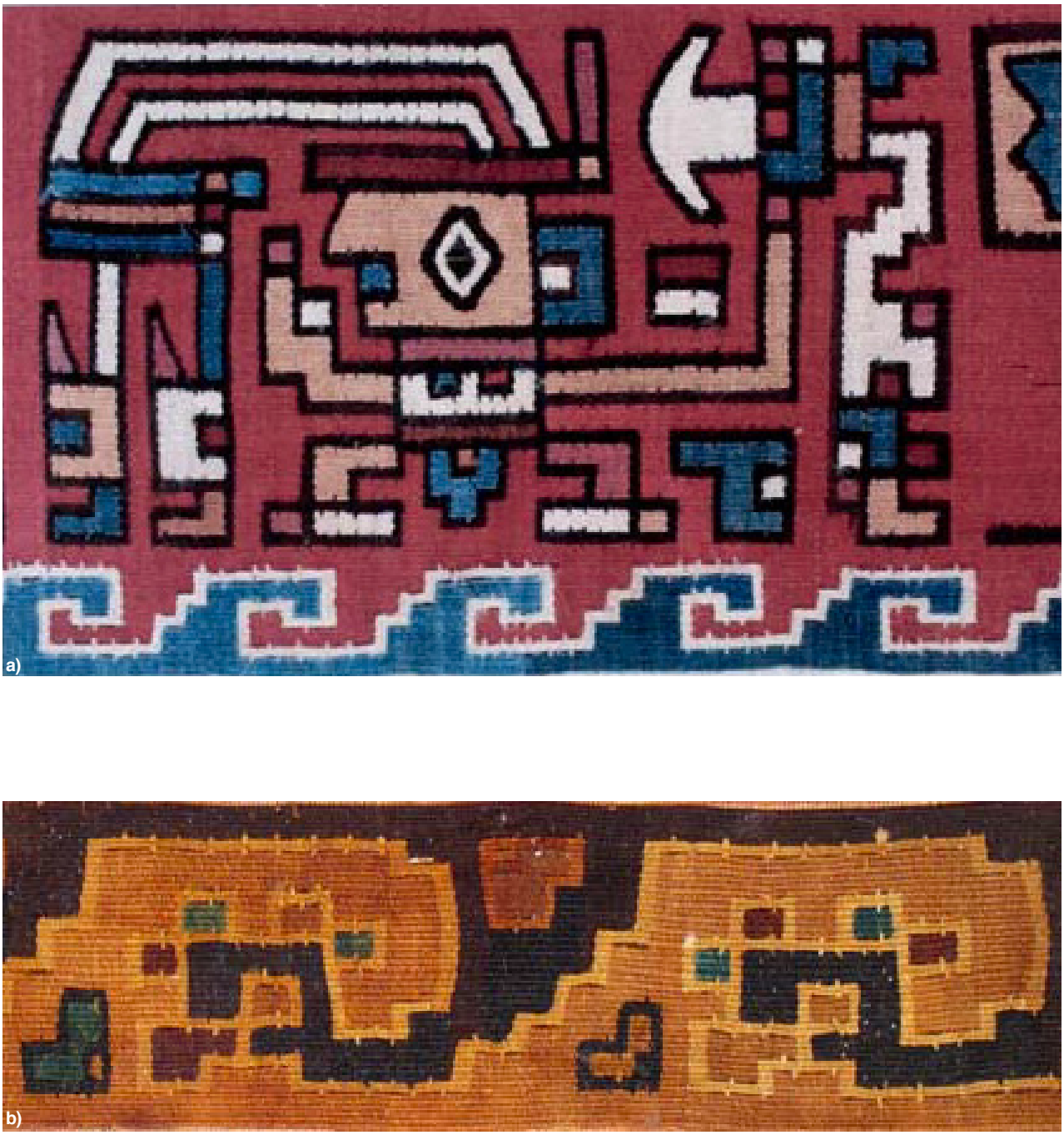
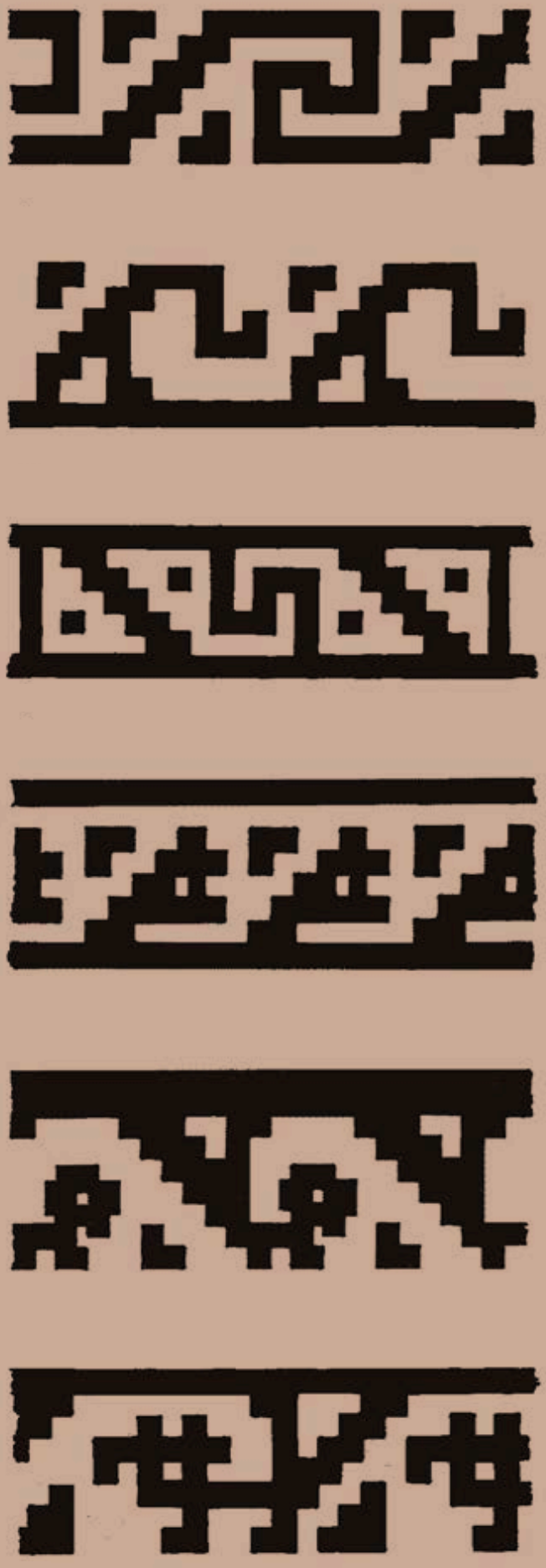
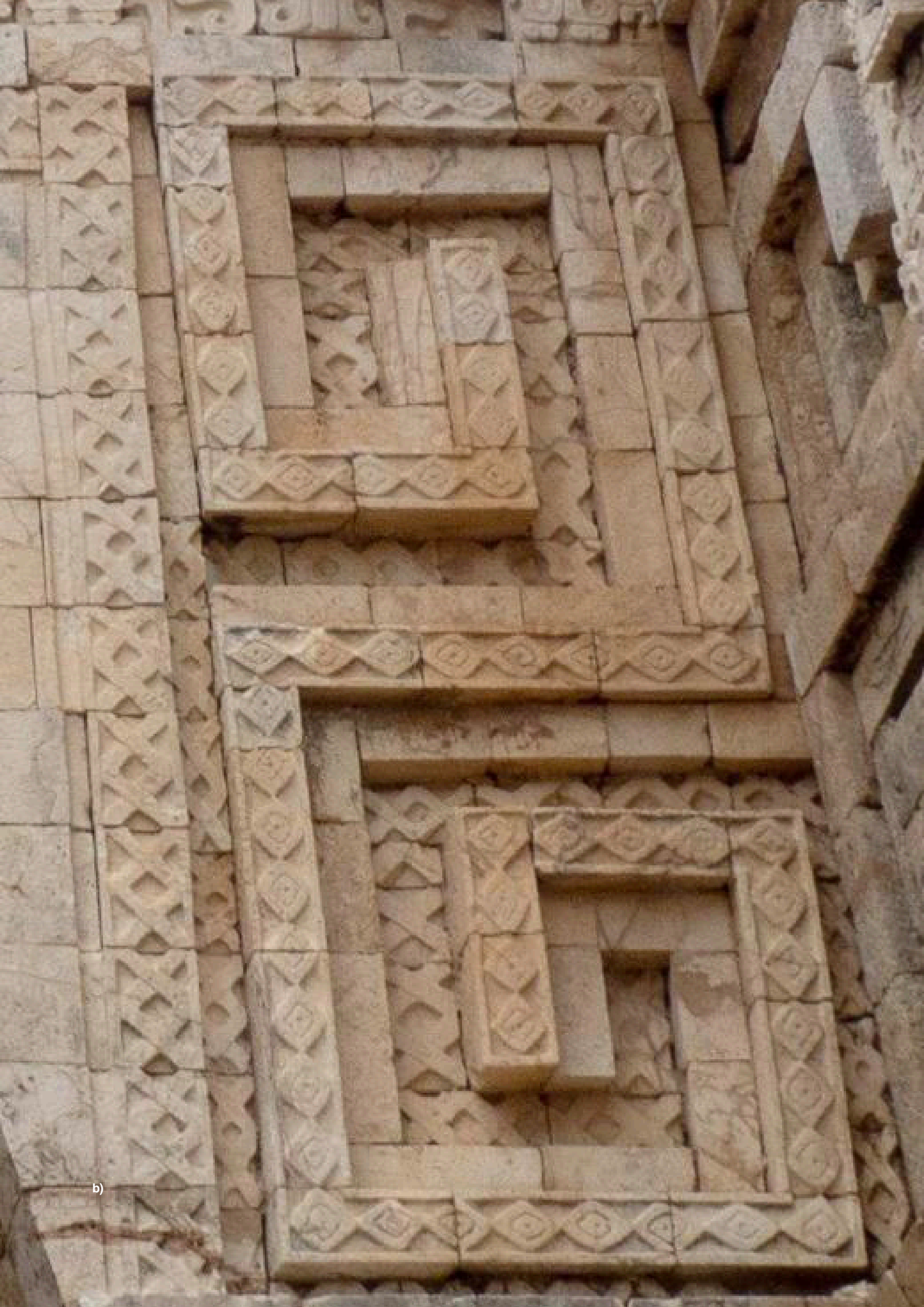


Figure 4.19 *a-c) Representation of Horizontal S-shape Symbol on fabrics from Moche culture.*



c)

Figure 4.20 *a) Detail facade O. of the Quadrangulo de las Monjas, Uxmal, Yucatan; b) Detail facade E. of the Governor's Palace, Uxmal*



b)

Figure 4.21 *a-b) Representation of Horizontal S-shape Symbol on constructions, Chachapoyas, Peru.*

After providing some examples of the use of the iconographic Horizontal S-shape symbol across the Amerindian area the author would like to invite the reader to reflect about its similarity with the Mississippian Scroll motif also used, as you can see from Figure 4.8 e), on a Powell Plain beaker, an iconic item part of the SECC coming from the Southeastern area of the Unites States.
As we previously demonstrated the use of SECC iconography on Ramey Incised pots discovered north of the American Bottom, it also looks like that the use of the Scroll symbol has been shared by communities spread all over the Pre-Columbian American territory, adapting it to local circumstances.

After these considerations we started to look at Southeastern Ceremonial Complex iconographic elements and it came to our attention a few more iconographic similarities with the Amerindian symbology. The first similarity we noticed is about the side-face representation of the typical Mayan character and the representation of the faces on the "De los Danzantes" reliefs, Zapotec culture, which remind us to the faces represented on the Mississippian Ramey Tablet (see Figure 4.6 b) and the two Rogan plates (see Figure 4.5 a and b).
In specific the Mayan and the Mississippian character share a peculiar element, they both wear a lock of hair with beads, which is a confirmed iconographic representation for high status society members.

Figure 4.22 *"De los Danzantes" Reliefs of Monte Albán, Zapotec culture.*

Figure 4.23 *Example of typical Maya culture male character representation*

The second similarity we noticed is about the shared used of the spider motif between the two cultures. As attested by Figure 4.6 c-f) the spider was an important symbol to people of the Mississippian culture and it was meaningful for Andean communities too but with a different interpretation.
Uru, the mythical Spider was the beneficial faber who taught the Andean man the art of textiles, of the fluidity of the word but it was also the co-adjuvant of the cosmic balance (Laurencich, 2011). Although the Mississippian and the Andean representation of the spider looks quite different, compared one to another, we have to confirm that this animal for both cultures had an important meaning, as shown by: Nazca fabric (see Figure 4.23), Nazca ceramics (see Figure 4.24 a-b) and Moche ceramic, from Peru (see Figure 4.25), and its iconographic elaboration surely was adapted to local imaginary.

The Mississippian culture has a lot in common with the Olmec culture, the ancestor of the Amerindian cultures. The Olmec culture is also defined on the basis of the same cultural traits: the construction of pyramids, cultivation of maize, wall trenched structures, creation of pottery and lithic technology and the development and diffusion of a system of religious beliefs.
The Andeans, as the Mississippians, were societies with no written tradition, so these images represented their form of communication and their way to leave us their history and thoughts.
In the Mesoamerican case, the same could be said, but on the contrary, these societies did have also a way to communicate through their written languages (Solanilla, 2020).
The Andean region, during the long process of sociocultural development, managed to combine an extensive ideological field, which inferred the appearance, since the Early Archaic period (8500 A.P. approx.), of a consolidated religion with a polytheistic pantheon based on the veneration of multiple naturalistic gods.
The Andean and the Mesoamerican areas shared and focused their cosmology on three vertical areas: sky, air (eagle-harpy), earth (snake and jaguar) and underworld, water (alligator), with animated beings (animals) inhabiting these areas (Solanilla, 2020). They therefore possessed a common world vision, religion and mythology, a phenomenon started around 6500 B. C., when maize began to be domesticated and agriculture began.
The proven contacts between the Andean and the Mesoamerican areas were responsible for the creation of a common cultural tradition, composed by different populations such as Olmecs, Teotihuacans, Mayas, Zapotecs, Mixtecs, Toltecs and finally Mexicas, which took place in different times and places in the Mesoamerican area (Solanilla, 2020).
As in the Mississippian culture, for the Andean and Mesoamerican world, in addition to these universal and shared deities there were many others of more regional nature.
Luckily, in the case of the Amerindian area, we have a high amount of iconographic examples represented on a variety of different supports such as ceramic, fabrics, stone that show us what the earthly or supernatural world around these societies looked like.
Thanks to these archaeological and iconographic evidences, the experts were able to demonstrate that specific iconographic motifs are repeated across the Amerindian area, this therefore confirmed a cultural contact between the different regions, a relationship of religious and political nature, in respect of local circumstances.

After this analysis, the author final reflections are about if the provided iconographic similarities evidences, detected between two different cultures such as the Mississippian and the Amerindian one, can prove a cultural contact between the two parties.
The author provided information and evidences about iconographic similarities shared by indigenous inhabitants of the two interested areas. Two populations with a lot of common cultural elements but which, we have to consider, were geographically and temporally very distant. Just to give an idea, without deepening geographic condition of the territory or other factors, the Mississippian and the Mesoamerican region are thousands of miles apart, but if we also look at the timing element we are in front of two cultures which are thousands of years apart.
This difficult topic regarding the cultural contact between the Mississippian and the Mesoamerican society has long been debated between academics also because, till present days, just few evidences have being found.

Figure 4.24 *a) Cup, Middle Nazca period; b) Jar, Early Nazca period both from Peru, with spider symbol represented. (Laurencich, 2011)*

Figure 4.25 *Stirrup vessel, Moche I culture from Peru, with spider symbol represented. (Laurencich, 2011)*

Figure 4.26 *Nazca Fabric from Peru, with spider symbol represented . (Laurencich, 2011)*

By these pages the author intention was to give a little contribution to this interesting topic by providing more data in order to fuel the debate. With this research and with the iconographic evidences provided, the author intends to support the theory that the Mississippian and the Amerindian area look sharing a similar religious and cosmological vision of the natural and supernatural world, but do these similarities determine a contact? A lot of authors identified common and universal symbols that may have suggested iconographic connections between North and Central America but, as we already mentioned, till present days these similarities evaporate on closer examination of either end of the supposed connection (King, 2007).

As we said this is a really difficult topic mostly due to the scarcity of Mississippian archaeological evidences, as the Cahokian case demonstrated.

The author tried to provide all the possible evidences with the purpose to encourage the reflection on the elements provided, to question if they can be considered as additional valid proofs or at least a hint of cultural contact.

Unfortunately, with the data collected till now, it will not be realistic to formulate a response, however it looks like that some universal and ancient symbols have been shared by communities spread all over the Pre-Columbian American territory, as across other areas of the world, adapting it to local circumstances.

Chapter 5

Summary and Conclusions

Cahokia had risen to be the greatest Mississippian settlement by the middle of the 11th century until its abandonment at the end of the 14th century.

The size and monumentality of the settlement made this site an exemplary case in North America, in fact, it was in Cahokia that the egalitarian societies that had been prospering for millennia in the Eastern Woodlands developed their first ranked political system (Mehrer, 1995; Roger and Smith, 1995; Brown and Kelly, 2015). During the Mississippian period Cahokia was able to develop a proper culture characterized by a set of distinctive traits: the construction of earthworks, cultivation of maize, wall trenched structures, lithic technology and the adoption of the shell-tempered pottery. Thanks to the elaboration of a series of artifacts, in particular through the dissemination of the Ramey Incised pottery iconographic message, Cahokians laid the basis for the development and the diffusion of a system of political and religious beliefs to the South Eastern communities, known as South-Eastern Ceremonial Complex.

After its slow abandonment the Mississippian Cahokia was forgotten and it was only in the 1880s that John J.R. Patrick first showed interest in the Mississippian centre from a scientific point of view. In 1921, Warren King Moorehead led the first scientific archaeological investigations in Cahokia (Iseminger, 2010; Pauketat, 2004; Kelly, 2000), after which the general idea about Cahokia started to change, highlighting the fact that Cahokia had been the most important political and ceremonial center of North America. In the academic environment the interest for the area started to grow and a sequence of archaeological investigations followed till present days.

In 2011, the University of Bologna, IT, started a new archaeological project located in the West Plaza of the Cahokia site, thanks to which we were able to elaborate new hypothesis concerning settlement dynamics and use of space of the interested area.
This research followed several stages, which the first one was possible by combining Merrel Tract-Unibo field work conclusions with laboratory analysis, in specific with the information provided by the ceramic detected in place.

The Merrel Tract-Unibo project yielded evidences of domestic activities occurred during the Emergent Mississippian (AD 750-1050) and the Late Mississippian (AD 1200-1400) phases and of public and ritualistic use of the area in the middle of the Mississippian period, during the Lohmann (AD 1050-1100) and Stirling phase (AD 1100-1200).
By the beginning of the Lohmann phase the site was undergone to a massive transformation. The area was cleared in order to construct the "Downtown Cahokia" and to accommodate public and ritual activities, confirmed by the high amount of Ramey Incised jars, specially attested for the Late Stirling/ Early Moorehead phase, and by the erection of the public Compounds A and B/C (Valese, 2017). The West Plaza was an integral part of downtown Cahokia and it seemed to cover an important religious and/or political role.
Starting from the Early Moorehead phase and continuing into the Sand Prairie phase, the Merrell Tract-Unibo and 15B area witnessed the sprawling of a new Late Mississippian residential occupation, also proved by a variation in the ceramic assemblages. This change have been associated as being part of the large-scale social changes that interested this period, to be in accord with the emergence of a Late Mississippian "new ceremonialism" (Pauketat 2013: 302-303, Baltus 2014).

As long as Cahokia was declining, at the end of the Moorehead phase, other powerful centres arose in the wider Mississippian world linked by a strong presence of Cahokia artefacts and beliefs which spread across the Mississippian valley creating a cultural sphere called Pax Cahokiana (Pauketat and Alt, 2015). During this period the role of Cahokia in extra regional exchange was greatly diminished although evidence of interaction with societies, particularly those to the south, is evident in the strong similarities of certain ceramic vessels.

The Moorehead phase has long been represented as period of decline for Cahokia. Recently experts are more inclined to think the Moorehed phase as a time for socio political change. The Merrell Tract-Unibo excavation results supported the "Cahokia's Second Climax" (Kelly et al. 2001) theory, a period of reconstitution and florescence of the community on a different order and magnitude.

At that time, the area may also be the place of origin for the iconography of the Southeastern Ceremonial Complex, which subsequently spread throughout the southeastern United States (Brown and Kelly, 2000; Kelly et al., 2001). This "international art style" (SECC), became an elaborate, pan-regional iconography, appearing on a variety of media including shell, copper, and pottery. Krieger (1945) suggested the SECC reflected the "beliefs in ritualism, in supernatural creatures and their magic powers, division of the universe into quarters or 'winds' and perhaps also matters of social status, rank, heraldry, and other aspects of the mental life of the times.

The religious system was made up of a set of cult institutions, each with its own constituency and associated key artifacts or objects known as sacra.
Mississippian societies have multi-century and multi-cultural history, for example certain core iconographic themes-such as the Birdman (forked eye symbol) and the chunkey player, had roots extending into the Emergent Mississippian Period. By recasting these elements of the SECC, they were integrated into local Mississippian society. While it is clear that there are temporal and regional variations, at the same time they are historically and functionally related and therefore warrant consideration as part of the same concept, the SECC.

The Ramey Incised pottery is one of the elements of the SECC and it has also been used as a marker of Cahokia's influence all over the Midwest and at the base of the hypothesis of possible Cahokian migrations and interactions (Kelly, 1991; Pauketat and Emerson, 1991). The strong stylistic congruence in these ceramics emphasizes the importance of Cahokia in the continued web of interaction among the various Mississippian groups (Kelly, 1991).

After the previous considerations, the author focused the following stage of the research on Ramey Incised pottery variety, developing an iconographic analysis by comparing pottery sherds discovered during the Italian excavation, which is the classic Ramey Incised style example, to those detected across Cahokians northern hinterland's sites, in order to investigate political and religious interactions between the interested areas.

Ramey Incised jars were cosmograms through which Cahokians attempted to frame relationships among different social groups and the broader cosmos. In the middle of the Mississippian period (AD 1100 – 1200) Ramey Incised pots were most popular at Cahokia and the displayed motifs were used for political and religious propaganda purposes.
The Mississippian cosmological model, in general, includes upper and lower world represented around a central axis, or axis mundi (Emerson, 1989; Lankford, 2004, 2007; Pauketat, 2004; Pauketat and Emerson 1991). This model also embodies a quadripartite world view community organization, as seen in villages orientated to cardinal directions with mounds or houses surrounding a plaza with a central pole (Kelly, 1996a; Kelly and Brown, 2014). Ramey Incised pots had a huge geographic distribution and are commonly found in both ceremonial and domestic context, highlighting their value in Mississippian communities (Emerson and Pauketat, 2008; Griffith, 1981; Pauketat and Emerson, 1991). Mostly during the latest phases of the Mississippian period all the civilizations touched by the Mississippi river shared these vessels. Thanks to the Ramey Incised pottery icono-

graphic analysis and to the goods distribution study in general, we know that different and therefore distant communities were in contact.

Traditionally, it is granted that the presence of Cahokia-style cosmograms outside of the American Bottom represents a local desire to participate in the Cahokian cultural phenomenon. Early theories of cultural contact suggest that inhabitants of peripheral settlements passively adopted the practices of a more powerful core polity.
However, thanks to recent researches, many experts disagreed and suggested that peripheral inhabitants reinterpreted and negotiate these practices on their own term and in reference to their own histories and existing worldviews (Dietler, 2010; Lightfoot and Martinez, 1995; Pauketat and Alt, 2005; Silliman, 2005; Stein, 2002).

The author supports the theory that the presence of Cahokia style cosmograms outside of the American Bottom for sure represents a local desire to participate in the big polity cultural phenomenon, although, we verified that there is a relevant interregional variation in the ways Cahokian religion concept was localized and practiced. In fact, the evidences proved that Mississippian pottery in Cahokia's northern hinterland exhibits patterns of Woodland – Mississippian hybridity (Bardolph, 2014; Delaney-Rivera, 2000; Delaney-Rivera, 2004; Emerson, 1991b; Finney, 1993; Millhouse, 2012; Richards, 1992; Wilson, 2015; Wilson et al., 2017; Zych, 2013). Most of the Ramey Incised jars found north of Cahokia appear to be produced locally, with a minority of samples being Cahokian imports (Hall, 1991; Harn, 1991; Pauketat and Emerson, 1991; Stoltman, 1991). Iconographic analysis revealed that many northern hinterland Ramey Incised pots statistically differed from those found in the greater Cahokia area (Conrad, 1991; Delaney-Rivera, 2000; Emerson, 1991a; Mollerud, 2005). Unquestionably this variation indicates that these groups did not adopt Mississippian religion wholesale, on the contrary it suggests differences in the perceived composition and structure of the cosmos from region to region and reveals the power of local worldview in the negotiation of Cahokian religious influence.

We concluded that inhabitants of peripheral Cahokia's settlements did not passively adopt the practices of more powerful core polities, but more likely, there was an entanglement between Cahokian and local ideas and symbolism.
The Ramey incised pots iconographic analysis and the comparison we made with Cahokias northern hinterlands, also supported by the analysis of the SECC phenomenon, demonstrated Mississippian societies had multi-century and multi-cultural history.
In particular and in general these societies are and were composed locally and regionally as a result of internal and external events.

Inspired by these conclusions the author decided to focus the last part of the research by extending the cultural contact inquiries to a wider area. We started investigating an iconographic similarity noticed between the Mississippian Ramey Incised motif "Scroll 2" and the Mesoamerican and Andean "Horizontal S-shape" symbol.
We demonstrated that iconographic similarities detected within the Mississippian area, as well as the once found within the Amerindian area, testify a cultural contact between different populations occupying the two separate regions.
After these affirmations, the author wonders if iconographic similarities shared between the Mississippian and the Amerindian area testify a contact between the two areas.
Surely the Amerindian and the Mississippian cosmology and naturalistic pantheon share a lot of elements and as a consequence the iconographic representations have a lot in common.

The topic regarding iconographic similarities between distant cultures was already addressed by previous experts, for example Rieff Anawalt (1992:114) stated that: "The style of the dress, decorative designs and production techniques illustrated in codices, ceramics and fabric fragments suggest the dissemination of cultural elements from the north coast of South America to western Mexico and the southwestern United States"; but does the sharing of similar iconographic traits means cultural contact?

To summarize, thanks to this iconographic investigation we were able to provide evidences about the use of the Scroll motif across Cahokias northern hinterland regions; on a SECC Powell Plain beaker and we also found it represented on fabrics, paintings and constructions from the Amerindian area.
It looks like the Scroll motif has been shared by communities spread all over the Pre-Columbian American territory, adapting it to local circumstances.
We also noticed the use of a SECC iconography motif, the forked-eye motif, on Ramey Incised pots discovered north of the American Bottom, in the LIRV region.
Furthermore we started to look at iconographic similarities between the Mississippian and Amerindian areas and we recognized a similarity between the side-face representation of the typical Mayan character and the representation of the faces on "De los Danzantes" reliefs, from Zapotec culture with the faces represented on the Mississippian Ramey Tablet and the two Rogan plates. In addition we identified the shared used of the spider motif between the SEEC and the Nazca and Moche cultures from Peru.

Thanks to a variety of evidences we were able to proof that, for several reasons, Cahokia s hinterland regions, from north Illinois to the Southeastern area, were surely in contact between them, a contact demonstrated by artifacts showing the circulation of a cultural and religious common idea, adapted to local circumstances.
The diversity of many locally made ceramic wares, once thought to be "trade sherds", suggest a cultural interaction process, in which we believe that regardless of their culturally specific meanings, they had similar discursive meanings.
Till present days, a lot of authors identified common and universal symbols that may have suggested iconographic connections between North and Central America but lately, however similarities of any Mississippian artistic materials to those of Mesoamerica were never confirmed.
If we look at the iconographic Cross theme for example, it is essentially universal and its combination with the circle form is common everywhere.
An example represented on a Cahokia Red Engraved beaker was found during the Merrell Tract-Unibo excavations. This typology of beakers was possibly related to the consumption of the Black Drink during purification rituals (Crown et al., 2012), a famous practice shared by Mesoamerican communities.
So, on one hand this kind of motifs can demonstrate a long chronological history and a great diffusion across the territory but on the other hand, due to the same reasons of basic and universal characteristics, it represents a poor chronological or cultural "marker" for archaeologists.

The author gave information about a common but contextualized religious culture and socio- political interaction between Cahokia s hinterland populations, from the north portion of the American Bottom to the Southeastern area and at the last stage of this research the author provided some evidences in order to extend the cultural contact topic to the Amerindian area.
Unfortunately, with the data collected till now and due to the scarcity of the Mississippian materials, it will not be realistic to formulate a response.
However, the intent of this research is to provide additional data and to encourage further researches to reflect in regard of this interesting and multidisciplinary subject.
The long time spent studying and the knowledge gained clarified to the author that it can be possible to understand this complex topic only by using an interdisciplinary approach.
This iconographic investigation came as a natural consequence of the initial archaeological project, because of author interest; two big areas of studies which presuppose some knowledge of art, history, geology, topography, anthropology and oral tradition, to mention a few.

The author strongly believes that the most important tools we have to investigate human socio-political behaviors are the interchange of the studies and the interdisciplinary methodology, and in order to visually stress this point the author decided to edit the thesis using a professional graphic design layout.

To conclude, it looks like that some SECC iconographic elements but most of all the use of the Ramey Incised Iconography, especially the Scroll symbol, has been shared by communities spread all over the Pre-Columbian American territory, adapting it to local circumstances.

When we analyzed the Mississippian territory first and the Amerindian territory in a second moment we confirmed that internally inhabitants of each area adopted, shared and locally adapted political-religious concepts and the way to iconographically reproduce it.
Of course when we compare the Mississippian and the Amerindian areas, such geographically and temporally distant territories, we cannot easily affirm that a culture may have passed a symbol to the other one nor we cannot prove that a culture adopted a motif with the intention to underline its political-religious bond with the other one.
However, it is in the author opinion that, due to political-religious purposes, there must have been within the Pre-Columbian American territory, as across other areas of the world, a shared circulation of same socio– political meaningful concepts accompanied by their iconographic contextualized representations, especially in the case of ancient rooted and universal motifs.

Appendices

Photos

0 1 cm

1. MT2-08-35-1-1D

2. MT2-13-36-2-1D

3. MT2-14-36-3-1D

4. MT2-87-43-2-1D

5. MT2-85-35-3-1D

6. MT2-89-36-5-1D

A: Merrell Tract- Unibo Ramey Incised Diagnostic sherds number 1; 2; 3; 4; 5 and 6: Unidentified Chronology.

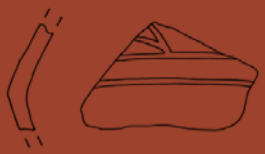
Drawings

0 1 cm

1. MT2-08-35-1-1D

2. MT2-13-36-2-1D

3. MT2-14-36-3-1D



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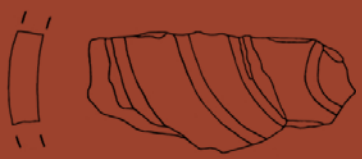
5. MT2-85-35-3-1D



6. MT2-89-36-5-1D

A.1: Merrell Tract- Unibo Ramey Incised Diagnostic sherds number 1; 2; 3; 4; 5 and 6: Unidentified Chronology.

Photos

0 1 cm

7. MT2-1020-12-1-1D

8. MT2-1049-86-1D

B: Merrell Tract- Unibo Ramey Incised Diagnostic sherds number 7 and 8: Late Stirling phase.

9. MT2-1015-1-1D

10. MT2-1069-3-1D

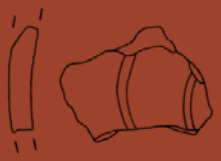
C: Merrell Tract- Unibo Ramey Incised Diagnostic sherds number 9 and 10: Late Stirling/ Early Moorehead phase.

Drawings

0 1 cm

7. MT2-1020-12-1-1D

8. MT2-1049-86-1D



B.1: Merrell Tract- Unibo Ramey Incised Diagnostic sherds number 7 and 8: Late Stirling phase.

9. MT2-1015-1-1D

10. MT2-1069-3-1D

C.1: Merrell Tract- Unibo Ramey Incised Diagnostic sherds number 9 and 10: Late Stirling/ Early Moorehead phase.

Photos

0 1 cm

11. MT2-1015-2-1D

12. MT2-1019-13-3D

13. MT2-1019-14-1D

14. MT2-1019-14-2D

15. MT2-1019-14-3D

16. MT2-1019-14-4D

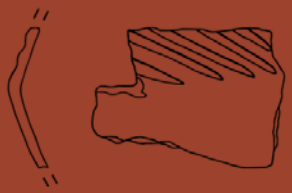
17. MT2-1019-14-5D

D: Merrell Tract- Unibo Ramey Incised Diagnostic sherds number 11; 12; 13; 14; 15; 16 and 17: Moorehead phase.

Drawings

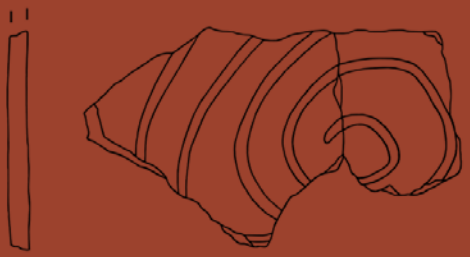
0 1 cm

11. MT2-1015-2-1D

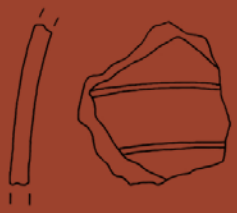


12. MT2-1019-13-3D

13. MT2-1019-14-1D



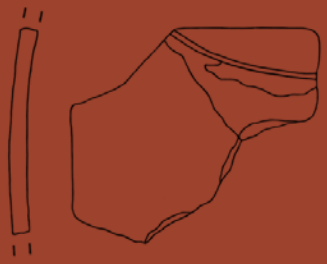
14. MT2-1019-14-2D



15. MT2-1019-14-3D

16. MT2-1019-14-4D

17. MT2-1019-14-5D



D.1: Merrell Tract- Unibo Ramey Incised Diagnostic sherds number 11; 12; 13; 14; 15; 16 and 17: Moorehead phase.

Photos

0 1 cm

18. MT2-1048-2-1D

19. MT2-1056-1-1D

20. MT2-1056-1-1D

21. MT2-81-35-3-1D

E: Merrell Tract- Unibo Ramey Incised Diagnostic sherds number 18; 19; 20 and 21: Moorehead phase.

Drawings

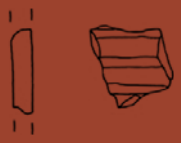
0 1 cm

18. MT2-1048-2-1D

19. MT2-1056-1-1D

20. MT2-1056-1-1D

21. MT2-81-35-3-1D



E.1: Merrell Tract- Unibo Ramey Incised Diagnostic sherds number 18; 19; 20 and 21: Moorehead phase.

Unit_N	Bag_N	PZ/Feature_N	Level	Excavation Year	Area	Diagnostic_N	Weight	Definition	Temp	Fo
N208-W235	MT2-08-35-1	PZ	Lvl 1-3	2011	Area A	MT2-08-35-1-1D	0,6	Decorated Body Sherd	Shell	Jar
N212-W236	MT2-1015-1	1015	Lvl 3	2012	Area C	MT2-1015-1-1D	2	Decorated Body Sherd	Shell	Jar
N212-W237	MT2-1015-2	1015	Lvl 3	2012	Area C	MT2-1015-2-1D	5,2	Decorated Body Sherd	Shell	Jar
N212-W237	MT2-1019-13	1019	Lvl 4	2012	Area C	MT2-1019-13-3D	2,7	Decorated Body Sherd	Shell	Jar
N212-W236	MT2-1019-14	1019	Lvl 7	2012	Area C	MT2-1019-14-1D	18	Decorated Body Sherd	Shell	Jar
N212-W236	MT2-1019-14	1019	Lvl 7	2012	Area C	MT2-1019-14-2D	5,3	Decorated Body Sherd	Shell	Jar
N212-W236	MT2-1019-14	1019	Lvl 7	2012	Area C	MT2-1019-14-3D	2,4	Decorated Body Sherd	Shell	Jar
N212-W236	MT2-1019-14	1019	Lvl 7	2012	Area C	MT2-1019-14-4D	1,8	Decorated Body Sherd	Shell	Jar
N212-W236	MT2-1019-14	1019	Lvl 7	2012	Area C	MT2-1019-14-5D	9,4	Decorated Body Sherd	Shell	Jar
N212-W235	MT2-1020-12	1020	Lvl 7	2012	Area C	MT2-1020-12-1D	1,6	Decorated Body Sherd	Shell	Jar
N215-W236	MT2-1048-2	1048	Lvl 4	2013	Area C	MT2-1048-2-1D	2	Decorated Body Sherd	Shell	Jar
N184-W244	MT2-1049-86	1049	Lvl 5	2015	Area E	MT2-1049-86-1D	2,8	Decorated Body Sherd	Shell	Jar
N215-W237	MT2-1052-1	1052	Lvl 8	2013	Area C	MT2-1052-1-1D	2,1	Decorated Body Sherd	Shell	Jar
N215-W236	MT2-1056-1	1056	Lvl 10	2014	Area C	MT2-1056-1-1D	4,5	Decorated Body Sherd	Shell	Jar
N199-W237	MT2-1069-3	1069	Lvl 4	2014	Area A	MT2-1069-3-1D	3,1	Decorated Body Sherd	Shell	Jar
N213-W236	MT2-13-36-2	PZ	Lvl 2	2012	Area C	MT2-13-36-2-1D	4,4	Decorated Shoulder	Shell	Jar
N214-W236	MT2-14-36-3	PZ	Lvl 3	2012	Area C	MT2-14-36-3-1D	3,6	Decorated Body Sherd	Shell	Jar
N181-W235	MT2-81-35-3	FILL 1193	LVL 4	2016		MT2-81-35-3-1D	1,1	Decorated Body Sherd	Shell	Jar
N185-W235	MT2-85-35-3	FILL 1193	LVL 4	2016		MT2-85-35-3-1D	10,5	Decorated Body Sherd	Shell	Jar
N187-W243	MT2-87-43-2	PZ	Lvl 3	2013	Area E	MT2-87-43-2-1D	0,5	Decorated Body Sherd	Shell	Jar
N189-W236	MT2-89-36-5	FILL	Lvl 4	2015	Area A	MT2-89-36-5-1D	2,3	Decorated Body Sherd	Shell	Jar

Table.A: Merrell Tract- Unibo Ramey Incised Diagnostic sherds Database Records.

rm	Vessel Type	Chronology	Decoration Tecniques	Surface Treatment	Surface (int)	Design	Comments
	Ramey Incised		Incised	Black-Slipped	Black-Slipped		
	Ramey Incised	Late Stirling/ Early Moorhead	Incised	Plain	Plain		
	Ramey Incised	Moorehead	Incised	Plain	Plain	Rectilinear	
	Ramey Incised	Moorehead	Incised	Black-Slipped	Plain	Rectilinear	
	Ramey Incised	Moorehead	Incised	red-slipped	Plain	Curvilinear	+1 bodysh. from bag 1019-17
	Ramey Incised	Moorehead	Incised	red-slipped	Plain	Rectilinear	
	Ramey Incised	Moorehead	Incised	red-slipped	Plain	Rectilinear	
	Ramey Incised	Moorehead	Incised	black slipped	Plain	Rectilinear	
	Ramey Incised	Moorehead	Incised	black slipped	Plain	Mixtilinear	
	Ramey Incised	Late Stirling	Incised	Red- Slipped	Plain	Curvilinear	
	Ramey Incised	Moorehead	Incised	Red- Filmed	Red Slipped	Curvilinear	
	Ramey Incised	Late Stirling	Incised	Plain	Plain	Curvilinear	
	Ramey Incised	Moorehead	Incised	Plain	Plain		
	Ramey Incised	Moorehead	Incised	Black Slipped	Plain	Rectilinear	
	Ramey Incised	Late Stirling/Early Moorehead	Incised	Polished	Plain	Curvilinear	
	Ramey Incised		Incised	Plain	Plain		
	Ramey Incised		Incised	Plain	Plain		
	Ramey Incised	Moorehead	Incised	Black- Slipped	Black- Slipped	Rectilinear	
	Ramey Incised		Incised	Black Slipped	Black Slipped	Curvilinear	
	Ramey Incised		Incised	Red- Slipped	Plain		
	Ramey Incised		Incised	Black Slipped	Black Slipped	Rectilinear	

Photos

0 1 cm

1. MT2-92-40-2-1

F: Merrell Tract- Unibo Ramey Incised Rim sherd number 1: Unidentified Chronology.

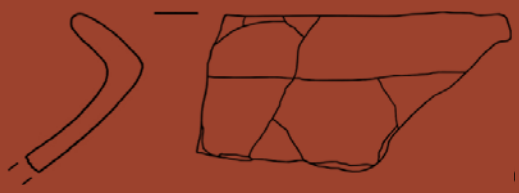
2. MT2-1049-43-1

G: Merrell Tract- Unibo Ramey Incised Rim sherd number 2: Mississippian period.

Drawings

0 1 cm

1. MT2-92-40-2-1



F.1: Merrell Tract- Unibo Ramey Incised Rim sherd number 1: Unidentified Chronology.

2. MT2-1049-43-1

G.1: Merrell Tract- Unibo Ramey Incised Rim sherd number 2: Mississippian period.

0 1 cm

3. MT2-1019-2-1

4. MT2-1052-1-6

H: Merrell Tract- Unibo Ramey Incised Rim sherds number 3 and 4: Stirling phase.

Drawings

0 1 cm

3. MT2-1019-2-1

4. MT2-1052-1-6

H.1: Merrell Tract- Unibo Ramey Incised Rim sherds number 3 and 4: Stirling phase.

Photos

0 1 cm

5. MT2-1019-1-1

6. MT2-1019-9-3

7. MT2-1019-15-1

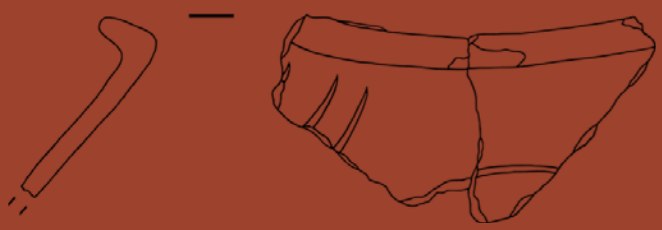
8. MT2-1019--15-2

I: Merrell Tract- Unibo Ramey Incised Rim sherds number 5; 6; 7 and 8: Late Stirling phase.

Drawings

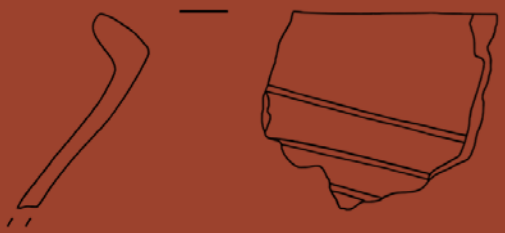
0 1 cm

5. MT2-1019-1-1

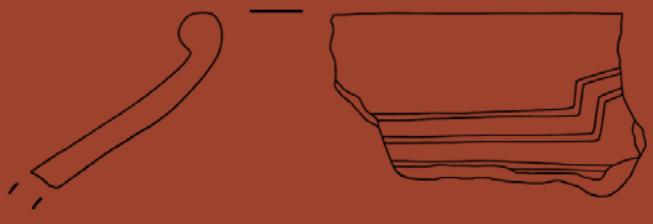


6. MT2-1019-9-3

7. MT2-1019-15-1



8. MT2-1019--15-2



I.1: Merrell Tract- Unibo Ramey Incised Rim sherds number 5; 6; 7 and 8: Late Stirling phase.

0 1 cm

9. MT2-1020-15-3

J: Merrell Tract- Unibo Ramey Incised Rim sherds number 9: Late Stirling phase..

10. MT2-1015-1-5

K: Merrell Tract- Unibo Ramey Incised Rim sherds number 10: Late Stirling / Early Moorehead phase.

0 1 cm

9. MT2-1020-15-3

J.1: Merrell Tract- Unibo Ramey Incised Rim sherds number 9: Late Stirling phase.

10. MT2-1015-1-5

K.1: Merrell Tract- Unibo Ramey Incised Rim sherds number 10: Late Stirling / Early Moorehead phase.

Photos

0 1 cm

11. MT2-1015-4-1

12. MT2-1019-4-4

13. MT2-1049-16-5

14. MT2-1048-9-1

L: Merrell Tract- Unibo Ramey Incised Rim sherds number 11; 12; 13 and 14: Late Stirling / Early Moorehead phase.

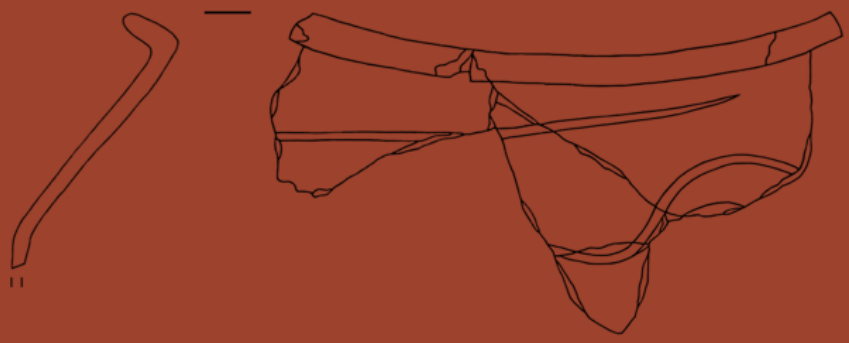
Drawings

0 1 cm

11. MT2-1015-4-1

12. MT2-1019-4-4

13. MT2-1049-16-5



14. MT2-1048-9-1

L.1: Merrell Tract- Unibo Ramey Incised Rim sherds number 11; 12; 13 and 14: Late Stirling / Early Moorehead phase.

0 1 cm

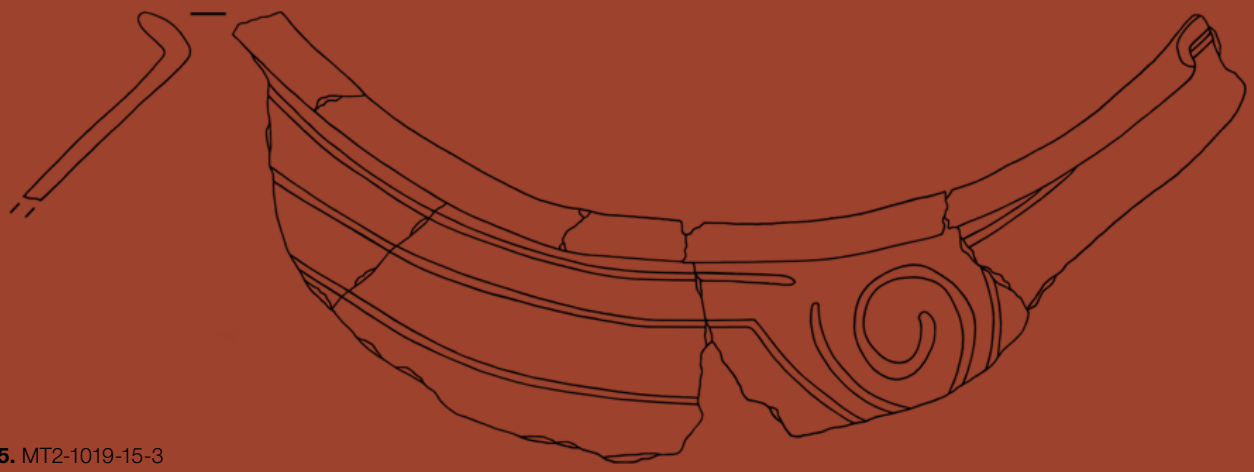
15. MT2-1019-15-3

16. MT2-1049-4-2

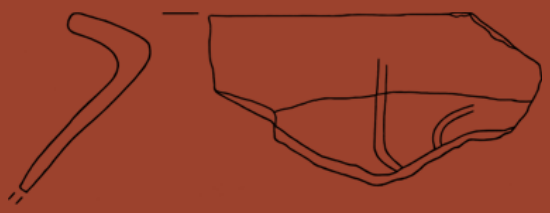
M: Merrell Tract- Unibo Ramey Incised Rim sherds number 15 and 16: Late Stirling / Early Moorehead phase.

Drawings

0 1 cm



15. MT2-1019-15-3



16. MT2-1049-4-2

M.1: Merrell Tract- Unibo Ramey Incised Rim sherds number 15 and 16: Late Stirling / Early Moorehead phase.

0 1 cm

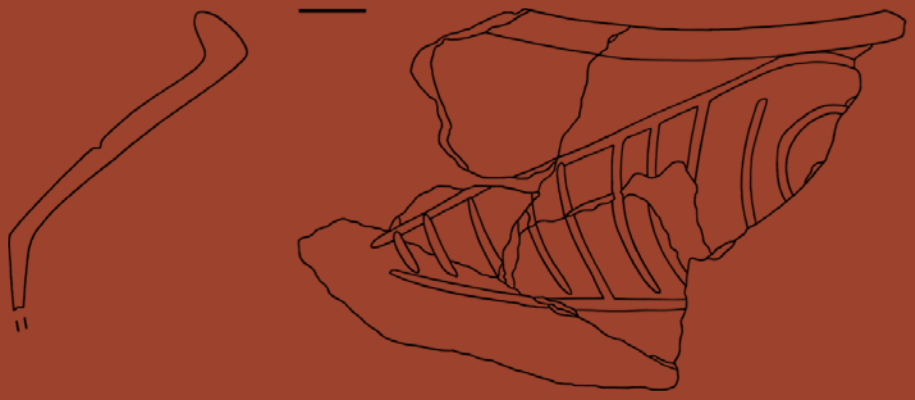
17. MT2-1015-1-6

18. MT2-1015-7-1

N: Merrell Tract- Unibo Ramey Incised Rim sherds number 17 and 18: Early Moorehead phase.

Drawings

0 1 cm



17. MT2-1015-1-6

18. MT2-1015-7-1

N.1: Merrell Tract- Unibo Ramey Incised Rim sherds number 17 and 18: Early Moorehead phase.

Photos

0 1 cm

19. MT2-1019-29-3

20. MT2-1049-3-1

21. MT2-1049-28-1

22. MT2-1049-80-7

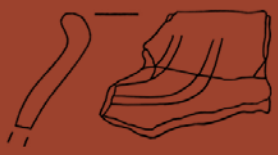
O: Merrell Tract- Unibo Ramey Incised Rim sherds number 19; 20; 21 and 22: Moorehead phase.

Drawings

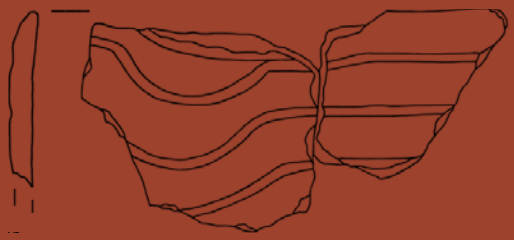
0 1 cm

19. MT2-1019-29-3

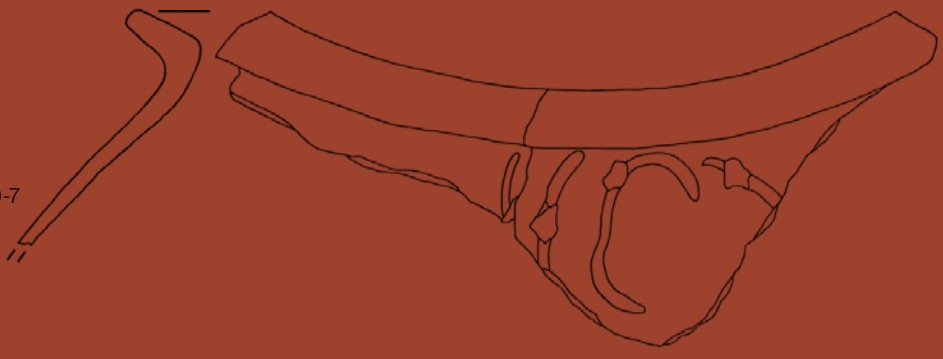
20. MT2-1049-3-1



21. MT2-1049-28-1



22. MT2-1049-80-7



O.1: Merrell Tract- Unibo Ramey Incised Rim sherds number 19; 20; 21 and 22: Moorehead phase.

Unit_N	Bag_N	PZ/Feature_N	Level	Excavation Year	Area	Rim_N	Weight	Temper	Form	Vessel Type	Chronology
N212-W236	MT2-1015-1	1015	Lvl 3	2012	Area C	MT2-1015-1-5	158,4	shell	Jar	Ramey Incised	Late Stirling/Early Moorehead
N212-W236	MT2-1015-1	1015	Lvl 3	2012	Area C	MT2-1015-1-6	59,3	shell	Jar	Ramey Incised	Early Moorehead
N213-W236	MT2-1015-4	1015	Lvl 3	2012	Area C	MT2-1015-4-1	18,5	shell	Jar	Ramey Incised	Late Stirling/Early Moorehead
N214-W235	MT2-1015-7	1015	Lvl 3	2012	Area C	MT2-1015-7-1	47	shell	Jar	Ramey Incised	Early Moorehead
N213-W235	MT2-1019-1	1019	Lvl 4	2012	Area C	MT2-1019-1-1	21,5	shell	Jar	Ramey Incised	Late Stirling
N212-W236	MT2-1019-15	1019	Lvl 4	2012	Area C	MT2-1019-15-1	12,8	shell	Jar	Ramey Incised	Late Stirling
N212-W236	MT2-1019-15	1019	Lvl 4	2012	Area C	MT2-1019-15-2	28,9	shell	Jar	Ramey Incised	Late Stirling
N212-W236	MT2-1019-15	1019	Lvl 4	2012	Area C	MT2-1019-15-3	119,3	shell	Jar	Ramey Incised	Late Stirling/Early Moorehead
N213-W237	MT2-1019-2	1019	Lvl 4	2012	Area C	MT2-1019-2-1	76,6	shell	Jar	Ramey Incised	Stirling
N212-W236	MT2-1019-29	1019	Lvl 7	2012	Area C	MT2-1019-29-3	9,5	shell	Jar	Ramey Incised	Moorehead
N213-W235	MT2-1019-4	1019	Lvl 5	2012	Area C	MT2-1019-4-4	16	shell	Jar	Ramey Incised	Late Stirling/Early Moorehead
N213-W237	MT2-1019-9	1019	Lvl 6	2012	Area C	MT2-1019-9-3	12,4	shell	Jar	Ramey Incised	Late Stirling
N212-W235	MT2-1020-15	1020	Lvl 7	2013	Area C	MT2-1020-15-3	95,7	shell	Jar	Ramey Incised	Late Stirling
N215-W237	MT2-1048-9	1048	Lvl 7	2013	Area C	MT2-1048-9-1	17,5	shell	Jar	Ramey Incised	Late Stirling/Early Moorehead
N184-W243	MT2-1049-16	1049	Lvl 4	2015	Area E	MT2-1049-16-5	34	shell	Jar	Ramey Incised	Late Stirling/Early Moorehead
N184-W244	MT2-1049-28	1049	Lvl 4	2015	Area E	MT2-1049-28-1	19,8	shell	Bowl	Ramey Incised	Moorehead
N184-W243	MT2-1049-3	1049	Lvl 4	2014	Area E	MT2-1049-3-1	6,5	shell	Jar	Ramey Incised	Moorehead
N184-W243	MT2-1049-4	1049	Lvl 4	2014	Area E	MT2-1049-4-2	25	shell	Jar	Ramey Incised	Late Stirling/Early Moorehead
N183-W244	MT2-1049-43	1049	Lvl 5 SW 1/4	2015	Area E	MT2-1049-43-1	11	shell	Jar	Ramey Incised	Mississippian
N183-W243	MT2-1049-80	1049	Lvl 4	2015	Area E	MT2-1049-80-7	50,4	shell	Jar	Ramey Incised	Moorehead
N215-W237	MT2-1052-1	1052	Lvl 8	2013	Area C	MT2-1052-1-6	27,4	shell	Jar	Ramey Incised	Stirling
N192-W240	MT2-92-40-2	PZ	Lvl 4	2014	Area A	MT2-92-40-2-1	20,6	shell	Jar	Ramey Incised	

Table.B: Merrell Tract- Unibo Ramey Incised Rim sherds Database Records.

Deco Tec	Surface Treat	Surface (Int)	Design	Decoration Loc	Wall Thickness	Rim Width	Rim Type	Lip Type	Shoulder Type	Comments
Incised	Plain	Plain	Scroll	on shoulder	0,7	1,5	Everted	Extruted	Slightly Angular	+ bodysh. From bag: 1019-20, 1019-18, 1015-1
Incised	Plain	Plain	Scroll	on shoulder	0,6	1,5	Everted	Extruted	Angular	+ bodysh. from bag: 1015-1
Incised	Plain	Plain	Curvilinear	on shoulder	0,5	1,5	Everted	Extruted		
Incised	Black-Slipped	Red-Slipped	Curvilinear	on shoulder	1	1,6	Everted	Extruted		
Incised	Plain	Plain	Curvilinear	on shoulder	0,5	1,4	Everted	Extruted		+ rimsh. from bag 1019-4
Incised	Plain	Red-Slipped	Rectilinear	on shoulder	0,4	1,5	Everted	Extruted		
Incised	Red-Slipped	Red-Slipped	Rectilinear	on shoulder	0,6	0,9	Incurved	Rolled		
Incised	Red-Slipped	Red-Slipped	Mixtilinear	on shoulder	0,5	1,6	Everted	Extruted		+ rimsh. from bag: 1019-27, 1019-14
Incised	Plain	Plain	Scroll	on shoulder	0,5	1,5	Everted	Extruted	Angular	+ bodysh. from bag: 1019-2, 1019-6, 1015-4
Incised	Black-Slipped	Black-Slipped	Rectilinear	on neck	0,4	1,4	Everted	Extruted		
Incised	Plain	Plain	Curvilinear	on neck	0,5	1,5	Everted	Extruted		N.3 attached to 1019-1
Incised	Plain	Red-Slipped	Rectilinear	on rim	0,7	1	Vertical	Flatened		
Incised	Plain	Plain	Mixtilinear	on neck	0,6	1,4	Everted	Extruted	Angular	out of bag
	Black-Slipped	Red-Slipped					Flaired	Rounded		
Incised	Black-Slipped	Plain	Mixtilinear	on shoulder	0,6	1,5	Everted	Extruted	Slightly Angular	+ 1 rimsh. From 1049-16-4
Incised	Black-Slipped	Black-Slipped	Mixtilinear	on rim			Vertical	Rounded		PP2//+ PP.FF moved from Diag 1049-25
Incised	Plain	Plain	Curvilinear	on neck			Incurved	Rounded		
Incised	Plain	Plain	Mixtilinear	on shoulder	0,5	2,1	Everted	Extruted		N.1 attached to 1049-5
	Red-Slipped	Plain					Flaired	Flatened		PP5
Incised	Black-Slipped	Plain	Curvilinear	on shoulder	0,5	1,9	Everted	Extruted		
Incised	Red-Slipped	Plain	Curvilinear	on shoulder			Vertical	Rounded		
	Black-Slipped	Plain					Everted	Rounded		

References

References

ALT, S. M., 2006a. *Cultural Pluralism and Complexity: Analyzing a Cahokian Outpost.* Unpublished PhD diss., University of Illinois. Urbana, IL.

ALT, S. M., 2006b. The Power of Diversity: The Roles of Migration and Hybridity in Culture Change. In *Leadership and Polity in Mississippian Society*, B. M. Butler and P. D. Welch, ed. Pp. 289-308. Center for Archaeological Investigations, Occasional Paper No. 33. Southern Illinois University, Carbondale.

ALT, S. M., 2008. Unwilling Immigrants: Culture, Change, and the "Other" in Mississippian Societies. In *Invisible Citizens: Slavery in Ancient Pre-State Societies*, Cathy M. Cameron, ed. Pp 205-222. University of Utah Press, Salt Lake City.

ALT, S. M. and PAUKETAT, T. R., 2010. *Compound Problems in Mississippian Archaeology.* Illinois Archaeology, Vol. 22 (2): 379-369.

ALT, S. M., KRUCHTEN, J. D. and PAUKETAT, T. R., 2010. The Construction and Use of Cahokia's Grand Plaza. *Journal of Field Archaeology* 35(2): 131-146.

ANDERSON, D. G., 1994a. *The Savannah River Chiefdoms: Political Change in the Late Prehistoric Southeast.* Tuscaloosa: University of Alabama Press.

ANDERSON, D. G., 1994b. Factional Competition and the Political Evolution of Mississippian Chiefdoms in the Southeastern United States. In *Factional Competition in the New World*, ed. by E.M. Brumfiel and J.W. Fox, pp. 61-76. Cambridge: Cambridge University Press.

ANDERSON, J., 1997. A Cahokia Palisade Sequence. In *Explorations into Cahokia Archaeology*, ed. by Melvin Fowler, pp. 89-99. Illinois Archaeological Survey, Bulletin 7. Urbana.

ARNOLD, D. E., 1985. *Ceramic Theory and Cultural Process*. Cambridge: Cambridge University Press.

ARNTZEN, K., 1998. *Preliminary Investigations at the Allsheid Rockshelter* (11M0932), Monroe County, Southwestern Illinois. MA thesis, Department of Anthropology, Washington University in St. Louis.

BALTUS, M. R., 2014. *Transforming material relationships: 13th Century revitalization of Cahokian religious-politics.* PhD diss., University of Illinois Urbana Champaign.

BARDOLPH, D. N., 2014. Evaluating Cahokian Contact and Mississippian Identity Politics in the Late Prehistoric Central Illinois River Valley. *American Antiquity* 79:69–89.

BAREIS, C. J. and PORTER, J. W., 1984. *American Bottom Archaeology.* Urbana, University of Illinois Press.

BAREIS, C. J. and PORTER, J. W., 1965. Megascopic ah Petrographic Analysis of a Foreign Pottery Vessel from the Cahokia Site. *American Antiquity* 31:95-101.

BARTRAM, W., 1955. [1792] *Travels of William Bartram*. Reprint, Dover Publications, Mineola, N.

BENCHLEY, E., 1974. *Mississippian Secondary Mound Loci: A Comparative Functional Analysis in a Time-space Perspective.* PhD diss., University of Wisconsin, Milwaukee.

BENN, D. W., 1995. Woodland People and the Roots of the Oneota. In *Oneota Archaeology: Past, Present, and Future*, edited by William Green, pp. 91–139. Report 20. Office of the State Archaeologist, University of Iowa, Iowa City.

BINFORD, L. R. 1972. Archaeology as Anthropology. In *An Archaeological Perspective*, pp. 20-32. New York: Seminar Press.

BLITZ, J. H., 1993a. *Ancient Chiefdoms of the Tombigbee.* Tuscaloosa: University of Alabama Press.

BLITZ, J. H., 1999. Mississippian Chiefdoms and the Fission-Fusion Process. *American Antiquity* 64 (4): 577-592.

BLANTON, R. E., FEINMAN, G. M., KOWALEWSKI, S. A. and PEREGRINE, P. N., 1996. A Dual- Processual Theory for the Evolution of Mesoamerican Civilization. *Current Anthropology* 37 (1):1-14.

BRAIN, J. P., and PHILLIPS, P., 1996. *Shell Gorgets: Styles of the Late Prehistoric and Protohistoric Southeast.* Peabody Museum of Archaeology and Ethnology, Harvard University. Cambridge.

BRAUN, D. P., 1991. Why Decorate a Pot? Midwestern Household Pottery, 200 B.C. -A.D. 600. *Journal of Anthropological Archaeology* 10:360-397.

BROWN, I. W., 1980. *Salt and the Eastern North American Indian: An Archaeological Study.* Peabody Museum, Harvard University Survey Bulletin 6.

BROWN, J. A., 1975. Spiro Art and its Mortuary Contexts. In *Death and the Afterlife in PreColumbian America*, edited by E. P. Benson, pp. 1-32. Dumbarton Oaks Research Library and Collections, Washington.

BROWN, J. A., 1976 The Southern Cult Reconsidered. *MidContinental Journal of Archaeology* 1:115-135

BROWN, J. A., 1996. *The Spiro Ceremonial Center. The Archaeology of Arkansas Valley Caddoan Culture in Eastern Oklahoma.* Memoirs of the Museum of Anthropology University of Michigan, Ann Arbor.

BROWN, J. A., 2001. *The Invention of an Art Style as an Instrument of Elite Control in the Mississippian Southeast*. Paper presented at the 58th annual meeting of the Southeastern Archaeological Conference, November 14-17, 2001, Chattanooga, TN.

BROWN, J. A., 2003. *The Cahokia Mound* 72- Sub 1 Burials as Collective Representation. Wisconsin Archeologist 84:83–99.

BROWN, J. A., 2007. On the Identity of the Birdman within Mississippian Period Art and Iconography. In *Ancient Objects and Sacred Realms: Interpretations of Mississippian Iconography,* edited by F. Kent Reilly, III, and James F. Garber, pp. 56–106. University of Texas Press, Austin.

BROWN, J. A., HOLLEY, G. R., LOPINOT, N. H. and WOOD, W. I., 1988. *Cultural and Natural Explanations for Buried Late Prehistoric Sites in the American Bottom.* Paper presented at the 53rd annual meeting of the Society of American Archaeology, Phoenix, AZ

BROWN, J. A., BRUES M. A. et al., 1996. *The Spiro Ceremonial Center: the archaeology of Arkansas Valley Caddoan Culture in Eastern Oklahoma*. Ann Arbor: University of Michigan. Museum of Anthropology.

BROWN, J. A. and. KELLY, J. E., 2000. Cahokia and the Southeastern Ceremonial Complex. In *Mounds, Modoc, and Mesoamerica*: Papers in Honour of Melvin L. Fowler, Steven R.

Ahler. Illinois State Museum Scientific Papers, Springfield.

BROWN, J. A. and. KELLY, J. E., 2015. Surplus Labour, Ceremonial Feasting, and Social Inequality at Cahokia. A study in social process. In *Surplus. The Politics of Production and the Strategies of Everyday Life.* Morehart Christopher T. and De Lucia Kristin, ed. Pp. 221-241. University Press of Colorado.

BRUNSON, J. L., 1985. Corrugated Ceramics as Indicators of Interaction Spheres. In *Decoding Prehistoric Ceramics*, ed. by B. A. Nelson, pp. 102-127. Carbondale: Southern Illinois University Press.

BYERS, M. A., 2006. *Cahokia: A World Renewal Cult Heterarchy.* University Press of Florida, Cainsville.

CHAPPELL, S. A. K., 2002. *Cahokia: Minor of the Cosmos.* University of Chicago Press, Chicago.

COBB, C. R., 1993. Archaeological Approaches to the Political Economy of Non-stratified Societies. *Archaeological Method and Theory* 5: 43-100.

COLLINS, M. J., 1990. *The Archaeology of the Cahokia Mounds ICTII: structures.* Illinois Cultural Resources Study No. 10. Illinois Historic Preservation Agency, Springfield.

CONRAD, L. A., 1991. The Middle Mississippian Cultures of the Central Illinois Valley. In *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest.* Thomas E. Emerson and R. Barry Lewis (Eds.), pp. 119–156. University of Illinois Press, Urbana.

CONRAD, L. A., 1993. Two Elaborate Middle Mississippian Graves from the Kingston Lake Site, Peoria County, Illinois. In *Highways to the Past: Essays on Illinois Archaeology* in Honour of Charles J. Bareis, Illinois Archaeology, Vol. 5. Thomas E. Emerson, Andrew C. Fortier, and Dale L. McElrath (Eds.), pp. 297–314. Illinois Archaeological Society, Springfield. Costin, Cathy L. 2005 The Study of Craft.

CROWN, P. L., EMERSON, T. E., GU, J., HURST, J. W., PAUKETAT, T. R. and WARD, T., 2012. *Ritual Black Drink consumption at Cahokia.* Proceedings of the National Academy of Sciences 109 (35): 13944-13949.

DALAN, R. A., 1989. *Geophysical investigations of the prehistoric Cahokia palisade sequence.* Illinois Cultural Resources Study No. 8. Illinois Historic Preservation Agency, Springfield.

DALAN, R. A., 1993. *Landscape modification at the Cahokia Mounds Site: Geophysical evidence of culture change.* PhD diss., University of Minnesota.

DALAN, R. A., HOLLEY, G. R., and WATTERS, H. W. Jr., 1993. *An Assessment of Moorehead's Investigations at Mound 56, Cahokia Mounds State Historic Site.* Report submitted to the Illinois Historic Preservation Agency, Springfield, IL.

DALAN, R. A., HOLLEY, G. R., WOODS, W. I., WATTERS, H. W. Jr. and KOEPKE J. A., 2003. *Envisioning Cahokia: A Landscape Perspective.* Northern Illinois University Press, DeKalb.

DEBOER, W. R. and LATHRAP. D. W., 1979. The Making and Breaking of Shipibo-Canibo Ceramics. In *Ethnoarchaeology: Implications of Ethnography for Archaeology*, ed. by C. Kramer, pp. 102-138. New York: Columbia University Press.

DELANEY-RIVERA, C., 2000. *Mississippian and Late Woodland Cultural Interaction and Regional Dynamics: A View from the Lower Illinois River Valley.* PhD dissertation, Department of Anthropology, University of California, Los Angeles.

DELANEY-RIVERA, C., 2004. *From Edge to Frontier: Early Mississippian Occupation of the Lower Illinois River Valley.* Southeastern Archaeology 23:41–56.

DIETLER, M., 1996. Feasts and Commensal Politics in the Political Economy: Food, Power, and Status in Prehistoric Europe. In *Food and the Status Quest: An Interdisciplinary Perspective,* ed by P Wiessner and W. Schiefenhovel, pp. 87-126. Providence: Berghahn Books.

DIETLER, M., 2010. *Archaeologies of Colonialism: Consumption, Entanglement and Violence in Ancient Mediterranean France.* University of California Press, Berkeley.

DIETLER, M., and HAYDEN, B., 2001. *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics and Power.* Washington, D. C.: Smithsonian Institution Press.

DOMENICI, D. and VALESE, I., 2016. Toward an Understanding of Native American Socio-Political Complexity: Italian Archaeological Researches at Cahokia (Illinois, USA). *Thule. Rivista Italiana di Studi Americanistici*, 38-41 (2015/2016): 37-65.

DRENNAN, R. D., 1976. *Fabrica San Jose and Middle Formative Society in the Valley of Oaxaca.* Memoirs of the Museum of Anthropology, University of Michigan N. 8 Ann Arbor: University of Michigan.

DUPIECH, CAVALERI. D., 2016. *Los Textiles Mayas Contemporáneos de Yucatán en el Espejo del Códice Tro-cortesiano.* Anales del Museo de América, XXIV, pp.169-210.

EMERSON, T. E., 1989. Water, Serpents, and the Underworld: An Exploration into Cahokia Symbolism. In *The Southeastern Ceremonial Complex: Artifacts and Analysis,* P. Galloway (Ed). pp. 45-92. University of Nebraska Press, Lincoln.

EMERSON, T. E., 1991a. Some Perspectives on Cahokia and the Northern Mississippian Expansion. In *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest,* Thomas E. Emerson and R. Barry Lewis (Eds.), pp. 221–236. University of Illinois Press, Urbana.

EMERSON, T. E., 1991b. The Apple River Mississippian Culture of Northwestern Illinois. In *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest,* Thomas E. Emerson and R. Barry Lewis (Eds.), pp. 221–236. University of Illinois Press, Urbana.

EMERSON, T. E., 1995. *Settlement, Symbolism, and Hegemony in the Cahokian Countryside.* Unpublished Ph.D. dissertation, University of Wisconsin-Madison.

EMERSON, T. E., 1997a. Elite Ideology and the Mississippian Cosmos. In *Cahokia: Domination and Ideology in the Mississippian World*, Timothy R. Pauketat and Thomas E. Emerson (Eds.), pp. 190–228. University of Nebraska Press, Lincoln.

EMERSON, T. E., 1997b. *Cahokia and the Archaeology of Power.* University of Alabama Press, Tuscaloosa.

EMERSON, T. E., 2002. An Introduction to Cahokia 2002: Diversity, Complexity, and History. *Midcontinental Journal of Archaeology* 27(2): 127-148.

EMERSON, T. E. and JACKSON, D. K. 1984. *The BBB Motor Site.* Urbana: University of Illinois Press.

EMERSON, T. E. and BARRY LEWIS, R., (Eds.), 1991. *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest.* University of Illinois Press, Urbana.

EMERSON, T. E., MILLHOUSE, P. G. and SCHROEDER, M. B., 2007. *The Lundy Site and the Mississippian Presence in the Apple River Valley.* Wisconsin Archeologist 88(2):1–123.

EMERSON, T. E., Alt, S. M. and PAUKETAT T. R., 2008. Locating American Indian Religion at Cahokia and Beyond. In *Religion, Archaeology, and the Material World*, Lars Fogelin (Eds.), pp. 216–236. Occasional Paper No. 36. Center for Archaeological Investigations, Southern Illinois University, Carbondale.

ESAREY, D., 2000. Late Woodland Maples Mills and Mossville Phase Sequence in the Central Illinois River Valley. In *Late Woodland Tradition and Transformation Across the Midcontinent,* Thomas E. Emerson, Dale L. McElrath, and Andrew C. Fortier (Eds.), pp. 387–410. University of Nebraska Press, Lincoln.

FINNEY, F. A., 1993. *Cahokia's Northern Hinterland as Viewed from the Fred Edwards Site in Southwest Wisconsin: Intrasite and Regional Evidence for Production, Consumption, and Exchange.* PhD dissertation, Department of Anthropology, University of Wisconsin, Madison.

FORD, J, A., and WILLEY, G. R., 1941. An Interpretation of the Prehistory of the Eastern United States. *American Anthropologist* 43:325-363.

FORTIER, A. C. and McELRATH, D. L., 2002. Deconstructing the Emergent Mississippian Concept: The Case for the Terminal Late woodland in the American Bottom. *Midcontinental Journal of Archaeology*, 27(2):171-215.

FOWLER, M. L., 1975. A Pre-Columbian Urban Center on the Mississippi. *Scientific American* 233(2):92-101

FOWLER, M. L., 1997. *The Cahokia Atlas: a historical atlas of Cahokia archaeology.* (Revised edition of the 1989 Illinois Historic Preservation Agency edition). University of Illinois Press, Urbana.

FOWLER, M. L. & Hall, L. R., 1972. Archaeological Phases at Cahokia. *Illinois State Museum Research Series, Papers in Anthropology.* Illinois State Museum Springfield, IL.

FOWLER, M. L. & Hall, L. R, 1975. Archaeological Phases at Cahokia. In *Perspectives in Cahokia Archaeology.* Illinois Archaeological Survey Bulletin 10:1-14.

FOWLER, M. L., ROSE J., VANDER LEEST, B. and AHLER, S. A., 1999. *The Mound 72 Area: Dedicated and Sacred Space in Early Cahokia. Reports of Investigations No. 54.* Illinois State Museum, Springfield.

FRENCH, P., 2009. *An Examination of the Chronological Morphology of Ramey Incised Vessel.*

FRIBERG, C. M., 2017. *Cosmic negotiations: Cahokian religion and Ramey Incised pottery in the northern hinterland*, Southeastern Archaeology, DOI.

GALLOWAY, P., 1989. *The Southeastern Ceremonial Complex: Artifacts and Analysis.* Lincoln: University of Nebraska Press.

GALLOWAY, P., 1998. Where Have All the Menstrual Huts Gone? The Invisibility of Menstrual Seclusion in the Late Prehistoric Southeast. In *Reader in Gender Archaeology,* ed. by K. Hays Gilpin and D.S. Whitley, pp. 197-212. New York: Routledge.

GRAVES, W. M. and SPIELMANN, K. A. 2000. Leadership, Long-Distance Exchange, and Feasting in the Protohistoric Rio Grande. In *Alternative Leadership Strategies in the Prehistoric Southwest*, ed. by Barbara J. Mills, pp. 45-59. Tuscon: University of Arizona Press.

GREGG, M., 1975. *Settlement Morphology and Production Specialization: The Horseshoe Lade Site, A Case Study.* Ph.D. dissertation, Department of Anthropology, University of Wisconsin, Milwaukee.

GRIFFIN, J. B., 1944. The De Luna Expedition and the "Buzzard Cult" in the Southeast. *Journal of the Washington Academy of Sciences*, 34:299-303

GRIFFIN, J. B., 1949. The Cahokia Ceramic Complexes. In *Proceedings of the Fifth Plains Conference for Archaeology,* J. L. Campe (Eds.), pp. 44–58. University of Nebraska, Lincoln.

GRIFFIN, J. B., 1952. An Interpretation of the Place of Spiro in Southeastem Prehistory. In *The Spiro Mound*, by H. W. Hamilton, pp. 89-106. The Missouri Archaeologist Vol. 14.

GRIFFIN, J. B., 1961. *Relationships Between the Caddoan Area and the Mississippi Valley.* Bulletin of the Texas Archeological Society 31:27-51.

GRIFFIN, J. B., 1985. Changing Concepts of the Prehistoric Mississippian Cultures of the Eastern United States. In *Alabama and the Borderlands: From Prehistory to Statehood* ed. by R.R. Badger and L.A Clayton, pp. 40-63. Tuscaloosa: University of Alabama Press.

GRIFFITH, R. J., 1981. *Ramey Incised Pottery*, Illinois Archaeological Society, Springfield.

HAGOPIAN, J., 1995. *Ceramic Vessels and Status Differentiation: A Case Study from Black Mesa, Arizona.* MA Thesis, Northern Arizona University.

HALL, R. L., 1966. *Cahokia Chronology.* Paper presented at the Annual Meeting of the Central States Anthropological Society, St. Louis

HALL, R. L., 1991. Cahokia Identity and Interaction Models of Cahokia Mississippian. In *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest,* Thomas E. Emerson and R. Barry Lewis (Eds.), pp. 3–34. University of Illinois Press, Urbana.

HALLY, D. J. and. RUDOLPH, J. L., 1986. *Mississippi Period Archaeology of the Georgia Piedmont.* University of Georgia Laboratory of Archaeology Series, Report No. 24

HAMLIN, M. J., 2004. *Sociopolitical Significance of Moorehead Phase Ceramic Assemblage Variation in the Cahokia Area*. PhD diss., Washington University, Saint Louis.

HANENBERGER, N. H., 1990. The Karol Rekas Site (11-Ms-1255). In *Selected Early Mississippian Household Sites in the American Bottom,* by D.K. Jackson and N.H. Hanenberger, pp. 425-509. American Bottom Archaeology, FAI-270 Site Reports, Vol. 22. Urbana: University of Illinois Press.

HARN, A. D., 1991. The Eveland Site: Inroad to Spoon River Mississippian Society. In *New Perspectives on Cahokia: Views from the Periphery,* James B. Stoltman (Eds.), pp. 129–153. Monographs in World Archaeology No. 2. Prehistory Press, Madison, Wisconsin.

HAYDEN, B., 2001. Fabulous Feasts: A Prolegomenon to the Importance of Feasting. In *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power,* ed. by Michael Dietler and Brian Hayden, pp. 23-64. Washington, D.C.: Smithsonian Institution Press.

HENRICKSON, E. F. and McDONALD, M. A., 1983. Ceramic Form and Function: An Ethnographic Search and an Archaeological Application. *American Anthropologist* 85:630-645.

HILGEMAN, S. L., 2000. *Pottery and Chronology at Angel.* Tuscaloosa: University of Alabama Press.

HOLLEY, G. R., 1989. *The Archaeology of the Cahokia Mounds ICT II*: Ceramics. Illinois Cultural Resources Study No. 11. Illinois Preservation Agency, Springfield.

HOLLEY, G. R., 1990. *Investigations at the Kunnemann Tract, Cahokia Mounds Historic Site, Madison County, Illinois*. Report submitted to the Illinois Historic Preservation Agency, Springfield, IL.

HOLLEY, G. R., DALAN, R., and SMITH P. A., 1993. Investigations in the Cahokia Site Grand Plaza, *American Antiquity* (58-2) pp. 306-319. Society for American Archaeology.

ISEMINGER, W. R., 2010. *Cahokia Mounds: America's first City.* History Press.

ISEMINGER, W. R. et al., 1990. *The archaeology of the Cahokia Palisade.* Illinois Cultural Resources Study, No. 14 Springfield: Illinois Historic Preservation Agency.

ISEMINGER, W. R and KELLY, J. E., 1995. Partitioning the Sacred Precinct. *Cahokian 3, no. 5* (Summer 1995).

JACKSON, D. K., FORTIER A. C. and WILLIAMS J.A., 1992. The Sponemann Site 2 (11-MS-517): The Mississippian and Oneota Occupations. *American Bottom Archaeology, FAI-270 Site Reports Vol. 24.* University of Illinois Press, Urbana.

JOHNSON, E. S., 2000. The Politics of Potter: Material Culture and Political Process among Algonquians of Seventeenth-Century Southern New England. In *Interpretations of Native American Life: Material Contributions to Ethnohistory,* ed. By M. S. Nassaney and E. S. Johnson, pp. 118-145. Gainesville: University Press of Florida .

KELLY, A. R., 1933. Some Problems of Recent Cahokia Archaeology. *Transactions of the Illinois State Academy of Science* 25(4):101-103.

KELLY, L. S., 2001. A Case of Ritual Feasting at the Cahokia Site. In *Feasts: Archaeological and Ethnographic Perspectives on Food, Politics, and Power.* Dietler M., ed. Pp. 334-367. University of Alabama Press, Tuscaloosa.

KELLY, J. E., 1980. *Formative Developments at Cahokia and the Adjacent American Bottom: A Merrell Tract Perspective.* Unpublished PhD diss., University of Wisconsin, Madison.

KELLY, J. E., 1982. *Formative Developments at Cahokia and the Adjacent American Bottom: A Merrell Tract Perspective.* 1980 PhD dissertation, University of Wisconsin-Madison. Published by Archaeological Research laboratory, Western Illinois University, Macomb, 2 volumes.

KELLY, J. E., 1990a. The Range Site Community Patterns and the Mississippian Emergence. In *The Mississippian Emergence,* Bruce D. Smith, ed. Pp. 67-112. Smithsonian Institution Press, Washington, DC.

KELLY, J. E., 1990b. The Emergence of Mississippian Culture in the American Bottom Region. In *The Mississippian Emergence*, Bruce D. Smith, ed. Pp. 113-152. Smithsonian Institution Press, Washington, DC.

KELLY, J. E., 1991a. The Evidence for Prehistoric Exchange and Its Implications for the Development of Cahokia. In *New Perspectives on Cahokia: Views from the Periphery,* James B. Stoltman ed., pp. 65–92. Monographs in World Archaeology No. 2. Prehistory Press, Madison, Wisconsin.

KELLY, J. E., 1991b. Cahokia and Its Role as a Gateway Center in Interregional Exchange. In *Cahokia and the Hinterlands: Middle Mississippian Cultures of the Midwest.* Emerson, T. E. and Barry Lewis, R., (Eds.), University of Illinois Press, Urbana.

KELLY, J. E., 1994. *The Archaeology of the East St. Louis Mound Center: Past and Present.*

KELLY, J. E., 1995. *The Sand Prairie Phase Occupation of the Merrell Tract, Cahokia. Unpublished manuscript. Illinois Archaeology* vol. 6 (1 and 2), pages 1-57.

KELLY, J. E., 1996a. Redefining Cahokia: Principles and Elements of Community Organization. In *The Ancient Skies and Sky Watchers of Cahokia: Woodhenges, Eclipses, and*

Cahokian Cosmology, Melvin L. Fowler ed.

KELLY, J. E., 1996b. *The Public Architecture on the Merrell Tract, Cahokia.* Draft report submitted to the Cahokia Mounds Museum Society, Collinsville. Central Mississippi Valley Archaeological Research Institute, Columbia, IL. The Wisconsin Archaeologist 77 (3-4):97-119.

KELLY, J. E., 1997a. Stirling-Phase Sociopolitical Activity at East St. Louis and Cahokia. In *Cahokia: Domination and Ideology in the Mississippian World*, T. R. Pauketat, ed. Pp. 141-166. University of Nebraska Press, Lincoln.

KELLY, J. E., 1997b. *From the Ditch: The Anatomy of a Moorehaed Phase House Complex along Kingshighway.* St. Clair County, Illinois. Unpublished manuscript.

KELLY, J. E., 2000. *The Cahokia Mounds.* John E. Kelly ed.; reprint of Moorehead's 1922, 1923 and 1929 publications of his research at Cahokia. Classics in Southeastern Archaeology Series, University of Alabama Press, Tuscaloosa.

KELLY, J. E., 2001. *The Historical and Distributional Significance of Wells Incised Plates.* Paper presented at the 58th annual Southeastern Archaeological Conference, Chattanooga, TN.

KELLY, J. E., 2008 (2009). Contemplating Cahokia's Collapse. In *Global Perspectives on the Collapse of Complex Systems.* Edited by J. A. Railey and R. M. Reycraft. Maxwell Museum of Anthropology, Anthropological Papers No.8, Albuquerque, NM.

KELLY, J. E., FINNEY, D. L., et al., 1984. Late Woodland Period. In *American Bottom Archaeology,* ed by C. J. Bareis and J. W. Porter, pp 104-127. Urbana: University of Illinois Press.

KELLY, J. E., OZUK, S. J. and WILLIAMS, J., 1990. The Renge Site 2: The Emergent Mississippian Dohack and Range Phase Occupations. *American Bottom Archaeology,* FAI-270 Site Reports 20. Urbana University of Illinois Press.

KELLY, J. E. and KOLDEHOFF, B., 1995. *The Sand Prairie phase occupation of the Merrell Tract, Cahokia.* Central Mississippi Valley Archaeological Research Institute. Draft Report submitted to the Cahokia Mounds Museum Society, Collinsville IL.

KELLY, J. E. and BROWN, J. A., 2001. *The University of Michigan Investigations in the American Bottom and Cahokia.* Paper presented in the symposium, An American Bottom Odyssey at the 47th Annual Meeting of the Midwest Archaeological Conference, La Crosse, WI.

KELLY, J. E., BROWN, J. A. and TRUBITT, M. B., 2001. *The Moorehead Phase Revisited: The Historical Context of Cahokia's Second Climax.* Paper presented at the 58th annual Southeastern Archaeological Conference, November 15-18, Chattanooga, TN.

KELLY, J. E., ISEMINGER, W. R. and VERMILION, M. R., 2008. *Defining Cahokia's Core: Proposal for Cahokia Palisade Project.* Report prepared for the Cahokia Mounds Museum Society, May 2008.

KELLY, J. E. and BROWN, J. A., 2014. Cahokia: The Processes and Principles of the Creation of an Early Mississippian City. In *Making Ancient Cities. Space and Place in Early Urban Societies*, Creekmore III A. T., ed. Pp. 292-336. Cambridge University Press.

KING, A., 1991. *Excavations at Mound B, Etowah:* 1954--1958. Unpublished M.A. Thesis, University of Georgia, Athens.

KING, A., 1994. *Chronological Placement of the Southeastern Ceremonial Complex at Etowah.* Paper presented at the 37th Annual Meeting of the Southeastern Archaeological Conference, Lexington.

KING, A., 2003. *Etowah. The Political history of a Chiefdom Capital.* The University of Alabama Press, Tuscaloosa and London.

KING, A, 2007. *Southeastern Ceremonial Complex. Chronology, Content, Context*. Edited by Adam King.University of alabama press Tuscaloosa

KNIGHT, V. J. Jr., 1986. The Institutional Organization of Mississippian Religion. *American Antiquity* 51:675-687.

KNIGHT, V. J. Jr., 2010. *Mound Excavations at Moundville: Architecture, Elites and Social Order.* The University of Alabama Press.

KNIGHT, V. J. Jr. and STEPONAITIS, V., 1998. *Archaeology of the Moundville Chiefdom.* Smithsonian Institution Press, Washington, DC.

KNIGHT, V. J. Jr., BROWN, J. A. and LANKFORD, G. E., 2001. *On the Subject Matter of Southeastern Ceremonial Complex Art*. Southeastern Archaeology 20:129–141.

KOLDEHOFF, B. and CARR P. J., 2001. Chipped Stone Technology: Patterns of Procurement, Production, and Consumption. In *Excavations at Wickliffe Mounds*, edited by Kit W. Wesler, pp. CD-ROM. University of Alabama Press, Tuscaloosa.

KRIEGER, A. D., 1945 An Inquiry into Supposed Mexican Influence on a Prehistoric "Cult" in the Southern United States. *American Anthropologist* 4 7:483-515.

LANKFORD, G. E., 2004. World on a String: Some Cosmological Components of the Southeastern Ceremonial Complex. In *Hero, Hawk, and Open Hand: American Indian Art of the Ancient Midwest and South*, edited by Richard F. Townsend, pp. 207–218. The Art Institute of Chicago, Yale University Press, New Haven, Connecticut.

LANKFORD, G. E., 2007. The Great Serpent in Eastern North America. In *Ancient Objects and Sacred Realms: Interpretations of Mississippian Iconography,* F. Kent Reilly, III, and James F. Garber (Eds.), pp. 107–135. University of Texas Press, Austin.

LANKFORD, G. E., REILLY, III F. K. and GARBER, J. F. (editors), 2011. *Visualizing the Sacred: Cosmic Visions, Regionalism, and the Art of the Mississippian World*. University of Texas Press, Austin.

LAURENCICH, L., 2011. ¿Es Uru, el Faber benefico, el mitico protector del textil andino?, in Solanilla, V. (ed.) *Actas V Jornadas Internacionales sobre Textiles Precolombinos*, Barcelona, Grup d'Estudis Precolombins nº6, pp.307-329.

LEVENTHAL, R. M., and BAXTER, K. H., 1988. The Use of Ceramics to Identify the Function of Copan Structures. In *Household and Community in the Mesoamerican Past*, ed. by R.R. Wilk and W. Ashmore, pp. 51-71. Albuquerque · University of New Mexico Press.

LEWIS, B. R. and STOUT, C., 1998. *Mississippian Towns and Sacred Spaces: Searching for an Architectural Grammar.* University of Alabama Press, Tuscaloosa.

LIGHTFOOT, K. G. and MARTINEZ, A., 1995. Frontiers and Boundaries in Archaeological Perspective. *Annual Review of Anthropology* 24:471–492.

LOPINOT, N. H., 1994. A New Crop of Data on the Cahokian Polity. In *Agricultural Origins and Development in the Midcontinent*, ed. by W. Green, pp. 127-153. Office of the State Archaeologist, Report 19. Iowa City.

LOPINOT, N. H. and WOODS, W. I., 1993. Wood Overexploitation and the Collapse of Cahokia. In *Foraging and Farming in the Eastern Woodlands*, ed, by C. M. Scarry, pp. 206-231.

Gainesville: University Press of Florida.

LORANT, S., 1946. *The New Wirld: The First Pictures of America*. New York: Duell, Sloan and Pearce.

MATTIOLI, M., 2017. *Report of the ceramic materials recovered from the Merrell Tract- Unibo excavations, Cahokia Site* (2011-2016). Unpublished report.

MATTIOLI, M., 2020. *The Ramey Incised Pottery of Cahokia (IL) USA: Diffusion and The Ramey Incised Pottery of Cahokia (IL) USA: Diffusion and Reinterpretation of its Iconographic Message*. Congreso Internacional sobre Iconografía Precolombina, Barcelona 2019. Actas. University of Nebraska – Lincoln, Zea E-Books.

McELRATH, D. L., WILLIAMS, J. A., MAHAR, T. O., and MEINKOTH, M. C., 1987. Emergent Mississippian and Mississippian Communities at the Radic Site (11-Ms-584). *American Bottom Archaeology*, FAI-270 Site Reports, Vol. 17. Urbana: University of Illinois Press.

MERHER, M. W., 1995. *Cahokia 's Countryside: Household Archaeology, Settlement Patterns, and Social Power*. DeKalb: Northern Illinois University Press.

MERHER, M. W., and COLLINS, J. M., 1995. Household Archaeology at Cahokia and Its Hinterlands. In *Mississippian Communities and Households*. Daniel Rogers and Bruce D. Smith, ed. Pp. 32-57. University of Alabama Press, Tuscaloosa.

MEINKOTH, M. C., 1993. Middle Mississippian Households in the Central Illinois River Valley: Examples from the Tree Row and Baker-Preston Sites. In *Highways to the Past: Essays on Illinois Archaeology* in Honour of Charles J. Bareis, Illinois Archaeology, Vol. 5, Thomas E. Emerson, Andrew C. Fortier, and Dale L. McElrath (Eds.), pp. 315–330. Illinois Archaeological Society, Springfield.

MICHALS, L. M., 1998. The Oliver Site and Early Moundville I Phase Economic Organization. In *Archaeology of the Moundville Chiefdom*, ed. by V.J. Knight, Jr. and V.P. Steponaitis, pp. 167-182. Washington D.C.: Smithsonian Institution Press.

MILLHOUSE, P. G., 2012. *The John Chapman Site and Creolization on the Northern Frontier of the Mississippian World*. PhD dissertation, Department of Anthropology, University of Illinois, Urbana-Champaign.

MILNER, G. R., 1983a. *The East St. Louis Stone Quarry Site Cemetery* (1 l-S-468). American Bottom Archaeology, FAI-270 Site Reports 1. Urbana: University of Illinois Press.

MILNER, G. R., 1983b. Part 3: Mississippian Sand Prairie Phase Mortuary Complex In the Florence Street Site, by T. E. Emerson, G. R. Milner and D. K. Jackson, pp 220-302. *American Bottom Archaeology*, FAI-270 Site Reports, Vol.2 Urbana: University of Illinois Press.

MILNER, G. R., 1984. Social and Temporal Implications of Variation among American Bottom Mississippian Cemeteries. In *American Antiquity*, 49 (3): 468-48.

MILNER, G. R., 1986. Mississippian period population density in a segment of the central Mississippi River valley. *American Antiquity* 51:227-238.

MILNER, G. R., 1990. The Late Prehistoric Cahokia Cultural System of the Mississippi River Valley: Foundations, Florescence and Fragmentation. *Journal of World Prehistory* 4(1):1- 43.

MILNER, G. R., 1991a. American Bottom Mississippian Culture: Internal Developments and External Relations. In *New Perspectives on Cahokia: Views from the Periphery*, ed. by J.B. Stoltman, pp. 29-47. Madison WI: Prehistory Press.

MILNER, G. R., 1996. Development and Dissolution of a Mississippian Society in the American Bottom, Illinois. In *Political Structure and Change in the Prehistoric Southeast United States*, ed. by J. Scarry, pp. 27-52. Gainesville: University Presses of Florida.

MILNER, G. R., 1998. *The Cahokia Chiefdom: The Archaeology of a Mississippian Society*. Smithsonian Institution Press, Washington, DC.

MILNER, G. R., EMERSON, T. E., JACKSON, D. K., McELRATH, D. L., FINNEY, F A. and ESAREY, D., 1984. Mississippian and Oneota Period. In *American Bottom Archaeology*, ed. by C.J. Bareis and J. W. Porter, pp. 158-186. Urbana: University of Illinois Press.

MOLLERUD, K. J., 2005. *Messages, Meanings and Motifs: An Analysis of Ramey Incised Ceramics at the Aztalan Site*. Master's thesis, Department of Anthropology, University of Wisconsin-Milwaukee, Milwaukee.

MONTOYA, J., 2008. *Los Tejidos Mayas. Espejos de una Cosmovisión.* Etnografisch Museum-Fundació Caixa de Girona.Cholsamaj. Guatemala.

MOOREHEAD, W. K., 1929. *The Cahokia Mounds*. University of Illinois Bulletin, Vol. 26, No. 4, Urbana.

MORSE, D. F. and MORSE, P. A., 1983. *Archaeology of the Central Mississippi Valley*. New York: Academic Press.

MULLER, J., 1986. *Archaeology of the Lower Ohio River Valley*. Orlando: Academic Press, Inc.

MULLER, J., 1997. *Mississippian Political Economy*. Plenum Press, New York.

MUÑOZ, S. E., GRULEY, K. E., MASSIE, A., FIKE, D. A., SCHROEDER, S., WILLIAMS, J. W., 2015. Cahokia's emergence and decline coincided with shifts of flood frequency on the Mississippian River. *Proceedings of the National Academy of Sciences* 112 (20): 6319-6324.

O'BRIEN, P. J., 1972. *A Formal Analysis of Cahokia Ceramics from the Powell Tract.* Monograph 3. Illinois Archaeological Survay, Urbana.

O'BRIEN, P. J., 1989. Cahokia: The Political Capital of the "Ramey" State? *North American Archaeologist* 10:275-292.

PANOFSKY, E., 1939. *Studies in Iconology: Humanistic Themes in the Art of the Renaissance.* Oxford University Press.

PAUKETAT, T. R., 1987b. A Functional Consideration of a Mississippian Domestic Vessel Assemblage. *Southeastern Archaeology* 6: 1-15.

PAUKETAT, T. R., 1989. Monitoring Mississippian Homestead Occupation Span and Economy Using Ceramic Refuse. *American Antiquity* 54:288-310.

PAUKETAT, T. R., 1992. The Reign and Ruin of the Lords of Cahokia: A Dialectic of Dominance. In *Lords of the Southeast: Social Inequality and the Native Elites of Southeastern North America,* ed. by A. W. Barker and T.R. Pauketat, pp. 31-52. Archaeological Papers 3. Washington D.C.: American Anthropological Association.

PAUKETAT, T. R., 1993a. *Temples for Cahokia Lords: Preston Holder's 1955-1956 excavations of Kunnemann Mound*. Memoirs of the Museum of Anthropology, University of Michigan, No. 26. Ann Arbor. Mich.: Museum of Anthropology, University of Michigan.

PAUKETAT, T. R., 1994. *The ascent of chiefs: Cahokia and Mississippian politics in native North America*. University of Alabama Press, Tuscaloosa.

PAUKETAT, T. R., 1997. Specialization, Political Symbols, and the Crafty Elite of Cahokia. *Southeastern Archaeology* 16:1–15.

PAUKETAT, T. R., 1998. *The Archaeology of Downtown Cahokia: The Tract 15-A and Dunham Tract excavations.* Studies in Archaeology No. 1, Illinois Transportation Archaeology Research 11 Program, University of Illinois, Urbana.

PAUKETAT, T. R., 2003. Resettled Farmers and the Making of a Mississippian Polity. *American Antiquity* 68:39–66.

PAUKETAT, T. R., 2004. *Ancient Cahokia and the Mississippians*. Cambridge University Press.

PAUKETAT, T. R., 2005. Stirling Phase Pottery. In *The Archaeology of the East St. Louis Mound Center, Part I: The Southside Excavations*. T. R. Pauketat, ed. Pp. 193-228. Transportation Archaeological Research Reports, No. 21. Illinois Transportation Archaeological Research Program, University of Illinois, Urbana.

PAUKETAT, T. R., 2007. *Chiefdoms and Other Archaeological Delusions*. Alta Mira Press, New York.

PAUKETAT, T. R., 2008. Founders' Cults and the Archaeology of Wa-Kan-Da. In *Memory Work: Archaeologies of Material Practices*, B. Mills and W. H. Walker, ed. Pp. 6179. School for Advanced Research Press, Santa Fe, New Mexico.

PAUKETAT, T. R., 2009. *Cahokia: Ancient America's Great City on the Mississippi.* Viking-Penguin Press, New York.

PAUKETAT, T. R., 2010. Of Leaders and Legacies in Native North America. In *The Evolution of Leadership and Complexity*, John Kantner, Kevin J. Vaughn, and Jelmer Eerkins (Eds.), pp. 169–192. School for Advanced Research, Santa Fe, New Mexico.

PAUKETAT, T. R., 2013. *An Archaeology of the Cosmos: Rethinking Agency and Religion in Ancient America*. Routledge, London.

PAUKETAT, T. R. and EMERSON, T. E., 1991. The Ideology of Authority and the Power of the Pot. *American Anthropologist* 93(4): 919941.

PAUKETAT, T. R. and EMERSON, T. E., 1997. *Cahokia: Domination and Ideology in the Mississippian World*. University of Nebraska Press, Lincoln.

PAUKETAT, T. R. and LOPINOT, N. H., 1997. Cahokian Population Dynamics. In *Cahokia: Domination and Ideology in the Mississippian World*. T. R. Pauketat and T. E. Emerson, ed. Pp. 103- 123. University of Nebraska Press, Lincoln.

PAUKETAT, T. R. and Alt, S. M., 2005. Agency in a Postmold? Physicality and the Archaeology of Culture Making. *Journal of Archaeological Method and Theory* 12:213–237.

PAUKETAT, T. R. and Alt, S. M., 2015. *Medieval Mississippians. The Cahokian World. Santa Fe, NM.* School for Advanced Research Press.

PEREGRINE, P. A. 1998. *Corporate and Network Political Strategies in the Evolution of Mississippian Societies*. Paper presented at the 63rd annual meeting of the Society for American Archaeology, Seattle, WA.

PERINO, G., 1971. The Mississippian Component at the Schild Site (No. 4), Greene County, Illinois. *Mississippian Archaeology in Illinois I: Site Reports from the St. Louis and Chicago Areas*. Illinois Archaeological Survey Bulletin 8:1–148.

PHILLIPS, P., 1940. Middle American Influences on the Archaeology of the Southeastern United States. In *The Maya and their Neighbors*, pp. 349-367. D. Appleton Century Co., New York.

PHILLIPS, P., FORD, A. J. and GRIFFIN, B. J., 1951. *Archaeological Survey in the Lower Mississippi Alluvional Valley*. Papers of the Peabody Museum of American Archaeology and Ethnology. Harvard University Vol. XXV Cambreidge, Massachusetts, U.S.A. Published by the Museum.

PHILLIPS, P. and BROWN, J. A., 1978. *Pre-Columbian Shell Engravings from the Craig Mound at Spiro, Oklahoma*, Part 1. Peabody Museum of Archaeology and Ethnology, Harvard University.

PHILLIPS, P. and BROWN, J. A., 1984. *Pre-Columbian Shell Engravings from the Craig Mound at Spiro, Oklahoma*. Peabody Museum Press, Cambridge, Massachusetts.

PORTER, W. J., 1962. *Temper in Bluff Pottery from the Cahokia Area*. Research Report No. 1, Southern Illinois University Museum Lithic Laboratory.

PORTER, W. J., 1963a. *Bluff Pottery Analysis- Thin Section Experiment No. 1: Thin Sectioning All Sherds from One Trash Pit* (C-484 through I C-521). Research Report No. 3, Southern Illinois University Museum Lithic Laboratory.

PORTER, W. J., 1963b. *Bluff Pottery Analysis- Thin Section Experiment No. 2: Analysis of Bluff Pottery Site, Madison County, Illinois*. Research Report No. 4, Southern Illinois University Museum Lithic Laboratory.

PORTER, W. J., 1974. *Cahokia Archaeology as Viewed from the Mitchell Site- A Satellite Community at A.D.* 1150-1200. PhD dissertation, University of Wisconsin.

RICHARDS, J. D., 1992. *Ceramics and Culture at Aztalan, A Late Prehistoric Village in Southeast Wisconsin*. PhD dissertation, Department of Anthropology, University of Wisconsin-Milwaukee, Milwaukee.

RIEFF, ANAWALT, P., 1992. *Archaeology Ancient Cultural Contacts between Ecuador, West Mexico, and the American Southwest: Clothing Similarities*, Latin American Antiquity, Vol. 3, No. 2 (Jun., 1992), pp. 114-129.

RINGBERG, J. E., 1996. *Ceramic Chronology and Mound Construction: A temporal Sequence for Mound 48*, Cahokia. M.A. thesis, Northern Illinois University.

RODNING, C. B., 2009. Mounds, Myths, and Cherokee Townhouses in Southwestern North Carolina. *American Antiquity* 74, 4: 627-663.

RODNING, C. B., 2010. Architectural Symbolism and Cherokee Townhouses. *Southeastern Archaeology* 29, 1: 59-79.

RODNING, C. B., 2011. Cherokee Townhouses: Architectural Adaptation to European Contact in the Southern Appalachians. *North American Archaeologist* 32, 2: 131-190.

ROGERS, J. D., MOORE, M. C. and GREAVES, R., 1982. *Spiro Archaeology: The Plaza*. Studies in Oklahoma's Past 10. Oklahoma Archaeological Society, Norman.

ROGERS, J. D. and SMITH, B. D., 1995. *Mississippian Communities and Households*. University of Alabama Press, Tuscaloosa.

RYE, O. S., 1981. *Pottery Technology: Principles and Reconstruction*. Washington: Taraxacum.

RYE, O. S. and EVANS, C., 1976. *Traditional Pottery Technique of Pakistan*. Smithsonian Contri-

butions to Anthropology 21, Washington D. C.: Smithsonian Institution Press.

SAITTA, D. J., 1994. Agency, Class and Archaeological Interpretation. *Journal of Anthropological Archaeology* 13:201-227.

SALZER, R., 1972. *Excavation on the Merrell Tract of the Cahokia Site: Summary Field Report 1972.* Notes on file at Research Collection Centre, Springfield IL.

SAMPSON, K. W., 1988. *Conventionalized Figures on Late Woodland Ceramics.* Wisconsin Archeologist 69:163–188

SCARRY, C. M., 1998. Domestic Life on the Northwest Riverbank at Moundville. In *Archaeology of the Moundville Chiefdom,* ed. By V. J. Knight, Jr. and V. P. Steponaitis, pp 63-101- Washington D. C.: Smithsonian Institution Press.

SCHELE, L. and MILLER, M. E., 1992. *The Blood of Kings: Dynasty and Ritual in Maya Art.* London. Thames and Hudson.

SCHILLING, T., 2010. *An Archaeological Model of the Construction of Monks Mound and Implications for the Development of the Cahokia Society* (800-1400 AD). PhD diss., Washington University in St. Louis.

SHEPARD, A. O., 1971. *Ceramics for the Archaeologist.* Carnegie Institution of Washington, Publication 609. Fifth printing. Washington D.C.

SHEPARD, A. O., 1995. *Ceramics for the Archaeologist.* Reprint. Washington: Carnegie Institute of Washington.

SILLIMAN, S. W., 2005. Culture Contact or Colonialism? Challenges in the Archaeology of Native North America. *American Antiquity* 70:55–74.

SMITH, B. D., 1978. Variation in Mississippian Settlement Patterns. In *Mississippian Settlement Patterns*, ed. by Bruce D. Smith, pp. 479-503. New York: Academic Press.

SMITH, B. D., 1990. *The Mississippian Emergence.* Smithsonian Institution Press, Washington, DC.

SOLANILLA, V., 2020. *Signos Comunes en los Textiles Andinos y los Mesoamericanos.* VIIIth International Conference on Indigenous Textiles of the Americas, Bruxelles.

SQUIER, E. and DAVIS, E. H., 1848. *The Ancient Monuments of the Mississippi Valley.* Smithsonian Contributions to Knowledge No. 1, Washington, D.C.

STEIN, G. J., 2002. From Passive Periphery to Active Agents: Emerging Perspectives in the Archaeology of Interregional Interaction. Archaeology Division Distinguished Lecture AAA Annual Meeting, Philadelphia, December 5, 1998. *American Antiquity* 104:903–916.

STEPONAITIS, V. P., 1978. Location Theory and Complex Chiefdoms: A Mississippian Example. In *Mississippian Settlement Patterns*, ed by B. D. Smith, pp 417-453. New York Academy Press.

STEPONAITIS, V. P., 1983. *Ceramics, Chronology and Community Patterns. An Archaeological Study at Moundville.* New York: Academic Press

STEPONAITIS, V. P., 1986. Prehistoric Archaeology in the Southeastern United States, 1970-1985. *Annual Review of Anthropology* 15:363-404.

STOLTMAN, J. B., 1991. Ceramic Petrography as a Technique for Documenting Cultural

Interaction: An Example from the Upper Mississippi Valley. *American Antiquity* 56:103–120.

THOMAS, C., 1894. *Report on the Mound Explorations of the Bureau of American Ethnology.* Fifth Annual Report of the Bureau of Ethnology. Smithsonian Institution, Washington.

TOWNSEND, R. F. (editor), 2004. *Hero, Hawk, and Open Hand: American Indian Art of the Ancient Midwest and South.* The Art Institute of Chicago, Yale University Press, New Haven, Connecticut.

TRUBITT, M. B., 1996. *Household Status, Marine Shell Bead Production and the Development of Cahokia in the Mississippian Period*. Ph.D. dissertation, Department of Anthropology, Northwestern University, Evanston, Illinois.

TRUBITT, M. B., 1997b. *Moorehead Phase Changes at Cahokia*. Paper presented at the 54th annual meeting of the Southeastern Archaeological Conference, November 7, 1997, Baton Rouge, LA.

TRUBITT, M. B., 2003. Mississippian Period Warfare and Palisade Construction at Cahokia. In *Theory, Method, and Practice in Modern Archaeology*, Jecke R. J and Charles D. K. Westport, ed. Pp. 149-162. Connecticut.

VALESE, I., 2012. *Settlement dynamics and use of space in the Mississippian World. An analysis of the Cahokia West Plaza*. Unpublished M.A. thesis, University of Bologna.

VALESE, I., 2017. *The Archaeology of Cahokia's West Plaza. Excavations in the Merrell Tract*, Unpublished Ph. D thesis, University of Bologna.

VOGEL, J. O., 1975. Trends in Cahokia Ceramics: Preliminary Study of the Collections from Tracts 15A and 15B. In *Perspectives in Cahokia Archaeology*, edited by James A. Brown pp. 32- 125. Bullettin 10. Illinois Archaeology Survey, Urbana.

WARING, A. J., Jr, 1968. The Southern Cult Revisited. In *The Waring Papers*. The Collected Works of Antonio J Waring, J1:, edited by S. Williams, Papers of the Peabody Museum of Archaeology and Ethnology, No. 58. Harvard University

WARING, A. J., Jr, and HOLDER, P., 1945. A Prehistoric Ceremonial Complex in the Southeastern United States. *American Anthropologist* 47:1–34.

WELCH, P. D. 1975. *Wood Utilization at Cahokia: Identification of Wood Charcoal from the Merrell Tract.* Master's thesis, University of Wisconsin, Madison.

WELCH, P. D., 1990. Mississippian Emergence in WestCentral Alabama. In *Mississippian Emergence: The Evolution of Ranked Agricultural Societies in Eastern North America,* edited by B. D. Smith, pp. 197-225. Smithsonian Institution Press, Washington.

WELCH, P. D., 1991. *Moundville's Economy.* Tuscaloosa: University of Alabama Press.

WELCH, P. D, 2006. Interpreting Anomalous Rural Mississippian Settlements: Leadership from Below. In *Leadership and Polity in Mississippian Society,* Brian M. Butler and Paul D. Welch, ed. Pp. 214-35. CAI Occasional Paper 33. Carbondale: Southern Illinois University.

WELCH, P. D. and SCARRY, C. M., 1995. Status Related Variation in Foodways in the Moundville Chiefdom, *American Antiquity* 60(3):397-419.

WHITE, W.P., SISSEL, J., CROSS, P.G. and KELLY, L. S. 1984. Environmental Setting. In *American Bottom Archaeology*, edited by Charles J. Bareis and James W. Porter, pp. 15-33. Urbana: University of Illinois Press.

WILLIAMS, K. R. and KELLY, J. E., 2017. *Contextualizing Cahokia's Feature "X". Initial archaeological investigations of a major remote sensing anomaly at Cahokia Mounds State Historic Site.* Unpublished draft of on-going research.

WILSON, G. D., 1998. *The Production and Consumption of Mississippian Fineware in the American Bottom.* Paper presented at the 55th annual Southeastern Archaeological Conference, Greenville, NC.

WILSON, G. D., 1999. The Production and Consumption of Mississippian Fineware in the American Bottom. *Southeastern Archaeology* 18(2):98-109.

WILSON, G. D., 2011. *Post- Cahokian Contact in the Central Illinois River Valley.* Paper presented at the 76th Annual Meeting of the Society for American Archaeology, Sacramento, California.

WILSON, G. D. and VAN DERWARKER, A. M., 2015. The Functional Dimensions of Earth Oven Cooking: An Analysis of an Accidently Burned Maize Roast at the C. W. Cooper Site in West-Central Illinois. *Journal of Field Archaeology* 40:165–174.

WILSON, G. D., DELANEY, C. M. and MILLHOUSE, P. G., 2017. The Mississippian of the Illinois and Apple River Valleys. In *Mississippian Beginnings*, edited by Gregory D. Wilson, pp. 97–129. University Press of Florida, Gainesville.

WITTRY, W. and VOGEL, J., 1962. Illinois State Museum Projects: October 1961 to June 1962. In *First Annual Report: American Bottoms Archaeology*, July 1, 1961-June 30, 1962, M. L. Fowler, ed. Pp. 15-30. Illinois Archaeological Survey, University of Illinois, Urbana.

WOODS, W. I. and HOLLEY, G.R., 1991. Upland Mississippian Settlement in the American Bottom Region. In *Cahokia and Hinterlands: Middle Mississippian Culture of the Midwest*, ed. by T.E. Emerson and R.B. Lewis, pp. 46-60. Urbana: University of Illinois Press.

YOUNG, B. W. and FOWLER, M. L., 2000. *Cahokia, the Great Native American Metropolis.* University of Illinois Press.

ZIMMERMANN HOLT, J., 2009. Rethinking the Ramey State: Was Cahokia the Center of a Theater State? *American Antiquity* 74 (2): 231-254.

ZYCH, T. J., 2013. *The Construction of a Mound and a New Community: An Analysis of the Ceramic and Feature Assemblages from the Northeast Mound at the Aztalan Site.* Master's thesis, Department of Anthropology, University of Wisconsin-Milwaukee, Milwaukee.