Households and Changing Use of Space at the Transitional Early Mississippian Austin Site

Benjamin Garrett Davis

University of Mississippi

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HOUSEHOLDS AND CHANGING USE OF SPACE AT THE TRANSITIONAL EARLY MISSISSIPPIAN AUSTIN SITE

A Thesis

presented in partial fulfillment of requirements

for the degree of Masters of Arts

in the Department of Sociology and Anthropology

University of Mississippi

by

BENJAMIN GARRETT DAVIS

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ABSTRACT

The Austin Site (22TU549) is a village site located in Tunica County, Mississippi dating to approximately A.D. 1150-1350, along the transition from the Terminal Late Woodland to the Mississippian period. While Elizabeth Hunt’s (2017) masters thesis concluded that the ceramics at Austin emphasized a Late Woodland persistence, the architecture and use of space at the site had yet to be analyzed. This study examines this architecture and use of space over time at Austin to determine if they display evidence of increasing institutionalized inequality. This included creating a map of Austin based on John Connaway’s original excavation notes, and then analyzing this map within the temporal context of the upper Yazoo Basin. Based on five chronometric dates, reconstructed houses, and Hunt’s ceramic analyses from Austin’s pit features, this study created a chronology for Austin, identifying which households were likely the oldest at the site and how they relate to the rest of the village. This resulted in the identification of the oldest households excavated at the site, which may have established the mound as well as differentiated status at Austin. Additionally, this study places this analysis within the cultural context of the broader upper Yazoo Basin, displaying Austin’s changing role in this region during the Early Mississippian period. This study supports Hunt’s conclusion that Austin is an example of “independent co-existence” in which the initial Late Woodland households at Austin adapted to changing regional circumstances while simultaneously maintaining and retaining many facets of their Late Woodland material culture. These changes, however, saw the inhabitants incorporating some typical traits of Mississippian sites, such as
defensive stockades and status differentiation between households, in order to manage the rising tensions of a changing region.
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First, I would like to recognize and thank my thesis committee, Dr. Maureen Meyers, Dr. Tony Boudreaux, and Dr. Jay Johnson. Throughout this process, they have always been available for consultation, continuously providing advice and direction. In particular, I would like to thank Dr. Meyers, my advisor and committee chair, for constant help and guidance in writing this thesis. Without her suggestions, edits, and direction, this thesis would not have been possible. Also, thank you Dr. Boudreaux for continuous help understanding the various statistical analyses and mapping involved in this thesis. Additionally, Dr. Jay Johnson provided his invaluable expertise and knowledge on the archaeology of the upper Yazoo Basin, Mississippi. Dr. Robbie Ethridge also provided immense help in the early stages of this thesis, providing indispensable advice on narrowing down this thesis topic, helping me to understand what question I was really trying to answer. Finally, I would like to extend a special thanks to John Connaway for his consistent and continuous availability and expertise throughout this process. Without his first hand experience and notes from Austin, none of this thesis would have been possible.
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I. INTRODUCTION

The Austin site, located in Tunica County, Mississippi, was a transitional site that spanned the Late Woodland and Early Mississippian periods. Dating to approximately A.D. 1150-1350, this village was occupied for about 200 years. Over this span of time, certain changes at the site occurred, including the construction of two different stockade post rows, the establishment of an earthen mound, and growth in size of specific houses and households. When considering these site characteristics, they would appear to describe a rather typical transition from more egalitarian Late Woodland lifeways to a more differentiated, and hierarchical Mississippian culture. However, recent work by Elizabeth Hunt (2017) shows that the majority of ceramics from the site are Late Woodland ceramic types, including a notable prevalence of Mulberry Creek Cord Marked, var. Edwards, which suggests that the change from Late Woodland to Mississippian lifeways was more about accommodation rather than abrupt change. This is in contrast to other ideas of Mississippian emergence (Caldwell 1958; Kelly 1990; Smith 1990; Pauketat 2004) that suggest Late Woodland populations were replaced or forced to change their culture. This thesis aims to examine how Mississippian culture emerged at Austin by analyzing how the use of space and style of architecture utilized by Austin’s inhabitants changed over time and reflected an increasing presence of institutionalized inequality. While there was likely much more to this site to the east, much of the site was damaged prior to excavation by road and railroad construction.
This prevented any claims regarding who first founded Austin, but a chronology of occupation of the remaining site was achieved. Further, I place this analysis within the broader contexts of both the Upper Yazoo Basin region, as well as the Southeastern United states more generally.

I begin in Chapter 2 with a detailed overview of previous literature and topics relevant to this thesis. First, I discuss past perspectives and debates regarding the archaeology of structures and households in the Southeast. This includes a discussion of bent-pole-versus-rigid-pole architecture, which architectural traits are seen archaeologically, the importance of multi-scalar investigations of architecture, and, finally, how to effectively identify markers of status differentiation in structures and houses. Next, I review the details of the on-going debate concerning how the Late Woodland transitioned into the Early Mississippian period. This includes descriptions of the homology and analogy models and the various versions of hybrid models that lie along the spectrum between these two theories. This is followed by a discussion of the culture history of the Lower Mississippi Valley broadly and the upper Yazoo Basin more specifically. Finally, this initial chapter closes with a discussion of all previous work at Austin.

Chapter 3 describes the methods involved in the excavation of Austin and, specifically, the structures analysis. It begins with a description of John Connaway’s field methods during his excavations from 1988-1991. This includes an explanation of the site’s state of preservation prior to excavation, as well as a description of the salvage excavation methods used by Connaway. Additionally, this section relays how Connaway mapped the site’s many features once his excavations revealed them. This is particularly important for this thesis because these notes allow me to create and update Connaway’s feature maps. Additionally, there is a brief section describing Hunt’s lab methods used for analyzing Austin’s ceramic assemblage. The next section in this chapter focuses on the methods used in data input and map creation. This includes
digitizing long, hand-written feature logs and then mapping them in ArcGIS. Additionally, spatial analysis of these maps was performed using various ArcMap analysis tools. The final section of this chapter states my research question as well as an explanation of its significance.

This is then followed by a description and explanation of the results of these analyses. Chapter 4 begins with a description of each type of feature found at the site, including stockades, houses, pits, and one mound. This is followed by an investigation of Austin’s chronology. Here, the five chronometric dates from Austin are discussed in terms of the contexts and features they came from as well as how they relate to other surrounding features. Additionally, the Late Woodland and Early Mississippian pits analyzed by Hunt are shown in their spatial contexts, revealing which house structures they intersect with. These two lines of evidence are used to construct an approximate chronology of events at Austin. Next, the six house groups identified through spatial analysis are described and compared. This is followed by a description of house orientations, sizes, shapes, and wall-trench types. Also, Chapter 4 describes the variation in household occupation lengths, explaining which households were repeatedly rebuilt and which were not. Finally, this chapter closes with a broad discussion concentrated on understanding the variation seen among and between different house groups by incorporating and contextualizing all of the results listed above. This discussion concludes by placing this evidence of change over time at Austin within the broader regional context of the upper Yazoo Basin and the Mississippian Southeast more generally.

Chapter 5, the conclusion, reviews the research question and results presented in this thesis, and it also discusses the broader implications of its findings. While a great amount of work has been done in the upper Yazoo Basin, there is still a lot of room for continued research. Like Austin, many sites in the region have assemblages left on shelves waiting to be analyzed.
Current work at Parchman Place (Nelson 2016), Hollywood (Haley 2014), and Austin (Hunt 2017) depict the upper Yazoo Basin as a rather variable region in which local contexts must be investigated at multiple scales. This thesis aims to do this as well in its investigation of change over time at Austin, focusing primarily on the use of space and architecture by its inhabitants.
II. LITERATURE REVIEW

The Austin site (A.D. 1150-1350) in the upper Yazoo Basin, dates to the transition between the Terminal Late Woodland and Early Mississippian periods (Hunt 2017). This thesis focuses on an analysis of the houses that make up the village within the context of this transition. Accordingly, my background research has been organized using a multi-scalar approach to better understand how the Austin site architecture relates to the upper Yazoo Basin locally, and the southeastern United States more broadly. Situating data within proper scales is necessary to reach a more complete reconfiguration of a site (Meyers and Gougeon 2015:xxxiv). I first discuss the general topic of household archaeology. Next, I investigate the broad-scale topic of the Woodland-Mississippian transition. I follow this with a discussion of work done in the upper Yazoo Basin and how it relates to nearby regions. I conclude with a discussion of previous work at the Austin site itself.

The Archaeology of Structures and Households

In southeastern North America, the archaeology of structures most often relies on indirect evidence. Unlike many other parts of the world, structures in the Southeast were most often constructed using perishable materials like wood, bark, moss, cane, and bundles of grass (Steere 2017:75-79). Unless the structure is burned prior to deconstruction, these materials will typically disintegrate over time. The spaces left in the ground after disintegration are then naturally filled with other sediments or materials.
This refilled space is the most common evidence of previous structures found by archaeologists in the Southeast. Occasionally, under the right conditions, wall or roofing material such as daub is preserved, but this is not a frequent occurrence. Therefore, the house foundation in the form of postmolds, wall-trenches, or depressions are the primary structure identifiers (Lacquement 2007:2-3).

Because the evidence is often indirect, understanding structures, their place within a site, and the archaeological record more broadly is very interpretive work. As in all areas of anthropology, these interpretations can often lead to debates and disagreements. One of the more interesting ongoing debates in this field is an immediate result of such indirect evidence. The debate surrounding Early Mississippian wall-trench houses focuses on how these structures may have actually looked and how they were constructed (Lacquement 2007:4-7). In the early twentieth century, archaeologists generally agreed that these structures were made using a bent-pole or flexed-roof design in which small posts were set within wall-trenches and bent together at the top to form a lattice-work roof (Lacquement 2007:4). Importantly, these structures typically lack corner posts, suggesting this bent-pole design. Later archaeologists contested this theory, though, proposing that you can create a small-pole, wall-trench structure using a rigid-pole, separate-roof design without corner posts (Lacquement 2007:5-6; Black 1967; Harn 1972; Walthall 1977). The debate between these two positions continues today (Reed 2007; Sullivan 2007). Subsequently, the discussion has come to rely on many ethnographic and experimental archaeology strategies to form arguments (Reed 2007:2). Regardless of how different types of houses were built, though, it is important to realize that the form of construction itself means little without the temporal and cultural context within which it existed. The adoption of wall-
trench construction, for example, occurred over vast stretches of the Southeast (Alt and Pauketat 2011:120), but these changes must be considered at multiple scales to be understood.

Structure analysis usually begins at a narrow, fine-grained scale, and then expands from there (Steere 2017:16). Acquiring accurate and detailed data about the size, shape, and orientation of a structure and its associated features is important for understanding for whom and for what purpose the house was built. All of these variables help limit the possibilities of function and number of inhabitants. Structural analysis is not approached solely from a utilitarian perspective, though. While descriptions of structures and associated features can tell us about activities that may have occurred within and around them, these variables also may reflect social position, cosmologies, and broader belief systems of the inhabitants (Steere 2017:18). Rather than viewing structures in such strictly domestic, economic, or political terms, this latter consideration recognizes that structures are also symbolic (Rodning 2015:100-101). In fact, households, which typically are referred to as domestic, also can be ritual or ceremonial. The two are not mutually exclusive (Steere 2017:111). There are instances in which the ceremonial and secular are not distinctly separate, such as the Woodland period-Leake complex (Keith 2013:151). Keith notes that the site includes a large midden with artifacts that are both ceremonial and domestic. This blurs the line between the ceremonial and domestic activities at the site, forcing archaeologists to consider how domestic contexts also can be ceremonial or sacred. Therefore, analysis of households and communities must limit the assumptions that can be made concerning the relationship between the household and domesticity. While it is safe to assume that households include some domestic contexts, we must not entirely conflate the two terms (Rogers 1995c:82).
The household can and should be defined distinctly from the idea of “domestic.” Rogers (1995c:82) notes that “domestic” relates to “basic subsistence and related functions that may or may not take place in or near a residence.” “Household,” however, refers to “a social group that lives together and participates in mutually related subsistence activities” (Rogers 1995:82). Obviously, there is significant overlap between these two, but conflating their meaning entirely does not leave room for the presence of possibly important variation at a given site. Hally (2008:3) describes the household as a house or small group of houses that “provide a ready access to most kinds of social and economic behavior that humans engage in on a day-to-day basis.” He also explains that these groups of houses should be defined in functional terms rather than by their morphology, kin composition, or size (Hally 2008:3). Along with Wilk and Rathje (1982:618), Douglass and Gonlin (2012:2) define the household as “the most common social component of subsistence, the smallest and most abundant activity group.” The important factor here is shared use. Households are delimited by the way in which they demonstrate shared use of resources or shared activity. The household model helps archaeologists understand how a community was organized socially through the relationship of its domestic structures. While households may have been inhabited by extended families in certain instances, familial kinship is not inherently required to define a household (Douglass and Gonlin 2012:3). This refocusing of the household discussion towards understanding activity rather than composition provides a better path towards useful analysis rather than getting lost in debates about household kinship relations (Rogers 1995b:9).

Structural analysis occurs on larger scales as well. Of particular interest to this thesis is the community or village level. Understanding individual households, and how they relate to one another, helps the archaeologist understand why the community is organized the way it is.
Established in the 1990s, the “building block” model explained Native American settlement and social organization by framing the household or farmstead as the basal unit of Mississippian societies (Steere 2017:5-6). While this model has had its critiques, the basic idea of the household has continued to be widely used. It seems, however, that the overall rigidity of the model has fallen to the wayside to allow for more flexibility. Critiques of the model took issue with this rigidity, explaining that it contradicts variation in household organization and fails to account for human agency (Steere 2017:6). Of course, household archaeology is not unified under one theoretical perspective. While these different perspectives are brought under the same subfield because they all share the household as the primary unit of analysis, they often take varied approaches. The study of the household can be applied to gender studies, economics, ritual and symbolic behavior, status differentiation, or settlement patterning (Steere 2017:3-4,6). For this reason, the field of household archaeology is variable, and is capable of addressing many different kinds of questions. In fact, these differing perspectives often utilize differing working definitions of household. For example, a Marxist or World Systems perspective would be more likely to define households based on their relation to labor and resources rather than shared activity (Rogers 1995b:9-10).

This thesis is concerned with issues of status differentiation and inequality. Most often, house size is the first and most obvious variable that archaeologists look to when investigating possible status differentiation at a site. It is thought that wealthier households usually were larger (Douglass and Gonlin 2012:13). However, the meaning of house size can change based on the contexts in which it is found. For example, house size on a small farmstead may be more dependent on the farm’s ability to produce surplus and attract more inhabitants (Douglass and Gonlin 2012:13). To put it simply, these variables must be considered in the site-specific context
to understand what they indicate. Architectural design is another important variable when considering status (Steere 2017:139). For example, an unusually elaborate domestic structure indicates differential access to resources and space compared with other structures. However, some contradict this notion, stating that many societies that have differentiated status all utilize the same architectural style (Douglass and Gonlin 2012:14). The location of households within settlements also can be informative. The placement on the landscape and spatial configuration within a settlement “should provide insight into its economic, social, and political organization” (Nass and Yerkes 1995:69). For example, accounts from the Desoto expedition describe chiefs as living near or on mounds (Steere 2017:139).

Architecture at Austin included stockade walls and an earthen mound. Both of these features are staples of Mississippian architecture in the Southeast, and they are integral components involved in the discussion of where inequality originates and how power and wealth aggregation begins. A primary and obvious symptom of this inequality is intergroup conflict, evidenced by defensive stockades (Schroeder 2006:116). Schroeder (2006:117) suggests that the Early Mississippian period was a time in which people negotiated and renegotiated for power within the context of regional “tension, discord, open hostility, cooperation, and amity.” This paints a picture of the Mississippian Southeast that is both uneasy and unstable, which resulted in efforts to create stability and safety in the form of defensive structures. Importantly, stockades are more common at sites with earthen mounds (Schroeder 2006:117). Therefore, these groups are simultaneously stating their authority in the form of monumental architecture while defending that authority within the region by constructing large stockades around the village.

Archaeologists have established ways of understanding how power, material resources, and use of space interact at archaeological sites. One primary example of this is Lightfoot and
Feinman’s (1982) diachronic examination of leadership at village sites in the Mogollon region of the ancestral Puebloan southwest. They established four hypotheses and subsequently found evidence to support them. They found that households of village leaders should be associated with greater amounts of storage space; evidence of subsistence strategies that maximize surplus production; evidence of greater amounts of long-distance exchange in the form of non-local goods; and greater proximity to public architecture (Lightfoot and Feinman 1982:73-77). While this is a useful example of how to directly identify possible evidence of leadership through material evidence, it is not widely applicable considering that many sites lack the contexts and data necessary to test such hypotheses. These difficulties can be helped by expanding the consideration of architecture to include an understanding of the village as a whole at multiple scales and through multiple lines of evidence.

Architecture itself is often not enough evidence to identify evidence of inequality at a site. The household artifact assemblages and associated features, such as pits and burials, often play a key role in determining status and inequality. Sometimes these assemblages are used to display variation and differentiation in activity and perceived wealth between households, indicating differentiated status or rank (Steere 2017:139). Strategies for delimiting status and rank have grown more intricate as we recognize certain complicating factors. For example, site history is incredibly important for issues of inequality because time can have an effect on artifact densities. One household or site area may have more material goods than others, but this may simply be the result of a longer occupation (Steere 2017:140-141).

The King site is a fantastic example of household archaeology in which the spatial and temporal contexts of both structures and associated artifacts and features are carefully considered to create a more accurate picture of the community. By using several lines of evidence, Hally
explained how status and social rank operated at this Late Mississippian town (Steere 2017:140-141). Hally (2008:4) uses the phrase “primary domestic structure” at the King site to describe a square structure associated with a specific suite of features: shallow basins, substantial walls of single-set posts, interior partition walls, and a central hearth. Such structures “were often physically associated with a more lightly constructed rectangular structure (RS), an outdoor work area, and a number of human burials” (Hally 2008:4). He identified groups of the primary domestic structures, and he found that almost half of these 26 primary domestic structures were built in multiple stages (Hally 2008:527). By analyzing these multi-stage houses, he was able to discern which houses were built first, and which had been there for the longest amount of time. The goal here was to recognize the founders of the community. By reconfiguring the site history in this way he could more appropriately compare structural significance with artifact counts and burial arrangements (Hally 2008:532). He found that houses with multiple stages of construction generally were larger than those with only a single stage of construction. He then compared these with their associated burials and artifacts. From this, he deduced that Household 15 was most likely the most important household: it was the largest, it was in a prominent location, and its associated burials suggested the most wealth and highest status (Hally 2008:532). This approach to household archaeology is particularly nuanced because it successfully articulates multiple lines of evidence to reconfigure site history, social organization, and spatial layout.

Incorporating multiple lines of evidence within the framework of a multiscalar approach has become the standard for diachronic spatial analysis, especially at transitional, multicomponent sites, like Austin. The central goal in these discussions is to determine to what degree a site displays continuity or contrast with what came before (Mehrer and Collins 1995:54-55; Wiewall 2012:408; Wright 2013:108-109). In order to make these arguments, the
archaeologist must take a diachronic multiscalar approach because evidence of change may not be as obvious as we would like and may only be revealed once multiple lines of evidence and multiple scales have been articulated (Wright 2013:109). Especially at sites like Austin, where new interactions may be occurring, evidence of social change may manifest in ways different from what is expected.

An interesting and significant work that was recently completed in the field of household archaeology is Ben Steere’s “broadscale diachronic and synchronic” research on changes in domestic architecture (Steere 2017:6). This work, *The Archaeology of Houses and Households in the Native Southeast* is one of the few analyses of such a broad-scale database. While this broad-scale research leads to inherently broad-scale conclusions, they are useful when contextualizing a site in the greater timeline of the southeastern United States. Steere (2017:6-7) explains that the factors affecting inclusion in this large database included ease of access, specificity of notes, broad horizontal exposure, and household variation. As a result, there are certain regions, including much of the Yazoo Basin, that are absent from the database. The absence of Lower Mississippi Valley sites is undoubtedly partially due to the lack of excavation at such sites in the region, but it is also due to a lack of integration of data from the few such excavations that have been completed. Integration of these data and research are an important step moving forward for the archaeology of the Lower Mississippi Valley.

**The Woodland-Mississippian Transition Debate**

Between A.D. 500 and A.D. 1200, the indigenous peoples of the southeastern United States experienced dramatic changes. The process through which this change occurred—including its pace, geographic extent, and origins—continues to be a highly debated topic. Over
the years, many archaeologists have presented their own explanations for the transition from the Late Woodland period to the Mississippian period. While there are now multiple models that claim to offer an explanation for this cultural transition, I will focus on three in particular: the homology model, the analogy model, and the independent coexistence model.

First, an explanation of the periods that bookend this transition is necessary to accurately portray these models, though. The Late Woodland Period is thought to date to approximately A.D. 500-1000 (Anderson and Sassaman 2012:126) following the end of the Hopewell tradition (Wright and Henry 2013:11-12). The Middle Woodland period, known for this Hopewell tradition, contrasts with the Late Woodland due to the appearance of widespread “panregional religious movements” incorporating “monumental ceremonial practices and extralocal interactions” (Wright and Henry 2013:12). Therefore, the Middle Woodland Period is known for interaction networks in which exotic goods were exchanged widely for ceremonial use. In contrast, the Late Woodland period has been often viewed as a period of cultural decline. Because scholars often were more intrigued by what came before and after it, Late Woodland societies have sometimes been described as “good gray cultures” (McElrath et al. 2000:3). However, we now know this to be incorrect (Anderson and Mainfort 2002:15). While interaction networks were disrupted, this does not mean that the Late Woodland was a period of social isolation. There were definitely demographic shifts and rearrangements on the landscape, but populations grew and new traditions were established (Anderson and Sassaman 2012:126). In fact, large ceremonial mound sites were present very shortly after the end of the Hopewell tradition, and they include the Jackson Landing site in southern Mississippi. This mound site, dating to approximately A.D. 440-650, has a large shell midden, a 460-meter (m) long earthwork and a 1.5-m tall platform mound. Woodland-period enclosure sites like this are often thought to
be places where people from other communities came to gather (Boudreaux 2011:354; 2013:163). This is one example of social interaction in the early Late Woodland Period. This pattern also is present and expressed by the Weeden Island tradition of the eastern Gulf Coast and the Coles Creek tradition of the Lower Mississippi Valley (Anderson and Sassaman 2012:126-127).

While interaction networks were re-forming during the Late Woodland, it was not until the Mississippian period, which dates from roughly A.D. 1000 to European contact, that Southeastern indigenous groups established intensive maize agriculture and institutionalized inequality. In contrast, Late Woodland groups in the Lower Mississippi Valley primarily relied on “locally available wild plant and animal foods” like acorns, hickory nuts, fish, and deer (Kidder 2002:86), hindering Late Woodland peoples in any efforts to establish food surplus. Additionally, Late Woodland settlements, with the exception of some Coles Creek mound centers, often lacked key markers of status differentiation such as platform mounds and architectural variation (Kidder 2002:89). Therefore, institutionalized inequality and intensive maize agriculture, along with the Southeastern Ceremonial Complex (SECC), are broadly cited as identifiers specific to the Mississippian period (Anderson and Sassaman 2012:152-153). The intensification of maize agriculture was a key trait of this period because it allowed for both population growth and the creation of surplus foods (Pauketat 2004:60). This surplus and population growth then may have led to population reorganization, characterized by pronounced and institutionalized inequality (Anderson and Sassaman 2012:158-159). This period also is characterized by wide-ranging spheres of interaction and trade (King and Freer 1995:270-271). These interaction networks played a key role in the promotion and dissemination of the material culture of the SECC (Peregrine 1995:252-253). The SECC was a concept that connected the
artistic styles of several major Southeastern ceremonial centers through a “set of motifs, god-
animal representations, ceremonial objects, and items of costume” (Knight 2006:1). However, these are broadly determined characteristics. More recently the SECC has been abandoned because each of these centers and groups have “independent trajectories” and defining them as a coherent complex is misleading (Knight 2006:2). The Mississippian period actually is quite regionally diverse in terms of population and material culture (Blitz and Lorenz 2002:117). More recent research has revealed that there are in fact many regionally distinctive Mississippian site-types (Anderson and Sassaman 2012:176; Knight 2006:2). The presence of palisaded stockade walls (Stout and Lewis 1998:175) at several Mississippian sites suggests that regional diversity resulted in social tension and possibly warfare in some instances. A few significant sites from this period are Cahokia in the American Bottom region, Moundville in Alabama, and Etowah in northern Georgia, but there are numerous others.

While these two periods have obvious differences from one another, the Mississippian period has largely come to be seen as an elaboration of certain trends that began in some areas during the Terminal Late Woodland (Anderson and Sassaman 2012:149, 155; Kelly 2000:165; Kidder 1998:131). However, the way in which this elaboration occurred is still under debate. In fact, it has come to be accepted that there will be no overarching, widely applicable model that explains every instance of “Mississippianization” (Kelly 2000:163; Smith 1990:2). Rather, it is more likely that each instance of mississippianization occurred within a unique regional and historical context that necessitates a more regional, scalar approach (Cobb and Garrow 1996:22; Smith 1990:3). While none of these models are able to explain the full scope of mississippianization in the Southeast as a whole, they are still heuristically useful when describing this transition in a specific context at a certain site.
The oldest of these models is the homology model, or the historical relatedness model, and it originated in the 1950s (Caldwell 1958). The core tenet of this theory is that Mississippian emergence occurred first in one “heartland” area and then spread outward across the east (Smith 1990:2). This heartland area typically is considered to be the American Bottom, the location of the rise of Cahokia (Blitz and Lorenz 2002:118). Some even go so far as to say that the beginning of Cahokia is synonymous with the beginning of the Mississippian period (Pauketat 2004:10). This theory states that these newly emergent groups, wielding maize agriculture and other innovations, expanded outward along routes bounded to river valleys, displacing or assimilating the societies they encountered (Smith 1990:2). However, not all scholars readily agree that this migration model requires the single origin point of Cahokia. As early as 1951 with the publication of the Phillips, Ford, and Griffin seminal volume of the survey of the Lower Mississippi Valley (Phillips, Ford, and Griffin 1951), some archaeologists argued that the Mississippian period had a few distinct but interacting areas of core development, rather than only one point of outward expansion (Blitz and Lorenz 2002:118). This viewpoint emphasized the diffusion of ideas rather than people across the Southeast. While the abrupt appearance of the Mississippian cultural tradition in local sequences and contexts that had no previous evidence of such activity continued to be the focus, archaeologists had to rethink how this may have occurred. They began to ask if these abrupt changes were the result of cultural borrowing through diffusion, or the result of population replacement through migration (Blitz and Lorenz 2002: 118; Smith 1990:2). In other words, scholars began to ponder if the spread of Mississippian cultural traits occurred due to the spread of things and ideas, rather than just the spread of the people themselves. While this viewpoint moved away from simple migration
explanations, it still relied on extralocal influence as the cause for the spread of Mississippian ideas. External stimulus was still the primary causal factor.

During the 1970s and 1980s, a new transition theory, referred to as the “analogy or process position,” entered the debate (Smith 1990:2). This position disagrees with the notion that Mississippian cultural traits appear across the entire southeastern landscape due to migration and diffusion. Instead, it argues that these “widespread cultural developmental similarities” can be explained through separate and isolated cultural responses to similar contextual circumstances and challenges (Smith 1990:2). In this view, populations grew and evolved, but they did not move (Blitz and Lorenz 2002:118). Rather than external stimulus, the driving force of Mississippian development was a set of similar pressures. This *in situ* model is often used to describe the rise of Cahokia itself, as most archaeologists today doubt that migration from Mexico is a valid origin of Mississippian culture (Fortier and McElrath 2002:173; Morse and Morse 1990:169). However, this model and the subsequent term “emergent Mississippian,” have come under some criticism for viewing the rise of Mississippian culture as inevitable. They criticize the phrase emergent Mississippian itself for implying such a predestined idea of the Mississippian period, and, therefore, prefer the phrase “Terminal Late Woodland” (Fortier and McElrath 2002:182-183; Pauketat 2004:67).

These two models form the two polar ends of the debate. Over time, the conversation has moved closer to the middle, with new models and theories that incorporate aspects of each theory, as well as new ideas. As more work has been done, and as data sets have grown, it has become evident that developmental sequences of different regions would not all conveniently fit within one of these models (Smith 1990:2). In fact, these Terminal Late Woodland groups exhibit discontinuous cultural material, community plans, and settlement patterns that suggest a
“multidimensional array of distinct historical sequences arranged in, as yet, poorly understood patterns of similarity and exhibiting different mixtures of demographic expansion, social reproductive isolation, and interpolity developmental interaction” (Blitz and Lorenz 2002:119; Smith 1990:2). One model that attempts to reconcile this seeming disjuncture is an independent coexistent model (Blitz and Lorenz 2002; Hunt 2017:35). This model of mississippianization recognizes that in situ development and influence through migration and diffusion are not mutually exclusive models (Blitz and Lorenz 2002:130). As archaeologists attempt to fit local cultural sequences within these models, several researchers have concluded that these two theories can be combined into one process of cultural change (Blitz and Lorenz 2002:118-119; Schroedl et al. 1990:189; Welch 1990:218). In this model, an intrusive Mississippian population settles in a region alongside an in situ Late Woodland population. Through processes of contact and interaction across a shared region and landscape, the in situ population incorporates Mississippian attributes from the nearby intrusive population (Blitz and Lorenz 2002:130-131; Welch 1990:218). This means that both the homology model and analogy model of mississippianization are incorporated simultaneously into a single example. This more recent approach recognizes that both homology and analogy are true and useful models, but should not be thought of as mutually exclusive.

While the spread of Mississippian culture is the central topic of the debate described above, it also has been shaped by the origins of Cahokia itself. The two major authors of this discussion in recent decades are John Kelly and Timothy Pauketat. While both archaeologists have done considerable work in the American Bottom region, their approaches to the resulting data are somewhat different. John Kelly focuses on the developmental roots of Cahokia in the American Bottom region. These roots are evident in both economic and ceremonial processes.
that led to the establishment of the city (Kelly 1980, 1990b:143, 2014). While Kelly’s perspective relies on notions of tradition, Pauketat seems to reject tradition as a useful term, describing it as an “inadequate explanation of history and civilization” (Pauketat 2004:47).

Kelly views Cahokia as the result of a long-term, gradual development stemming from deeply rooted traditions. Therefore, his model is aligned with the in situ model for cultural development. However, he agrees that external factors, such as interaction with other regions, were integral to the Mississippian emergence in the American Bottom (Kelly 1990a:143). His work at the Range site (Kelly 1990b) seems to have had a major effect on his view of the region. This site witnessed a changing sequence of community plans over a 500-year period, and Kelly claims that it played an integral role in the processes that “ultimately culminated in the Cahokia variant of Mississippian culture” (Kelly 1990b:69). Essentially, his model for Cahokia’s expansion begins with steady population growth throughout the Late Woodland period, possibly due to the increased use of starchy seeds in the diet. However, this population growth had not quite reached density levels high enough to result in resource competition during the Late Woodland period. With the introduction of maize agriculture at the end of this period, though, continued population growth occurred and evidence of competition appeared as a result (Kelly 1990a:144). This increased population density led to the restructuring of communities and to ranked social organization in response to limited control of and access to resources (Kelly 1990a:145). The ability to acquire this authority was not reliant on access to resources alone, however. Kelly also explains that this authority was deeply rooted in the symbolism tied to the cross-in-circle imagery (Kelly 1990a:145). Significantly, this cross-in-circle imagery is visible in the community plan at multiple stages of the Range site (Kelly 1990b:107-110). Kelly’s perspective emphasizes demographics, economics, and tradition as the key players in his local
development of Cahokia. Therefore, he is comfortable with Smith’s (1990) designation of this process as “emergence” because Kelly views it as a natural progression from previous events and traditions in the area.

Timothy Pauketat rejects the term “emergent Mississippian” because he sees it as implying an inevitable nature to development in the American Bottom. Instead, he uses the phrase “Terminal Late Woodland” (Anderson and Sassaman 2012:160; Pauketat 2004:67). Pauketat’s “historical-processual perspective” states that these pre-Cahokian traditions would have been memories that were then reworked to create a new and novel Cahokian tradition. Therefore, older traditions did not actually cause Cahokia to occur (Pauketat 2004:66). Tradition and community identity are created through the negotiation of past memories in the present. Not all memories are given equal significance, and therefore this negotiation is one involving social power. Therefore, the creation of tradition and community is quite political (Pauketat 2004:47).

Additionally, Pauketat claims that it is hard to describe mound construction as a tradition because there were multiple gaps in time throughout the Archaic and Woodland periods in which no mound construction occurred (Pauketat 2004:48). Pauketat promotes a more historical approach in which the unique historical and political contexts of the American Bottom at A.D. 1050 allowed for the rapid establishment of the city of Cahokia. Rather than focusing on the effect of economic and environmental forces, Pauketat emphasizes the effect of the political agency of individuals (Pauketat 1994:182-184, 2004:163-171).

The Regional Scale

While the Terminal Late Woodland and Esarly Mississippian periods may be defined by certain characteristics and suites of artifacts, this should not distort the fact that Late Woodland
and Mississippian societies actually were quite diverse and variable (Brown et al. 1978:169). It is important to have a general picture of the period that investigates diffusion and interaction (Cobb and Nassaney 1995; Peregrine 1995:256), but we should not let this prevent us from understanding the different scales of differentiation that did exist (Kidder 1998:123-124). This variation can be investigated through a regional approach. The region that I will focus on in this thesis is the upper Yazoo Basin. This region is located at the boundary between the Central and Lower Mississippi Valley.

The upper Yazoo Basin sits between two widely researched areas, the Central Mississippi Valley and the Lower Mississippi Valley. There are descriptions of both regions that each incorporate the upper Yazoo Basin (Kidder 2002:67-68; Morse and Morse 1990:153). While this may seem like only a geographical grey area, the cultural chronology of this region during the Terminal Late Woodland and Early Mississippian periods has proven to be equally poorly defined and remains unclear primarily because of a lack of research integration in the region (Underwood et al. 2008:13). A considerable amount of excavation has been done, but it is not clear how much analysis has been publicly disseminated. Adding to this, the upper Yazoo Basin sits between two more clearly defined regions: the Late Woodland and Early Mississippian/Plaquemine cultures of the lower Yazoo Basin (Rees and Livingood 2007), and the Plum Bayou and Varney complexes in the Central Mississippi Valley (Morse and Morse 1990:171). The former has been described as both conservative and resistant (Rees and Livingood 2007:15), while the latter is thought to have experienced significant Mississippian influence from its northern neighbors at Cahokia in the American Bottom (Morse and Morse 1990:171). This dichotomy can even be seen in some portions of the archaeological record of the upper Yazoo Basin. Some sites in this region during the Terminal Late Woodland/Early
Mississippian period, such as the Buford site (Marshall 1988:53), contain evidence that suggests abrupt replacement by intrusive or migrating Mississippian peoples. However, recent analysis of the Austin site ceramic assemblage indicated a potentially resistant Late Woodland period population persisting into the Early Mississippian period (Hunt 2017). The region of the upper Yazoo Basin is, therefore, difficult to define at present.

The Southern Yazoo Basin and Natchez Bluffs

I will begin with a discussion of the closest region to the northern Yazoo Basin, the southern Yazoo Basin and the Natchez Bluffs regions. The vast majority of significantly excavated sites in these regions are semi-vacant ceremonial mound centers such as Lake George and Winterville (Williams and Brain 1983), Feltus (Barrier and Kassabaum 2017:2; Kassabaum and Nelson 2016:139-140), and Smith Creek (Brown 2007:155). The chronology of the Late Woodland and Early Mississippian periods in these two regions includes the Coles Creek culture, (approximately A.D. 700-1000), and the subsequent Plaquemine culture, (approximately A.D. 1000-European Contact) (Kidder 1998:125). These regions undoubtedly had resident populations, but evidence of these populations is minimal and generally located separately from these large mound centers (Kidder 1998:130). Therefore, it is not clear where groups gathering at these mound centers were actually living year-round. By contrast, northern Yazoo Basin sites such as Carson (Mehta et al. 2012:6), Austin (Hunt 2017:7), and Parchman Place (Nelson 2016) all have evidence of large villages associated with nearby mound construction. This indicates a significant difference in settlement and community patterns for these two regions. In the southern Yazoo and Natchez Bluffs, ceremonial activities occurred during times of gathering at otherwise vacant mound centers. The northern Yazoo Basin, however, appears to incorporate ceremonial activities within domestic settlements. Additionally, the southern Yazoo basin and Natchez
Bluffs regions generally contain few nearby off-mound structures, while the settlements in the northern Yazoo Basin are more nucleated and densely populated with many nearby structures in off-mound contexts (Kidder 1998:147).

One challenge in the Lower Mississippi Valley has been defining and culturally situating the Plaquemine Culture. It was first discussed by James Ford in 1941, but has been fraught with difficulties and redefinitions ever since (Rees and Livingood 2007:1,3). Despite this history, the term is still accepted by many as a “distinct cultural tradition on the frontier of the Mississippian world” (Rees and Livingood 2007:1). The dilemma with this distinction comes from its basis in ceramic typology. Plaquemine resulted from Ford’s hierarchical ceramic classification system that prioritizes ceramic temper, making it perhaps inaccurately culturally significant at certain scales and contexts (Livingood 2007:109). Essentially, Plaquemine and Mississippian ceramic types are quite similar in most aspects except for temper. Rather than shell temper, Plaquemine ceramics were made with grog temper (Livingood 2007:109). However, the term has proven useful in discussions of the Mississippian period in the Lower Mississippi Valley despite this complication. First established by James Ford and George Quimby based on their WPA-era work between 1938-1941, and later more formally established in Quimby’s (1951) Medora site report (Rees and Livingood 2007:5). Phillip, Ford and Griffin (1951: 454) suggested that Plaquemine dated to approximately A.D. 1200 (Rees and Livingood 2007:6). Additionally, Phillips (1970) and Williams and Brain (1983) viewed Plaquemine as a culture entirely separate from Mississippian (Livingood 2007:109). This perspective is supported by the fact that Mississippian presence is minimal, based on the small number of Mississippian sites found at this time, and appears too late in the region to have had significant influence on the formation of Plaquemine culture (Rees 2010:180). Some sites in the region share Mississippian traits such as maize
horticulture and hierarchical social organizations, but they often maintain certain distinctions from the Mississippian culture through differences in iconography and technology that persist into historic contexts (Roe 2007:20). These were two groups who practiced distinct “cultural behaviors” (Kidder 2007:196-197). Significantly, ceramics decorated with SECC designs and motifs largely are absent from the Lower Mississippi Valley south of the Arkansas River (Kidder 2007: 198). Kidder (2007:198) describes this well when he states that the temporal unit known as the Mississippian period contains both the Mississippian and Plaquemine cultures as distinct cultural entities.

While the Plaquemine culture has proven difficult to define, it does seem evident that it was a distinct cultural tradition within the Mississippian period. The northern Yazoo Basin sits just north of the reach of Plaquemine culture and also on the northern fringe of the Lower Mississippi Valley. It is likely that the northern Yazoo Basin was a region of increased interaction and contact between intrusive Mississippian populations of the Northern and Central Mississippian Valley and the somewhat resistant Coles Creek and Plaquemine populations of the Lower Mississippi Valley.

*The Upper Yazoo Basin*

The Mississippian period in the Upper Yazoo Basin begins around A.D. 1200 (Morgan 1999:146, 147, 160). However, the antecedents of these developments require an understanding of the time period spanning A.D. 1000-1200 (Morgan 1999:147). As discussed previously, Coles Creek culture was expanding to the south and an Early Mississippian cultural complex was beginning to form to the north near southeastern Missouri (McNutt 1996:176). Therefore, the Upper Yazoo Basin was located between two major areas of Mississippian chiefdom expansion. For example, ceramics from the Buford site in Tallahatchie County, Mississippi contain both
Varney Red potsherds associated with the Zebree site and Big Lake phase to the north in Arkansas as well as ceramics associated with late Coles Creek ceramics to the south (McNutt 1996:177). Another site that roughly dates to this terminal Woodland or Early Mississippian period is the Bobo site (Figure 2.1). While the ceramics from the site suggest a long habitation with multiple components, the five radiocarbon dates from the site indicate primary occupation during the Late Woodland and Early Mississippian Peabody Phase (Potts and Brookes 1981:3). This settlement, located in Coahoma County to the south of Austin, is defined by the presence of many wall-trench structures by A.D. 850, ideal agricultural soil, large amounts of faunal remains, and corn remains possibly dating to as early as A.D. 1000 (Potts and Brookes 1981:11). While only five structures were recorded, there was evidence of over 80 house patterns (Connaway 1984:206). Located in even closer proximity to Austin, though, are the Dundee, West, Boyd, Bond, Owens, and Evansville village sites, each containing both Late Woodland and Mississippian components (see Figure 2.1) (Connaway 1984:196-197; Phillips et al. 1951:50, 51, 54). While little publicly available scholarly work can be found on these sites, it is significant that so many sizable village-scale sites existed roughly contemporaneously within 20 km of the Austin Site (McNutt 1996:167-168). Further south in Sunflower County there is yet another village site with both Woodland and Mississippian components, the Walford site (see Figure 2.1). This site is characterized by 19 wall-trench structures, earthen mounds, and a large palisade enclosure (Harrison 2015:5-6).

The Carson site, a contemporaneous site in the Upper Yazoo Basin to the south of Austin, has evidence of interaction with or intrusion by Cahokian peoples during most of Austin’s occupation in the Early Mississippian period. Early components of Carson include evidence of a microlith industry consisting of blades and cores made from a tabular white chert very similar to
the Burlington Chert and microlith industry seen at Cahokia (Johnson and Connaway In Press:16-17). There are also three Cahokia Tri-notched points and Powell Plain sherds, further suggesting interaction with Cahokian peoples (Johnson and Connaway In Press:16-18). Also, the ceramics from Carson are predominantly shell-tempered. This is in contrast to Austin’s primarily grog-tempered ceramics.
Figure 2.1. Map of selected Late Woodland and Mississippian sites mentioned in text.
The Middle and Late Mississippian period in the upper Yazoo Basin displays an increased Mississippian presence in the region, replacing Coles Creek interaction and settlement present previously (McNutt 1996:177). Overall, the Middle Mississippian period, dating to approximately A.D. 1250-1350, is notable for increased mound construction, changes in site plan orientation, and increasing site size (Morgan 1999:148). The Austin site is one of a very few sites of its size that bridges the early and middle Mississippian periods in this region.

Generally speaking, chronologies for the Yazoo Basin stem from the work of Phillip Phillips, James Ford, and James B. Griffin (Phillips et al. 1951; Phillips 1970). These chronologies and culture-histories have been somewhat updated and revised through the years, resulting in a chronology in which some phases are quite robust and others are weak as a result of a lack of data (Hunt 2017:12-13). Therefore, the upper Yazoo Basin continues to lack a fully developed regional material culture chronology (Underwood et al. 2008:13). The Late Mississippian period of the Upper Yazoo can be characterized by the Walls, Hollywood/Parchman, and Hushpuckena phases (A.D. 1350-1550) (McNutt 1996:179). Originally identified by Phillips et al. (1951), this cluster of sites includes the Walls, Chucalissa, Cheatham, Woodlyn, Norfolk, and Irby sites (see Figure 2.1). The majority of these sites are located in the bottomlands region within the Upper Basin, and most are single-mound sites (McNutt 1996:179). Smaller farmsteads in the region show evidence of association with the Walls phase (McNutt 1996:179) suggesting a settlement hierarchy was present (Hally 1996:98). The Hollywood/Parchman phase initially was identified by Phillips (1970) and later refined by Gerald Smith (1990). This phase, identified less by geography, primarily is defined by its ceramic complex, specifically the decorated types Barton Incised, Parkin Punctated, and Old Town Red (McNutt 1996:180). The Hushpuckena phase (see Table 2.1), located just south of
Parchman Phase sites is distinguished by a lack of Bell Plain, a preponderance of Barton Incised, painted wares, and the presence of rim effigies (McNutt 1996:183). Little else can be said of this period because prior to 1996 there was a lack of published data about sites in the region dating to the Walls, Hollywood, and Hushpuckena phases (McNutt 1996:184). Thankfully, this is slowly changing with ongoing work at Hollywood by Bryan Haley (Haley 2002) and Parchman Place by Erin Nelson (Nelson 2016). Regardless, this region is considered archaeologically rich, evidenced by earlier “large-scale site-identification surveys, location studies, and village and prehistoric mound investigations sponsored by museum and academic institutions.” It provides a great deal of opportunity for future research (Underwood et al. 2008:13).

<table>
<thead>
<tr>
<th>Phase</th>
<th>Time Period</th>
<th>Major Associated Sites</th>
<th>Ceramic Traits</th>
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<tbody>
<tr>
<td>Coahoma</td>
<td>Late Woodland A.D. 400-850</td>
<td></td>
<td>Grog Temper</td>
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<tr>
<td>Peabody</td>
<td>Terminal Late Woodland A.D. 850-1100</td>
<td>Barner, Bobo, Bush, Roosevelt</td>
<td>Grog Temper</td>
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<tr>
<td>Buford</td>
<td>Terminal Late Woodland &amp; Early Mississippian A.D. 900-1100</td>
<td>Buford</td>
<td>Shell Temper, Red Slip Painted Wares</td>
</tr>
<tr>
<td>Austin</td>
<td>Early Mississippian A.D. 1050-1300</td>
<td>Austin</td>
<td>Grog and Shell Temper, Corn Impressed, Red and White Painted Wares</td>
</tr>
<tr>
<td>Hushpuckena</td>
<td>Late Mississippian A.D. 1300-1400</td>
<td>Powell Bayou</td>
<td>Shell Temper, Painted Wares,</td>
</tr>
<tr>
<td>Parchman</td>
<td>Late Mississippian A.D. 1300-1400</td>
<td>Parchman Place, Wilsford, West, Salomon, Carson, Dundee</td>
<td>Shell and Grog Temper, Red Slip Painted Wares,</td>
</tr>
</tbody>
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*(Hunt 2017; McNutt 1996; Nelson 2016)
The Austin Site

The Austin site (TU549), located in the upper Yazoo Basin on a natural levee to the east of Phillipe Bayour (Figure 2.2), represents an opportunity to better understand the somewhat ambiguous prehistory of the region. It was excavated between 1988 and 1991 by John Connaway after the landowner informed the Mississippi Department of Archives and History (MDAH) that he had discovered indigenous human remains on the property. MDAH and the landowner agreed on a salvage excavation (Hunt 2017:5-6). Although only the western portion of the site remained intact at the time of excavation, these excavations revealed “3,367 features, two stockade post rows (one with a semi-circular bastion at the end), approximately 50 houses, and burials representing 145 individuals and nine dogs” (Hunt 2017:7). Since this work was done, only a handful of archaeologists have performed analyses on the collections recovered from the site.

Connaway (1989) first discussed the site in an article he wrote for the Mississippi Archaeological Association Newsletter (Connaway 1989). Shortly after work at the site was completed, Nancy A. Ross-Stallings performed an analysis of the skeletal remains from Austin as part of the Mississippi Burial Study for MDAH (Ross-Stallings 1991). This analysis identified information about burial context, disease, and trauma of the individuals from Austin. She observed a pattern of enamel hypoplasia and cavities in the Austin population dental remains (Ross-Stallings 1991), results that are consistent with populations who have experienced increased corn consumption (Hunt 2017:9). She also found evidence of osteoporosis resulting from iron deficiency anemia (Ross-Stallings 1991), further suggestive of a diet heavily based on corn. One of the burial pits included grave goods associated with one adult female and one adult male. Items found associated with the female included a shell-bead necklace, a turtle carapace placed between her lower legs, and a large celt beneath her neck (Ross-Stallings 1991:11).
Figure 2.2. Location of Austin (TU549) and topography of the region.
The male was interred with wolf molar teeth on each side of his head, as well as a brown novaculite projectile point inside his chest (Ross-Stallings 1991:11). Other burial contexts that stood out were five individuals who had been interred face-down as well as a mass-grave of 10 individuals (Ross-Stallings 1991:12). Some of these individuals were found with projectile points embedded in their chests, and one had been decapitated (Ross-Stallings 2007:345).

The most recent analysis that has been completed on the Austin site collections was Elizabeth Hunt’s master’s thesis (2017) which focused on the ceramic assemblage from Austin. Her analysis aimed to increase our understanding of the Late Woodland-Mississippian transition in the upper Yazoo Basin (Hunt 2017:9). Identifying a lack of research on this topic for the region, she created a transitional ceramic phase for this time period (Hunt 2017:26). She found that these ceramics and their associated pits displayed evidence of both local Baytown tradition as well as an intrusive Mississippian culture. This led her to suggest that changes at the Austin site reflected the independent-co-existent model of Mississippian transition, in which in situ local populations slowly incorporate certain traits from intrusive near-by populations (Hunt 2017:179-184).

Summary

In this review of literature focused on the upper Yazoo Basin during the Late Woodland and Mississippian periods, I first discussed current perspectives on household archaeology in the southeast. I followed this with an overview of the different perspectives and theories of Mississipian emergence. Next, I laid out what work has already been done in the region of the upper Yazoo Basin, as well as how this region relates to other nearby areas like the southern Yazoo Basin and Natchez Bluffs. And finally, I discussed what previous work has been done at
the Austin site. As noted previously, the upper Yazoo Basin has seen a great deal of archaeological work, but only a fraction of that work has been published. The case for the Austin site is not too different. In particular, an in-depth analysis of the use of space and architecture at Austin is needed to better understand how it relates to the surrounding region and the Early Mississippian period more generally.
III. METHODS AND RESEARCH QUESTION

The methods required for this thesis are the result of John Connaway’s methods of excavation at the Austin site in 1991. This chapter is organized into two sections: one explaining Connaway’s methods of excavation, and a second explaining my methods of analysis. Excavation methods are based on personal communication with Connaway and other analyses of Austin materials such as Hunt’s 2017 thesis on the site’s ceramics. Additionally, Connaway provided me with all of his field notes on wall-trench and postmold feature excavations. Together, these data allowed me to formulate the methods for my analysis of the wall-trench and post-in-ground structures.

1991 Field Methods and Excavation

In 1988, the railroad line that ran alongside old Highway 61 near the Austin site was removed, which led landowner Mr. Chuck Austin to level his portion of this segment of land for agricultural use (Hunt 2017:5). This process of land leveling revealed a burial which compelled Mr. Austin to contact Mississippi State University and MDAH. MDAH employees negotiated with Austin to undertake salvage excavation to remove all burials to protect them from destruction (Hunt 2017:6), per state and federal law. It became clear that significant portions of the site had already been destroyed by the initial construction of the railroad bed, construction of old Highway 61, and the process of land leveling and re-contouring work (Hunt 2017:6).
Although all of this work was done before the site was identified and this work did significantly damage portions of the site, it is estimated that just a quarter of the site had been destroyed.

Figure 3.1. Map showing Austin’s location in Tunica County, Mississippi.
Primarily, this damage occurred in the eastern and southern portions of the village (Hunt 2017:6). Despite this damage, the remaining site contained the remains of a large, four-acre, pre-contact native village (see Figure 3.1 and 4.1) (Hunt 2017:6).

Due to the large size of the excavation area and the extensive plowing that had taken place for decades across the majority of the site, MDAH archaeologist Connaway decided that removing the top layer of soil using land-leveling dirt buggies would be an efficient way to reveal the underlying site without losing much of the site material or its context (Figure 3.2) (Hunt 2017:6). He also had no funding for these excavations, often digging with very little outside help except for occasional assistance from University of Mississippi crews and volunteers (Hunt 2017:6). As a result of the aforementioned plowing, the original living surface of this pre-contact Native American settlement had been mostly destroyed. Therefore, the majority of the features documented at Austin were truncated by “a few or several inches” (Hunt 2017:6).

![Figure 3.2. Photo of a corner bastion and House Feature 42 (1989).](image_url)
Connaway mapped these features on a grid divided into 2-x-2-m test units, and, in the field, either bisected or completely excavated these features (Hunt 2017:7). This grid was set up based on a north-south centerline and an east-west zero-line with the point of origin towards the southern end of the site. The locations and descriptions of features and structures were recorded in multiple ways. First, individual feature coordinates and descriptions were noted in a feature log. Also, features such as pits, wall-trenches, hearths and postmolds were mapped and labeled by hand in 2-x-2-m test units onto graph paper (Figure 3.3) (John Connaway, personal communication 2018). After these features were mapped and excavated, their contents were then dry or water-screened (Hunt 2017:7). At least a portion of every feature was water-screened using 1/16-inch window screen. Features that contained large numbers of artifacts were selected for complete water-screening (John Connaway, personal communication 2019).

Figure 3.3. John Connaway mapping house feature, facing east (1989).
In total, 3,367 features were excavated at Austin, with the majority of the artifacts coming from the pits (Hunt 2017:42). Of these features, 2,087 of them were postmolds, 620 were pits, roughly 60 were burial pits representing 145 individuals, and numerous wall-trench features from about 50 house structures (see Figure 3.3; Figure 3.4) (John Connaway, personal communication 2017). The majority of these artifacts remain unsorted and uncounted in the original bags that were used after water-screening and drying (John Connaway, personal communication 2019). Therefore, it is impossible to say at this point how many total artifacts and artifact types were gathered from Austin. Until 2018, these artifacts were stored in Connaway’s Clarksdale MDAH office, but were recently moved to the MDAH Jackson office location where they are currently being re-catalogued (John Connaway, personal communication 2019). Additionally, during excavations, Connaway collected 88 carbon samples of varying sizes, five of which were submitted for radiocarbon dating (John Connaway, personal communication 2018; Connaway and Sims 1997).
Figure 3.4. Photo of House Features 47, 48, 54, 51, 50, 49 (top to bottom) beneath mound.
Lab Methods

The majority of the artifacts from Austin remain unanalyzed. Therefore, a total artifact count for the site was never completed. In 2017, Elizabeth Hunt (2017:42) completed a master’s thesis in which she analyzed ceramics from 123 of the 468 accessible pit features. Hunt’s analysis of this 25% random sample of Austin’s many artifacts began with rough sorting, choosing only sherds larger than a half-inch (Hunt 2017:43). These artifacts totaled 30,567 ceramic sherds. They were subsequently classified based on temper, decoration, and body portion (Hunt 2017:43).

Data Input and Map Creation

Connaway’s excavations took approximately three years to complete and resulted in the documentation of 3,367 features, two stockade post rows, up to 50 wall-trench structures (see Figure 4.1; Figure 3.3; Figure 3.4), and the burials of 145 individuals and nine dogs (Hunt 2017:7). Because Austin was excavated between 1988 and 1991, almost all of the data exist only in handwritten form on paper. These data were transcribed into an Excel spreadsheet by the author. This spreadsheet was primarily comprised of data from the field log of 3,367 features; however, the feature log lacked data on wall-trenches. The locations and descriptions of postmolds, pits, fire-pits and hearths were transcribed into the database. Next, these data were formatted and digitized for use in the GIS application ArcMap. Individual coordinate tables for each structure were created which allowed manipulation of each individual house within ArcMap. Most of the house structure data consisted of end points and average widths of individual wall-trenches. However, structures with several episodes of reconstruction were mapped in more detail. This allowed me to tease apart episodes of reconstruction into
identifiable wall-trenches, including linking wall-trenches with reconstruction episodes as identified by Connaway and noted on the structure maps.

Once the coordinates of each house had been transcribed into individual spreadsheets, it became clear that these coordinates, as well as the feature log coordinates, were based on a point of origin that was located approximately near the middle of the site. That is, the coordinates included north, south, east and west points. Because this arbitrary datum was placed in the middle of the site, this resulted in the creation of ‘negative’ points, which ArcMap can not process. To correct for this, all southern and negative points were changed to negative and an arbitrary value of 500 was added to each point. This maintained the shape of the arbitrary grid and eliminated negative values from the coordinate lists, placing the new grid origin southwest of all features and houses.

To input data, first the feature log was divided by feature type. Next, these types were put into ArcMap, creating individual GIS feature classes for postmolds, pits, fire-pits, and hearths. Then, each house was loaded into ArcMap, creating individual feature classes for each structure. In other words, each house and feature type had its own layer to allow analysis an manipulation of each individually. All unspecified postmolds were one layer, all stockade postmolds were another layer, all hearths were yet another, and so on. Once these were loaded into ArcMap as point shapefiles, they were transformed into polygon shapefiles. This step primarily applied to the wall-trench features as the four corners of each wall-trench needed to be connected to make closed polygons. The stockade postmolds and unspecified postmolds were simply given a buffer based on their measured diameter/radius.
Analysis

Once this initial mapping was completed spatial analysis of these house remains and other features was started. First, a chronology of the site was established using multiple lines of evidence. Considering that the reliable dates from the site span roughly 200 years, it is likely that not all of the 50 wall-trench structures were contemporaneous. Therefore, a chronology of feature (and structure) construction and dismantlement or abandonment needed to be established. This chronology was established using data from 123 pits that contain previously analyzed ceramic data (Hunt 2017), as well as radiocarbon dates from multiple house structures, and profile maps showing the superposition of features. Many of the 123 pit features from Hunt’s 2017 ceramic analysis intrude or are intruded by these house features. Understanding how these house features and dated pit features articulate provides an approximate estimation of their relative date. Several of the known radiocarbon dates from Austin came from wall-trench features or burned floors of house structures. These provided a supplemental and more fine-grained assessment of age. Also, many of these house structures intruded into other, earlier house structures. Therefore, profile drawings from trenches dug by Connaway were examined to identify the sequence of house construction for those areas.

In addition to establishing the chronology of house construction of the site, other subsequent related analyses were done. First, a basic spatial analysis of Hunt’s 123 pit features was completed. Hunt generally classified these features into either the Late Woodland or Early Mississippian period. By mapping the distributions of pits by time period, I attempted to identify evidence of movement of village residents over time. For example, a concentration of Late Woodland pits in one area of the site and a concentration of Early Mississippian pits in a
different area of the site could suggest movement or expansion to a new area of the site during the Early Mississippian period.

Also, measurements of house area and size can take on new meaning when understood in the context of the site (Steere 2017:22-24). For example, if one house has several episodes of reconstruction in which the floor plan area increases in size with each episode, this could indicate an increase in societal or economic power and stability for that household. On the other hand, structures with only one or very few episodes of reconstruction with a relatively small floor plan may indicate a household with less societal or economic power. The main point here is that these measurements allowed me to differentiate between houses. This may mean differentiation in use, status, or size of family depending on the contextualizing information. This is similar to how the size of house area is a measure of house shape. While at first glance most of the houses at Austin seem to be roughly square, there is actually some variation. Understanding how these less common structure shapes articulate with the rest of Austin’s architecture and pits could indicate variation in use. Hally’s (2008) analysis of architecture at the King site is an example in which differences in shape indicated differences in use. The above methods were designed with a specific research question in mind, which I explain in detail below.

Research Question

During the transition from the Terminal Late Woodland (ca. A.D. 800-1000) to the Mississippian period (ca. A.D. 1000-1200), institutionalized hierarchies, identified in part by the presence of large-scale ceremonial mound complexes in the Southeast, became the widespread social organization (Anderson and Sassaman 2012:158-159). A primary goal of Southeastern archaeologists in recent decades has been to understand how and why this social change occurred
on such a broad scale (Anderson and Sassaman 2012:160; Kelly 1990; Knight 1998; Pauketat 2004; Kidder 1998; Meyers 2015). The debate over Cahokian influence in the Southeast has been a major part of this inquiry. During the early 1990s, Cahokia was thought to have had only minimal contact with and influence on the rest of the Southeast due to limited artifactual evidence of Cahokian presence outside the American Bottom (Griffin 1993:12; Kelly 1991:84; Knight 1997:230-235; Milner 1991). More recently, however, archaeologists have pushed for new ways of approaching this question, pointing towards the widespread use of prestige-good economies and offering alternative frameworks for the formation of ideology and the spread of cultural hegemony (Anderson 1997:258-268; Pauketat 2004:131-133; Pauketat and Emerson 1997:269-278). These archaeologists see Cahokia’s unique ideology and worldview as the reason for its influence throughout the Southeast. This perspective, therefore, allows for the considerable variability that we do see during the Mississippian period while also explaining consistencies, such as institutionalized hierarchy (Pauketat 2004:144).

The Austin site provides an opportunity to better understand how hierarchical inequality appeared in the northern Yazoo basin, located in northwest Mississippi. This region sits between two thoroughly researched areas, the Central Mississippi Valley and the Lower Mississippi Valley. Descriptions of both regions can and do incorporate the upper Yazoo Basin within their bounds (Kidder 2002:67-68; Morse and Morse 1990a:153). The cultural chronology of the region is poorly defined due to a lack of extensive research integration (Underwood et al. 2008:13), but it sits between the well-defined Coles Creek and Plaquemine cultures of the Lower Mississippi Valley and the Plum Bayou and Varney complexes of the Central Mississippi Valley (Morse and Morse 1990:171). In the upper Yazoo Basin, the Late Woodland is known by the
Baytown Phase, which is defined by the prevalence of Mulberry Creek Cord Marked ceramics (McNutt 1996).

Investigating the Austin site using a multiscalar approach may provide some clarity for this region and time-period. Social change occurs at multiple scales and levels, and therefore our methods should reflect this (Meyers 2015:226-228; Chamblee and Williams 2015:199). Due to the lack of temporal and spatial clarity in defining the upper Yazoo Basin (Underwood et al. 2008:13) and the variability of inequality during the Mississippian period (Meyers 2015:227-228), contextualizing the Austin site within the household, village, and regional scales is necessary to better understand how this transition may have occurred.

Archaeologists have developed multiple models to explain the widespread adoption of institutionalized hierarchy in the Mississippian Southeast, and it continues to be a topic of debate. Generally speaking, the discussion involves two opposing stances: a local in situ model and a migration-contact model (Kelly 1990a:139-143). The in situ model proposes that cultural and social change occurred within certain geographically restricted circumstances (Fortier and McElrath 2002:175; Kelly 1990a:139-143). These models focus on how local eco-demographic stress could have created individual regional examples of more widespread adaptive outcomes of social change (Blitz and Lorenz 2002:119). The migration-contact model, however, describes this process of change through contact with, or even replacement by, outside groups rather than localized change alone (Blitz and Lorenz 2002:118). This model stresses multiple distinct but interacting areas of core development across the Southeast (Blitz and Lorenz 2002:118). More recently, arguments that sit somewhere between these two have gained popularity. One such perspective is put forth by Susan Alt (2006:300) who describes Mississippian cultural change as occurring in “thirdspaces” that are created through the encounters of separate groups, who,
through interaction, create new spaces of hybrid cultural participation. Fortier and McElrath (2002: 175) also have suggested an idea of independent coexistence in which separate groups interact while maintaining their separate identities. No one of these models necessarily claims to explain all social change in the Mississippian period. Rather, they should be seen as useful heuristics that may help us understand the historical and regional contexts that lead to change.

Recent studies (Hunt 2017) of ceramics at the Austin site suggest that there is not evidence for a complete adoption of Mississippian traits (Hunt 2017:173-179). Instead, there is evidence of continuity from Late Woodland cultural traits. For example, 74 (60%) of the 123 pits examined at Austin lack shell-tempered ceramics (Hunt 2017:173). Hunt also notes that the lip attributes, rim decorations, and bases of vessels all remain unchanged at Austin (Hunt 2017:180). However, she does point out that there is a gradual adoption of some Mississippian ceramic attributes and styles such as “shell-tempering, new type-varieties, elaborate decoration, and new vessel forms” (Hunt 2017:180). Along with consistent pit shapes and evidence of maize agriculture within pits, this evidence led her to suggest that the Austin site fits within an independent co-existent model for transition (Hunt 2017:179-184). The implication is that this village maintained its separate identity while also incorporating degrees of certain Mississippian traits through co-existent interaction. It will be important to consider this when analyzing the architectural data (Hunt 2017:173-179). If the Austin site was in fact the location of an in situ mississippianized Terminal Late Woodland population, this suggests interaction with Mississippian groups.

Evidence of status differentiation was found in a primary burial in which a male and a female were both interred with grave goods. The female wore a shell bead necklace; a turtle carapace lay between her lower legs; and a large celt sat under her neck (Ross-Stalling 1991:11).
The male was buried with wolf molars on either side of his head, and there was a projectile point, of brown novaculite, inside his chest (Ross-Stalling 1991:11). Ross-Stallings (2007:345) also noted several individuals with evidence of physical trauma as well as a mass burial of 10 individuals, including individuals with projectile-points embedded in their back and one decapitation. These lines of evidence suggest that conflict and violence either occurred within Austin or as a result of outside pressure.

This thesis seeks in part to better understand this conflict by examining how the residents of Austin used space and organized themselves in their community, as well as how they viewed themselves within the context of the broader region of the Upper Yazoo Basin. When inequality can be seen at multiple scales, the argument for greater degrees of hierarchy can be made. If inequality can be seen within the household, within the village, and then more broadly within the region, social organization becomes more apparent. David Hally (1994:173) successfully utilized this strategy to show how the widespread Lamar culture of northern Georgia was not a “single, politically integrated society” as previously thought, but rather a more diverse regional collection of polities. His multiscalar approach demonstrated variability within the region that was not previously visible (Chamblee and Williams 2015:201-202). Austin, with the presence of stockades, an earthen mound, and notable variation in house sizes across the site, seems to indicate some amount of differential status amongst its inhabitants in addition to an outwardly defensive posture in relation to the surrounding region.

Conclusion

The primary question of this thesis is, was institutionalized hierarchy present at Austin before its abandonment around A.D. 1350. As described above, these methods are aimed at revealing evidence of increasing differentiation between certain houses over time. The methods
first establish an accurate and useful map of Austin. The next goal is to understand the timeline of these mapped features. Finally, the last step of my analysis seeks to reveal evidence of differentiation along this timeline based on house size, orientation, and persistence. Through the use of ArcGis, these analyses will result in precise and visually digestible maps that, when viewed together, will provide a more complete image of change over time at Austin. These methods provide a way in which to better understand if and how inequality increased over time at Austin.
IV. RESULTS

The analysis presented here of the architecture and use of space at Austin used multiple lines of evidence as well as multiple forms of descriptive statistics to better understand if and how Austin changed over time. Specifically, multiple types of data are used to understand changes in architectural form and style between the Late Woodland and Early Mississippian occupation at Austin. First, I present a map of the site to show the distribution of the basic variables at Austin. These include structure type, size, orientation and the spatial distribution of features (both domestic and ceremonial) across the site. These initial observations set the stage for the more specific analyses that establish a chronology for these structures. Finally, this chronology is used to determine how use of space at Austin may have changed over time by analyzing how the previously mentioned variables at Austin changed over time. This is followed by a discussion of what these changes mean in terms of the emergence of inequality at the site, and how these changes reflect or diverge from theories of Mississippian emergence (e.g. Wilson 2017).

Features

The map of the Austin site shows different types of features and structures at the site (Figure 4.1). This chapter includes counts and descriptions of wall-trench houses, stockade post rows, refuse pits, and a mound. While there are many burials and associated pits from Austin, many of these features were not available for analysis here (but were analyzed in the past: see Ross-Stallings 1991), and were therefore left out of the maps.
Hunt’s analysis of features and pits at Austin (Hunt 2017) however, were used to better understand chronology at the site.

Figure 4.1. Map of features at the Austin site.
**Houses**

In total, there were approximately 50 houses at Austin. This number is approximate because the count varies based on how houses with multiple episodes of reconstruction are counted. The total also varies based on whether houses are counted based on the presence of less than four walls (see Chapter 3 for a discussion of this issue). When all structures are counted, regardless of how many individual walls were found for each, and with all reconstruction episodes counted as individual houses, the total number is 50 houses. When counting only structures with multiple walls by individual reconstruction episodes, the total is 46 houses. When counting houses with multiple walls by households (i.e., considering a house with multiple reconstruction episodes as a single household), the count is 30 houses.

While there are a few examples of earlier wall-trench construction during the Woodland period in the Southeast (e.g. Pluckhahn 1996), it is overwhelmingly considered a trait indicative of Mississippian period architecture (Steere 2017:37). It is significant that all the house structures identified by Connaway (personal communication 2017) at Austin were wall-trench design (see Figure 4.1) because this suggests some level of uniformity in architectural design at the site through time. Austin also has many instances in which there are many overlapping episodes of reconstruction. These reconstructions often show changes in size and house orientation through time. An example of this trend can be seen in Figure 4.2 below, which shows the overlapping floor-plans of house 38, 39, and 49 and their variability in size and orientation. Additionally, I have separated houses between those with only two-or-less rebuilding episodes and those with three-or-more rebuilding episodes (Table 4.1) in order to try and see if there are meaningful analyses regarding those houses with greater time-depth.
Figure 4.2. Example of houses with overlapping reconstructions at Austin (Houses 38, 39, 40).
Table 4.1 List of houses organized by reconstructions.

<table>
<thead>
<tr>
<th>Number of Reconstructions</th>
<th>Houses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two or less</td>
<td>2, 3, 5, 6, 7, 8, 11, 12, 14, 15/16, 17, 22, 25, 27, 28, 31, 33, 34, 36, 42, 46, 47.</td>
</tr>
<tr>
<td>Three or more</td>
<td>20, 23/24, 30, 38, 39, 40, 43, 44, 45, 48, 49, 50, 51, 54</td>
</tr>
</tbody>
</table>

Pits

There were numerous pit features (n=486) filled with ceramics and other refuse located across the site. Hunt (2017) analyzed a small portion (n=123, 25%) of the total pits. The center points of these pits were plotted to identify which of these pits were near or intersected the footprint of any house features. These pits identified as dating to either the Late Woodland or Early Mississippian phase based on Hunt’s ceramic analysis were evenly distributed across the site. That is, there is no clear difference to the distribution of pits by time period. Additionally, there were 80 fire pits (see Figure 4.1) found at Austin, approximately 10 of which were central hearths inside of houses. These fire pits form two significant clusters: one between House 20 and the earthen mound and one inside and around Houses 27 and 28. These clusters of fire pits may indicate concentrations of ceremonial activity.

Stockades

While none of the domestic structures at Austin were made using single-set post architecture, which is typical of Early Mississippian occupations (Steere 2017: 37; see Chapter 2), the two approximately parallel stockades were. Despite site degradation and damage that occurred prior to excavation, and limited interpretation of these stockades, it is clear they were built using single-set posts laid out in a rectilinear pattern (see Figure 4.1-4.2). Even though the
full stockade is not visible, one corner of the stockade makes a sharp turn at an approximate 90º angle. There is one square overlapping entranceway located on the western wall of the outer stockade made of single-set posts. While no entrances were identified on the inner stockades, there were two potential bastions identified, both of which were made using wall-trench architecture. The first bastion sits at the right angle of the inner stockade and is curvilinear in shape. The second is located further south along the trajectory of the same inner stockade and is roughly rectilinear with curved corners. This is an interesting example of architecture that combines single-set post and wall-trench designs in one structure. There is only one other example of this at Austin, located in the northeastern inner wall-trench of House 38. This likely was a wall repair, though.

Postmolds

Connaway’s extensive feature log also included documentation of 2,087 postmolds scattered widely across the site. Many of these postmolds are from within wall-trench structures, some are unassociated features, and some are part of undetermined linear arrangements or structures. This scatter can be seen mapped in Figure 4.3 below.
Figure 4.3. Distribution of postmolds at Austin.
Chronology

Establishing a clear chronology based on the superposition of the structures at Austin is difficult. Much is based on field notes and maps recorded by others. In addition, the site was badly damaged from railroad and highway construction, plowing, and land-leveling activity in the decades prior to excavation. As a result, only a portion of the entire site was uncovered and documented archaeologically. Some chronological data, however, was obtained based on chronometric dating of remains from the site. These included three radiocarbon dates and two archaeomagnetic dates. This chronometric dating was supplemented by an extensive feature log documenting the location and description of 3,367 features, dimensions of all wall-trenches, detailed planviews of all multi-generational houses, and profile maps from nearly every structure uncovered at Austin.

Chronometric Data

Five dates have been processed from houses at Austin; of these, three are radiocarbon dates and two are archaeomagnetic dates (Table 4.2; Figure 4.5). All three of the radiocarbon dates were obtained from charred timbers associated with structures. These include charred wood from Houses 36 and 48, as well as a charred post that was part of the curvilinear bastion feature in the northwestern corner of the inner stockade. Two archaeomagnetic dates were obtained. One was from the baked floor of House 36, and the other was from the central hearth of House 20. While these five dates by themselves are rather limited evidence, they suggest some interpretations of site occupational history. The dates show an occupation beginning in the late twelfth century and lasting until the early fifteenth century, or approximately 200 years of occupation.
The earliest date at Austin, A.D. 1190-1240, comes from the baked floor of House 36, a single occupation house located outside of the stockades in the northwestern corner of the site (Figure 4.5). Next, a charred post in the corner bastion of the inner stockade dates to A.D. 1170-1295, which indicates that this inner stockade was built relatively early in the site’s occupation. The third date comes from the central hearth of House 20 and dates to circa A.D. 1260-1350. This indicates that House 20 was built in the latter half of the site’s occupation. The fourth date from Austin comes from House 48. This date, circa A.D. 1343, is the second-latest date at the site and comes from a context and structure that was underneath the earthen mound remnant. This suggests that the mound was a late addition to the village at Austin. The final date at Austin also came from contexts associated with House 36, a single occupation structure located outside the stockades. However, this sample is from a charred wood and cane mat fragment that dates to circa A.D. 1404. Obviously, this date contradicts Sample AU521, the earliest date from the site, which is also from House 36. These two dates pose a problem because this is a single occupation house. In other words, it is very unlikely this house was inhabited for almost 200 years. In examining sample provenience, Sample AU521 appears to be a more reliable date because it came from the actual baked floor of the house itself, while sample UGa-6386 came from a wood and cane mat fragment that may or may not have been part of this structure. Therefore, House 36, sitting just outside of the outer stockade post row, dates to a much earlier period of the site’s history.
Figure 4.4. Calibrated radiocarbon dates from Austin.

<table>
<thead>
<tr>
<th>Specimen Number</th>
<th>Type</th>
<th>Context</th>
<th>Material</th>
<th>Uncalibrated</th>
<th>Calibrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU521</td>
<td>Archaeomagnetic</td>
<td>Hs-36</td>
<td>Baked Floor</td>
<td>760-710 B.P. (A.D. 1190-1240)</td>
<td>N/A</td>
</tr>
<tr>
<td>UGa-6645</td>
<td>Radiocarbon</td>
<td>Stockade Bastion</td>
<td>Bastion Charred Post</td>
<td>787 B.P. +/- 47 (A.D. 1163)</td>
<td>Cal A.D. [1170 (1268) 1295]</td>
</tr>
<tr>
<td>AU520</td>
<td>Archaeomagnetic</td>
<td>Hs-20</td>
<td>Central Hearth</td>
<td>690-600 B.P. (A.D. 1260-1350)</td>
<td>N/A</td>
</tr>
<tr>
<td>Beta-131364</td>
<td>Radiocarbon</td>
<td>Hs-48</td>
<td>Charcoal</td>
<td>N/A</td>
<td>Cal A.D. [1329 (1343) 1395]</td>
</tr>
<tr>
<td>UGa-6386</td>
<td>Radiocarbon</td>
<td>Hs-36</td>
<td>Charred Wood, Cane</td>
<td>565 B.P. +/- 79 (A.D. 1385)</td>
<td>Cal A.D. [1287 (1404) 1470]</td>
</tr>
</tbody>
</table>
Figure 4.5. Location of archaeomagnetic and radiocarbon dates from Austin.

These dates, along with superposition data from field notes, helped date stockade construction. House 36, located outside of the stockade post rows, pre-dates the inner stockade, suggesting that the inner stockade was constructed a little later in the site’s history (see Figure
It was not built during the initial occupation, but it may have been added shortly thereafter. Also, these dates indicate that one of House 20’s episodes of construction was built after the inner stockade was constructed. It is hard to say if this central hearth belonged to one of the earlier, smaller constructions, or the later larger constructions because Connaway’s maps show them all on top of one another. House 48, located just to the south of House 20, sat beneath the northwestern corner of the mound remnant. Interestingly, the charred wood sample from House 48 is one of the latest dates from Austin, circa A.D. 1329-1395. In other words, this house and House 20 may have been roughly contemporaneous, and the mound remnant may have been built after both of them. That being said, House 20 has several episodes of reconstruction and likely outlasted the House 48 household.

Superposition of Overlapping Structures and Pit Features

In order to determine site occupation using field notes and planview maps, certain areas where several houses overlapped with one another were identified (Figure 4.5). Excavation notes were then consulted to determine which of these houses had planview and profile maps that could be used to determine superposition of these structures. However, many of the planviews and profiles were not suitable for this particular analysis. Additionally, many of the structures at Austin do not overlap with any other structures. Therefore, of the houses that both overlapped with other structures and had sufficient planview and profile maps, four instances in which houses overlapped were identified and further investigated (Table 4.3). For each of these areas, I also included any pit features from Hunt’s (2017) analysis that intersected with these houses. Based on the overlapping, closely bunched nature of these areas these overlapping structures appear to be part of housing groups, likely bounded by kinship ties. Each of these groups can be seen below in Figure 4.6.
Figure 4.6. Locations of House Groups 1, 2, 3, 4, 5, and 6.
House Group One

The group of overlapping houses and pits located underneath the mound remnant were investigated first. This cluster included Houses 25, 48, 49, 50, 51, and 54, as well as eight Late Woodland pits and one Early Mississippian pit (Table 4.3). A review of the planview of these structures suggests House 50 predates Houses 49 and 51 based on the intersection of their overlapping wall-trenches. I also found that House 54 predates House 51 as well, based on similar evidence. Additionally, House 49 is intruded by a pit that dates to the Late Woodland period, based on Hunt’s 2017 analysis of the ceramics from this pit. In other words, House 49 predates a Late Woodland pit feature. Therefore, based on the law of superposition, both Houses 49 and 50 are likely Late Woodland structures. While I do not have any temporally meaningful pits that overlay or underlay Houses 51 and 54, it seems somewhat likely that these structures

Table 4.3 Superposition of intersecting house and pit features.

<table>
<thead>
<tr>
<th>House</th>
<th>Stratigraphic Position</th>
<th>Feature Description</th>
<th>Time Period</th>
<th>House Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Over</td>
<td>Pit F34 (EM)</td>
<td>Early Mississippian</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>Over</td>
<td>Pits F477 (LW), F423 (LW)</td>
<td>Early Mississippian</td>
<td>6</td>
</tr>
<tr>
<td>15/16</td>
<td>N/A</td>
<td>Pit F513 (EM)</td>
<td>N/A</td>
<td>6</td>
</tr>
<tr>
<td>25</td>
<td>N/A</td>
<td>Pit F692 (EM)</td>
<td>N/A</td>
<td>1</td>
</tr>
<tr>
<td>27</td>
<td>Over</td>
<td>Pit F216 (EM)</td>
<td>Early Mississippian</td>
<td>3</td>
</tr>
<tr>
<td>28</td>
<td>Over</td>
<td>Pits F1909 (EM), F2330 (LW)</td>
<td>Early Mississippian</td>
<td>3</td>
</tr>
<tr>
<td>30</td>
<td>Over</td>
<td>Pit F2000 (EM)</td>
<td>Early Mississippian</td>
<td>5</td>
</tr>
<tr>
<td>40</td>
<td>N/A</td>
<td>Pit F2506 (EM)</td>
<td>N/A</td>
<td>2</td>
</tr>
<tr>
<td>42</td>
<td>Between</td>
<td>Pits F1331 (EM), F1334 (EM)</td>
<td>Early Mississippian</td>
<td>N/A</td>
</tr>
<tr>
<td>43</td>
<td>Under</td>
<td>Pit F1456 (EM)</td>
<td>N/A</td>
<td>4</td>
</tr>
<tr>
<td>49</td>
<td>Under</td>
<td>Pit F3312 (LW)</td>
<td>Late Woodland</td>
<td>1</td>
</tr>
</tbody>
</table>
were contemporaneous with Houses 49 and 51 based on their proximity and spatial
entanglement. Further, all four of these houses were located beneath the mound remnant,
suggesting an extended period of reconstruction that eventually culminated in the construction of
this low mound. Finally, House 25 intersected with a pit feature, but it could not be determined
whether the pit or house was established first.

*House Group Two*

Houses 38, 39, and 40 are also a grouped set of structures that overlap with at least one
Early Mississippian pit as well as the inner stockade post row (see Table 4.3). While the
planviews of these features were unfortunately less clear than others, field notes stated that one
post from the stockade post row clearly intruded into the northern corner of the western wall-
trench of House 38. Therefore, House 38 predates the inner stockade. Unfortunately, no stockade
posts intersect with either House 39 or House 40, so their temporal relation to the inner stockade
is undetermined. However, Houses 39 and 40 both intrude through the wall-trenches of House
38, indicating that they postdate House 38. Also, it was surprising to learn that House 39’s wall-
trenches overlaid those of House 40. Therefore, the largest episode in this house sequence was
actually the second of three. The eastern wall-trenches of House 40 intersect with an Early
Mississippian pit feature, but it is unclear which intrudes into which.

*House Group Three*

Houses 27 and 28 also overlapped with the stockade post row and several pit features
(see Table 4.3). Unfortunately, the planviews did not show any stockade post rows that directly
intersected with any of the wall-trenches from either of these structures. However, House 27’s
southern wall-trench does intrude through an Early Mississippian pit feature. Therefore, it
appears that both Houses 27 and 28 postdate Early Mississippian pit features. This indicates that these houses were built at least as late as the Early Mississippian period.

_House Group Four_

Group Four consists of Houses 43, 44, and 45, but only House 43 intersects with a pit feature. Unfortunately, it is unclear whether House 43 or the Early Mississippian pit was present first.

_House Group Five_

All seven of House 30’s reconstructions together constitute House Group Five. House 30, located in the far northern portion of the site, has several episodes of construction in which the southern walls post-date an Early Mississippian pit feature.

_House Group Six_

Houses 11 and 12 sit in the southern portion of the site and intersect each other as well as multiple pit features (see Table 4.3). House 11 pre-dates House 12 based on stratigraphic position. House 11 also intrudes an Early Mississippian pit feature. House 12 intrudes through two Late Woodland pit features. Therefore, it seems likely that based on the superposition of these two structures and these three pits both Houses 11 and 12 are Early Mississippian structures. Also in this group, House 15/16 intersects with a pit feature, but their stratigraphic position in relation to this pit could not be determined.

There also was one house that overlapped with pit features, but it was not part of any group of houses. House 42 appears to pre-date an Early Mississippian pit feature at its west wall, as well as post-date a separate Early Mississippian pit feature at its southeastern corner. This suggests it was built during the Early Mississippian period.
This house group analysis identified a few key points about the occupation of Austin. First, of these group areas, only House Group One (under the mound) included houses that pre-date a Late Woodland refuse pit. Additionally, House Group Two houses either all pre-date the inner stockade or existed continuously throughout the inner stockade’s construction. Third, houses with several episodes of reconstruction, e.g. House 30 and Houses 38, 39, and 40, appear to get larger over time. This pattern also is seen in the reconstruction of the largest house at Austin, House 20. Finally, the most widely spaced houses included in this particular analysis all appear to date to the Early Mississippian period, based on their association with previously analyzed pit features. Houses 11, 12, 30, and 42 are located along the outskirts of the site and all post-date pits considered to be Early Mississippian based on their ceramic content. In other words, this may indicate that the outer areas of the site were inhabited later in the site’s occupation history rather than earlier.

Wall Angle Data

The final portion of analysis with regard to the chronology of structures at Austin focused on the orientation of the house and stockade features. The angles of each wall-trench were measured and plotted in ArcGIS to determine the orientation of each house. In addition, the overall angle of the north-south and east-west stockade post rows were determined using the same methods. If the houses at Austin can be meaningfully grouped based on their orientations, this could indicate a change over time in house orientation. Further, if these groupings then lined up with specific dates, it would be possible to associate certain orientations with certain time periods. Once calculated these were plotted as a histogram that displayed the distribution of the angles of the eastern and western house walls (Figure 4.7), and the distribution of angles of the northern and southern house walls (Figure 4.8).
Both of these histograms display relatively normal distributions with the one exception of a spike between 75-80° in Figure 4.7. These mostly normal distributions imply that wall angle may not be a very useful indicator of change at Austin because there do not seem to be any obvious groupings. I further investigated this, however, by performing a two-step cluster analysis that compared these two sets of angles (Figure 4.9). As one would expect of such naturally related variables, this resulted in clusters organized in a very linear pattern. Additionally, these groupings were not particularly distinct, indicating that change occurred gradually, rather than
quickly and dramatically. Figure 4.9 also shows the chronological placement of the houses, if known from associated temporal pit information, which further indicates a gradual change over time occurred.

Figure 4.9. Two-step cluster analysis of wall angles, along with associated pit data.

This cluster analysis resulted in the identification of three primary groupings of house orientation (Groups 1, 2, and 4). The dated pits do not seem to be associated with any particular house orientation. For example, there are Early Mississippian pits associated with houses in each of these primary groupings. Each of these angle clusters were mapped to see if they might reveal any patterns in that context (Figure 4.10). This map shows that the third largest grouping (Angle Cluster One) was well spread throughout the site, although it tended to cluster near the center of the site. The second largest cluster (Angle Cluster Four) was primarily located in the northern half of the site, but also with some tendency toward the center region of the site. The largest
cluster (Angle Cluster Two), however, is spread evenly across most of the site, as well as inside and outside the bounds of the stockades. So, house orientation seems to have been of little significance to the inhabitants of Austin based on the range of variation and lack of distinct spatial and temporal patterns.

Figure 4.10. Spatial distribution of house orientations in relation to groups.

The angles of the stockades were also studied. The north-south outer stockade had an angle of 65.7923° while the north-south inner stockade had an angle of 68.2999°, and the east-
west stockade had an angle of 161.9413°. Therefore, the north-south stockades are located in the upper half of the largest cluster (Angle Cluster 2) while the angle of the horizontal stockade fits just within the lower half of the second largest cluster (Angle Cluster 4). It is important to point out, however, that the angles of the inner stockade walls (both vertical and horizontal) sit very close to the border between Angle Cluster 2 and 4. Therefore, the orientations of houses in Angle Clusters 2 and 4 seem to be similarly aligned to the stockade features at Austin, with neither of them aligning to the stockades perfectly. While the inhabitants at Austin aligned their houses with the orientation of these stockades, they did not do so with much care based on the relatively large range of these orientations in Angle Clusters 2 and 4 (range of approximately 40°; see Figure 4.9). Also in support of this, Figure 4.10 shows that these orientation clusters are not discrete to specific spatial groups. Multiple occupation households include multiple orientations in almost every House Group. It is more reasonable to suggest that the orientation of the natural levee on which Austin sits played a more significant role in determining the overall orientation of the site, as well as its various structures, throughout the site’s occupation.

These analyses do not show any correlation between these angle clusters and the radiocarbon dates and associated pit data. For example, both House 20 and House 50 are members of Angle Cluster 4. However, an archaeomagnetic date from a hearth in House 20 dates to ca. A.D. 1260-1350, while House 50 both sits beneath the low mound as well as beneath House 49 (a probable Late Woodland structure). In other words, these two structures are part of the same angle cluster, but most likely date to very different portions of the site’s history.

Furthermore, Houses 20 and 48 both roughly date to similar portions of Austin’s history, but belong to different angle clusters. Therefore, I would argue that house orientation was not a
particularly significant factor for the inhabitants of Austin in terms of distinguishing themselves from past generations.

**Summary of Site Chronology**

Based on the various analyses and data presented, the image of change over time at Austin has become more clear. While many of these analyses did not yield striking patterns of change over time, each provided useful pieces. The analysis of the radiocarbon and archaeomagnetic dates showed that the largest and most substantial house structure at Austin (House 20) also is likely one of the more recently constructed houses at the site along with neighboring House 48. Significantly, House 48 dates to a roughly similar period of time as House 20, but it pre-dates the mound. The House 20 date likely comes from one of its earlier reconstruction stages. Therefore, House 48 and House 20’s earlier reconstruction stages are contemporaneous with each other, while the low mound and House 20’s last, and largest, episode of occupation may have been contemporaneous. Similarly, one of the earliest dates from the site came from House 36, which sits outside the stockade. This suggests that the stockades became a necessity later in the site’s history. Additionally, the inner stockade post-dates House 36, but roughly predates both House 20 and House 48. Therefore, the inner stockade likely predates the mound. These basic inferences based on the five dates gathered from Austin suggest that over time, the inhabitants of Austin began to consolidate spatially behind defensive stockades. It also suggests that the mound was one of the latest architectural features built at the site.

The analysis of the superposition of features at Austin provided similar inferences. First, House 49, which was located beneath the southern end of the mound, may have been a Late Woodland structure. This indicates that this particular area of the site witnessed the longest area of occupation at the site. It has one potential Late Woodland structure (House 49), another
structure dating to the mid-fourteenth century (House 48), and a mound that was built on top of the remains of these two structures. This demonstrates a long period of occupation at the center of the site. Additionally, this area of the site contains some of the most substantial domestic architecture present at Austin in the form of Houses 20, 23, 24, and 40. Each of these structures are part of house groups with three-or-more episodes of reconstruction.

When considering some of the more widely scattered structures at Austin, it seems likely that many of these single-occupation structures were built during the latter part of Austin’s site-history. For example, Houses 11, 12, 27, 28, and 42 all likely date to the Early Mississippian period based on their stratigraphic position atop or between Early Mississippian pit features. While these likely were located outside of the inner stockade, they may have been within the bounds of the outer stockade. This subsequently suggests that the outer stockade was built later than the inner stockade, perhaps even around the time that the mound was constructed. However, more definitive archaeological evidence is needed to support this idea.

The analysis of wall-trench orientation in relation to both of the stockades as well as the pit features did not provide much clarity. If the inhabitants of Austin were building their structures within the bounds of these stockades, they were only building them loosely along similar angles. These similarities in orientation more likely reflect alignment with the natural levee landform rather than cultural affiliation. Based on Figure 4.9, it appears that house orientation does not further clarify much of Austin’s chronology.

**House & Pit Feature Data**

With the general chronology of the site laid out, a more detailed examination of house structures and pit features in terms of how they relate to one another spatially could be done. The
following analyses attempted to identify meaningful patterns within and between these structure and feature types. As mentioned previously, how “structure” is defined at Austin inherently changes the data set, and is the basis for how households are analyzed with regard to rebuilding episodes. As Steere (2017:57) points out, there are three different ways to describe rebuilding episodes. The first method identifies a single structure with \( n \) number of reconstructions. This method makes it easier to identify households with long spans of occupation. The second method simply identifies each rebuilding episode as a separate structure. This strategy emphasizes the amount of construction occurring at the site, generally, with less emphasis on time depth. Alternatively, a hybrid of these two options can be used, describing the reconstructions as a single structure while also describing each episode separately. With this third method, the analyst can be more flexible when working with a more varied data set that incorporates both houses with clear reconstructions, as well as those that are harder to interpret. A hybrid approach was used here because of the variability in structure clarity at Austin. In other words, there were some houses that were very obviously rebuilt directly on top of the previous structure. However, there were also instances in which the new episode was positioned in an offset position from the previous construction, but still overlapped with it. For example, Houses 49, 50, 51, and 54, all under the mound, have overlapping floor plans, but are defined as separate house structures because they are so obviously offset. With that in mind, this dataset was analyzed and interpreted to understand how Austin changed during the Early Mississippian. Changes in house traits such as size, shape, and reconstruction were considered to determine if these changes over time indicate any cases of increasing status, and if so, if this resulted in differential levels of power or wealth between households.
House Floor-Plan Size and Shape

The variation in architecture styles at Austin also includes variation in size (Table 4.4; Figure 4.11). The average floor plan size of structures with two-or-less rebuilding episodes at the site is 25.49 m², while the average floor plan size of structures with three or more rebuilding episodes is 27.56 m². Also, the average floor plan size of rectangular structures is 20.44 m², while the average floor plan size of square structures is 29.65 m². House size is an important variable for multiple reasons. A village-wide increase in floor-plan size may indicate general population growth, where families and households are growing in size (Steere 2017:88).

Contemporaneous variability in house size also may indicate differential wealth, power, or status in the community. When there is a great deal of contemporaneous floor plan size variation, it can be argued that the larger floor plans indicate higher status households (Steere 2017:138-139). Larger houses require more labor and materials for construction. When there is measurable variability in house size at a site at one time, it may indicate variable access to these materials and labor. Basic descriptive statistical analyses of house areas revealed there is variation, but this variation is mostly contained within one grouping that approximates a normal curve (see Figure 4.11). However, there are a few notable outliers in the data set. The area of House 40 is one entire standard deviation from the mean, while the area of House 20 is two standard deviations from the mean. This indicates that these two structures most likely were of some significance at Austin.

<table>
<thead>
<tr>
<th>Table 4.4 Descriptive statistics of house floor plan size.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area (m²)</strong></td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>38</td>
</tr>
</tbody>
</table>
Because the variation in house size was rather minimal with the exception of a few outliers, I subsequently split the dataset between square and rectangular structures. To do this, I had to first quantify house shape.

The size of houses at Austin based on house shape was also analyzed. First I had to decide which houses were square and which were rectangular. This was done by dividing the longest side of each house by its shortest side. A perfectly square house would have a ratio of one, while rectangular houses have ratios further from one. Considering that perfectly square houses are rare in this data set, a threshold between what could be considered square and what could be considered rectangular had to be established. Figure 4.12 shows the distribution of these length-width ratios of all houses with walls on four sides. While it displays a relatively normal distribution, there seem to be two concentrations, a larger one between 1.05 and 1.10 and another much smaller one between 1.25 and 1.30. Essentially, this shows that the majority of houses at

Figure 4.11. Distribution of house floor-plan sizes (m²).
Austin are roughly square, but that there are several outliers beyond 1.20 that are much more rectangular. Therefore, the threshold for determining squareness was set at a ratio 1.20.

![Figure 4.12. Distribution of house length-width ratios.](image)

Table 4.5, Figure 4.13, and Figure 4.14 display difference in house size seen between square and rectangular houses. This analysis shows that square houses (mean = 29.65) are larger than rectangular structures (mean = 20.44). Also, the sizes of square structures were far more variable than that of rectangular structures with standard deviations of 13.04 and 3.4 respectively.

<table>
<thead>
<tr>
<th>Shape</th>
<th>Number</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Square</td>
<td>27</td>
<td>15.16</td>
<td>71.99</td>
<td>29.65</td>
<td>13.04</td>
</tr>
<tr>
<td>Rectangular</td>
<td>6</td>
<td>16.32</td>
<td>26.39</td>
<td>20.44</td>
<td>3.4</td>
</tr>
<tr>
<td>N/A</td>
<td>5</td>
<td>14.94</td>
<td>32.07</td>
<td>20.85</td>
<td>7.01</td>
</tr>
</tbody>
</table>
Finally, the size of houses was analyzed based on their number of reconstructions (Table 4.6; Figures 4.15-4.16).

| Table 4.6 Descriptive statistics of house size by episodes of reconstruction. |
|-----------------|-------|--------|-------|-------|-------|
| Reconstructions | Number of Cases | Minimum | Maximum | Mean   | Std. Deviation |
| 2 or less       | 14    | 15.16  | 36.99  | 25.49  | 7.72          |
| 3 or more       | 24    | 14.94  | 71.99  | 27.56  | 13.79         |
Table 4.6, Figure 4.15, and Figure 4.16 show the difference in size between houses with two or less episodes of construction and houses with three or more episodes of construction. The mean house size for each of these two data sets was similar, i.e. houses with two or less rebuilding episodes mean (25.5) and three or more construction episode houses mean (27.56), while the size of houses with three or more episodes of construction was far more variable. Houses with two or less episodes had a standard deviation of 7.73 while houses with three or
more episodes had a standard deviation of 13.79. While the counts of these two groups are not equal (n= 14 and 24), this difference in variation may still imply that houses with two or less episodes of construction may be more similar to each other than they are to houses with three or more episodes of construction. Additionally, houses with three or more episodes of construction may be the best opportunity to see actual change over time at Austin. Considering that structures with two or less episodes are more similar to each other than they are to other structures, the argument could be made that they were built at a similar point in time. Their similarity to each other shows that they were built with a similar architectural plan in mind, which suggests that the families that built them may have interacted with each other.

Figure 4.17 shows the distribution of house sizes across the site. In order to depict this distribution spatially, the data set was divided into four separate groups, each containing 25% of the houses. The first quartile (0-25th percentile) are the smallest floor plans, while the fourth quartile (75th-100 percentile) are the largest floor plans. This map does not reveal many meaningful patterns, as houses of various sizes are spread across the site somewhat evenly. However, this suggests that each cluster or household with overlapping structures and multiple episodes of reconstruction appear to have a variation in house size over time.
Figure 4.17. Distribution of house floor-plan sizes across the site.
Occupation Length

As stated above, the average size of houses with two-or-less occupations and houses with three-or-more occupations is roughly similar, but the range of house size for three-or-more occupations is much larger than two-or-less occupations. This is particularly interesting because these multi-generational houses at Austin provide the best opportunity to observe change over time at the site. Therefore, the fact that this group has much greater variance indicates that house size was changing through time. Based on individual examples, such as House 20 and House 30, it seems that these houses were getting larger over time. However, these houses were not changing in a uniform way, indicating increasing differentiation between these house groups over time.

The spatial distribution of these two sets of houses at Austin shows that all houses with more than two occupations were in the northern half of the site, in roughly similar groupings as the clusters of overlapping structures discussed above (Figure 4.18). This is significant because this shows that the northern half of the site has notably deeper time depth based on the extended occupation at Austin by these households. Additionally, the northern half of the site has the only structure (House 49) closely associated with a Late Woodland pit, as well as multiple early dates from House 36 and the stockade bastion. Finally, the mound, which is also located in the northern half of the site, post-dates one of the oldest radiocarbon dates from the site.
Figure 4.18. Distribution of houses with two-or-less and three-or-more occupations.
Stockade Post Rows

As each of the previous maps has shown, the evidence of stockade structures at Austin is present but incomplete. Due to plowing and leveling work, large portions of the stockade post-rows were not identified. There are two clear northwestern corners, though, that both extend to the southwest and east which indicate the presence of two separate stockades likely built during different construction events. While both are primarily made of single-set posts, the inner stockade is distinguished by a corner bastion and regular bastion further to the south that were both made using wall-trench style architecture. This indicates a hybrid architecture style in which both single-set post and wall-trench architecture styles were used to build this structure. I suggest the bastions were added on during a later separate episode of stockade construction. The outer stockade has no evidence of wall-trench style architecture. Instead, it has one single-set post square structure along its western side that may have been a guarded entrance.

Discussion and Interpretation

Overall, these analyses have pointed to a data set that is fairly variable in terms of floor plan size, house orientation, and spatial distribution. However, when these distributions are compared, some interesting patterns emerge. First, there are a few significant houses at Austin noteworthy for their size and time-depth. In other words, many of the largest houses at Austin are also the houses with some of the longest occupations (based on number of reconstructions) at the site. These houses are primarily found in the northern portion of the site. Finally, these houses exist in separate groups from each other. I argue that these households may represent the oldest kin groups at Austin.
**Kin Groups**

The spatial distribution of architecture at Austin suggests the presence of possible kin groups or households at Austin occupying specific areas repeatedly through time. While familial kinship is not inherently required to define a household (Douglass and Gonlin 2012:3), households are considered to be the most basic nexus of shared resources and community activity (Douglass and Gonlin 2012:2). In most instances kinship and familial ties are key aspects of these basic social and political interactions. These analyses lay out the evidence that certain household groups, which likely shared kinship in some terms, had differential access to both political and material wealth or status depending on their claim to Austin’s origin. Beck (2007:7) points out that house construction anchors the inhabitants to both “place and past.” The repeated occupation in areas of the northern portion of the site by multiple households anchors them to both the identity and origin of the community at Austin as well as its physical claim of space on the landscape of the Upper Yazoo Basin.

The first of these household groups I will discuss—Houses 48, 49, 50, 51, 54, and potentially 23/24, 47, and 50— are a group of houses found underneath the mound remnant (Figure 4.19). Based on radiocarbon dates, these are some of the oldest structures at the site. For example, House 48 dates to c. A.D. 1343 (see Figure 4.5) and House 49’s stratigraphy and location in relation to a Late Woodland refuse pit suggest these houses represent the earliest group to occupy Austin. This is also based on their proximity to each other, as well as their similar floor-plan size. Additionally, these houses are arranged in a semi-circular fashion, suggesting there may have been a common area between them. At some point in the site’s history, these houses were burned (Connaway personal communication 2017) and an
Figure 4.19. Distribution of household groups and fire pits.
earthen mound was built on top of them. Additionally, House 20, located roughly 10-m north of this cluster and the mound, was becoming larger over time and would eventually became the largest house at the site. It is likely that this large structure was either contemporaneous with the mound or immediately preceded it.

A second group is made up of Houses 38, 39, and 40 which were rebuilt multiple times, culminating in the second-largest House (40) at the site. Houses 27 and 28 to the east, House 30 (with seven episodes of reconstruction), and Houses 43, 44, and 45 each represent additional small groups of house reconstruction (see Figure 4.19). These extended occupations, along with the early dates from this portion of the site (c. A.D. 1268 from stockade bastion, as well as the intersection with Late Woodland pit) indicate that this area of Austin—including House Groups One, Two, Three, Four, and Five (see Figure 4.19)—likely was the first to be inhabited. This area of the site has some of the largest houses with the greatest amount of reconstruction as well as the earthen mound. I would argue, first, that these households may represent individual kin-groups, and second, that these kin-groups had differential levels of status in the community.

In order to establish greater status in a community, and therefore open the door to inequality, a group must legitimize this increased status (Smith 2003:109). It seems that at Austin, the group of houses originally built under the mound (Houses 48, 49, 50, 51, 54) eventually decided to make an attempt to establish this legitimacy by abandoning their original structures, building a mound in their place, and then constructing the largest wall-trench structure at the site at its base. This showed a control of labor that, combined with the long history that this kin-group had at Austin, was used to legitimize their claim of status and potentially power.

Changes reflecting status-increase as seen through house and mound construction are found at other Mississippian sites, such as Jonathan Creek, a large Mississippian site in Western
Kentucky (Schroeder 2006). Similar to Austin, Jonathan Creek has multiple stockade post row constructions, numerous structures with multiple episodes of reconstructions, variability in architectural styles and house sizes, and a small mound that was added later in the site’s history (Schroeder 2006:126-131). During the Early Mississippian period, the size of the village at Jonathan Creek began to expand. Similar to the Yazoo Basin, very few places in the western Kentucky region have Mississippian sites that date prior to A.D. 1200. The expansion at Jonathan Creek included a population increase, as suggested by the construction of additional houses, as well as construction and expansion of a stockade. Like Austin, the residents of the oldest houses at Jonathan Creek began to establish and express their authority by building multiple, small mounds and notably large structures within the walls of the village (Schroeder 2006:128-131).

The early inhabitants of Austin persisted for multiple generations, with some households rebuilding their houses six (House 38/39/40) and even seven (House 30) times. When this persistence is considered within the context of Austin’s evidence of violence and conflict in the form of a mass-grave, decapitation, and stockades with bastions (Ross-Stallings 199:12), it can be interpreted as very deliberate. The increase in size of these persistent households, the late addition of an earthen mound, and the one instance of mortuary contexts with grave-goods (Ross-Stallings 1991:11) appear to suggest increasing differential access to both material resources and higher social status concentrated in the northern portion of the site. This persistence and increased structure size simultaneously lays claim to the oldest area of the site, the area most connected to the identity of the community, while also laying claim to larger and larger areas of this space through time. It cannot be said that these were the founders of Austin,
however, because it is impossible to know how much further to the east the site may have extended prior to the construction of the railroad.

*New Inhabitants*

To the south of these older house groups at Austin are numerous, single-occupation structures. While the temporal affiliation is less secure than the other structures discussed above, at least two of them (Houses 11 and 12) post-date an Early Mississippian refuse pit. There are three possible explanations for the differences between these southern structures and those located north of the mound. First, these houses may represent later additions of Mississippian peoples. Considering that none of these houses have evidence of episodes of reconstruction, as well as their association with Early Mississippian pit features, this area of the site may have been occupied only in the latter portions of the site’s history. The house-size analysis further supports this. While the largest houses from this area are not nearly as large as the largest houses to the north, there are some significantly large houses located in the south (such as Houses 2, 7, 11 and 14). These large houses may indicate large households, which are indicative of the Mississippian period relative to the Late Woodland period (Steere 2017:33). However, they could also simply be expansions of the initial kin group clusters located in the north. Also, there is not a significant difference in average size between houses in the north and houses in the south (see Table 4.6). Therefore, besides the lack of overlapping episodes of reconstruction, there is not much architecturally that differentiates the houses in the north from the houses in the south.

Finally, these houses may indicate intermarriage between incoming groups and the original kin groups at Austin. However, this possibility seems unlikely due to the presence of defensive architecture at Austin in the form of stockades and the evidence of violence and trauma in Austin’s mortuary contexts (Ross-Stallings 1991). There are two potential ways to
interpret this evidence of violence and tension. First, the presence of stockades by A.D. 1268 shows that the community adopted defensive measures relatively early on in the site’s 200-year span of occupation, suggesting that the acceptance of Mississippian incomers through intermarriage would be unlikely later on. However, many of Austin’s more obvious examples of inequality, such as House 20 and the earthen mound, did not show up until the fourteenth century, many years after initial stockade construction. So, one other interpretation could be that intermarriage occurred before these outward expressions of status began, but as tension grew between the original households and the incoming Mississippian groups, tension and worsening relations between the two led to increased expressions of inequality and greater claims to status and power locally at Austin.

Regardless of why change occurred, it is evident that these changes resulted in differential status for residents of Austin. However, this change occurred gradually rather than through dramatic moments. Despite the obvious evidence of conflict at Austin, the majority of the ceramics are Late Woodland (Hunt 2017). At this time in the Upper Yazoo Basin, there were many contemporaneous village sites that, like Austin, contained both Late Woodland and Early Mississippian components. Such sites as Dundee, West, Boyd, Bond, Owens, and Evansville show that this region had many groups spread across the region (Connaway 1984:196-197; Phillips et al. 1951:50, 51, 54). Also, Carson, a site primarily known for its significant Late Mississippian components, did, in fact, have some Late Woodland/Early Mississippian occupants (McLeod 2015). Near the end of Austin’s occupation, roughly A.D. 1400, the region experienced population growth, evident at sites such as Carson (McLeod 2015), Parchman Place (Nelson 2016), and Wilsford (Connaway 1984). This suggests that Austin existed across a span of time in the Upper Yazoo Basin during which a great deal of change occurred.
Populations were rising, tensions were growing, and violence was sometimes erupting. Austin provides evidence that depicts a community attempting to manage these changes while maintaining their own Late Woodland identity. In contrast to this, Nelson’s (2016) investigation of household distributions at Parchman Place recognized several distinct house groups organized around a central plaza and surrounding mound features, suggesting this site was established with a specific plan in mind from its beginning. Even individual neighborhoods and house groups were organized around individual courtyards at Parchman (Nelson 2016:266). Austin exhibits little evidence of such early site planning, suggesting that the changes that eventually did occur, such as increasing structure size, stockade construction, and mound construction, were gradual additions not originally included in the community’s plan. I would suggest that these additions were in reaction to interaction with new Mississippian groups in the area.

The Broader Context

The emergence of the Mississippian period and all of its associated traits occurs differently depending on regional cultural and environmental contexts (Cobb and Garrow 1996:22). Despite this diversity and variability, we tend to think of explanations for this time of change between two different frameworks at opposite ends of a spectrum: the homology model at one end in which mississippianization spread across the Southeast from one origin or heartland (Smith 1990:2), and the analogy model at the other end in which mississippianization occurs through specific and isolated cultural responses to similar contextual circumstances and challenges (Smith 1990:2). More recently, explanations of this period of change tend to fall somewhere between these two, acknowledging the influence of major Early Mississippian centers such as Cahokia, while still recognizing the complex local circumstances that led to societal change within communities (Blitz and Lorenz 2002:130). Austin shows that the
homology and analogy models of *mississippianization* are not mutually exclusive because both external and internal factors were important in Austin’s changing social dynamics. While the southern households at Austin likely represent a Mississippian addition to Austin, accounted for by Hunt (2017) in Austin’s nominal Early Mississippian ceramic assemblage, it appears that this Mississippian addition was somewhat later in the site’s occupation. Considering the early and extended occupations in the site’s northern households, these likely account for the notably substantial Late Woodland ceramic component noted by Hunt (2017). Importantly, both Late Woodland and Early Mississippian ceramic types were both scattered widely across the site, indicating that these ceramics were used by all of Austin’s inhabitants. Austin was simultaneously an example of interaction, continuity, and change, depending on which aspect of the site’s material remains you investigate.
V. CONCLUSION

The Austin site, occupied from the Late Woodland through the Early Mississippian periods, is an opportunity for archaeologists to better understand how Southeastern Native American communities enacted and experienced the great deal of societal change that occurred during this transitional period. This thesis has focused on the details of Austin’s occupation by investigating both changing use of space and changing architecture. It aimed to resolve the interesting juxtaposition between the results of Hunt’s (2017) analysis of Austin ceramics and the presence of particular Mississippian traits such as defensive stockades and warfare. In particular, this thesis sought to uncover evidence of increasing inequality at Austin.

Institutionalized inequality is seen as a hallmark of major Mississippian sites, evidenced by the presence of defensive architecture, intergroup conflict (Schroeder 2006:116), and variation in house size and spacing at the local scale (Steere 2017:154). Austin has evidence of all three of these elements. Yet, the ceramics analyzed by Hunt (2017) portray Austin as primarily Late Woodland. By analyzing the changing use of space at this transitional site, the juxtaposition of these Late Woodland ceramics alongside evidence of institutionalized inequality was resolved, showing that continuity and change can occur simultaneously in order to manage and maintain status amongst changing and incoming Upper Yazoo Basin Mississippian groups.

In order to resolve this juxtaposition and uncover evidence of inequality and differential status at Austin, I analyzed how the inhabitants of Austin organized themselves across the landscape of the site and how this organization changed through time.
To do this successfully, the chronology at Austin was first established. With five chronometric dates and 123 pits dated by their shape and ceramic content, certain features and structures were placed in their temporal contexts. This analysis showed that the site was occupied for approximately 200 years, from A.D. 1150-1350. Additionally, the inner stockade structure was built about halfway through the site’s occupation at around A.D. 1268. Some of the largest structures at Austin, such as House 20 and the earthen mound, were established relatively late in the site’s occupation. This indicates that the more explicit evidence of status differentiation in this community did not show up until the later periods of the site’s occupation. Also, all of the early dates and pits are located in the northern half of the site. Additionally, all houses with extended, repeated occupations come from this northern section of the site.

The northern area of Austin seemed of particular significance. Based on its large house structures, earthen mound, preponderance of fire pits, and repeated occupations throughout the site’s entire history. Investigations of structure size variation across the site supported this notion. While the average size of houses with multiple occupations was only slightly larger, the outliers in these reconstructed houses were far larger than those in single-occupation houses to the south. Analyses focusing on house orientation and wall-trench style were somewhat less conclusive, though. Little to no meaningful patterns were found in house orientation distributions across the site. Therefore, two variables stand out in the Austin house structure data set: house size and reconstruction count. For the most part, houses that were rebuilt at Austin got larger over time. Importantly, these extended occupations are only found in the northern portion of the site and under the mound.

Certain groupings of houses were identified through their overlapping reconstructions and general spatial proximity. The significant conclusion to these various analyses is that these
house groups have variable time-depth. Those in the north likely were established first, and they existed throughout much the site’s 200-year occupation, some having up to 7 rebuilding episodes. These were the oldest known houses at Austin. Additionally, the largest of these northern House groups sat in close proximity to the earthen mound. While this appears to be a clear indication of variable status between these house groups, it seems that this variability did not come to its zenith until the later portions of the site’s 200-year occupation. The earliest known inhabitants at Austin likely occupied these northern house groups. As stated above, it is not possible to claim that these occupants were the founders of this village, however, because it is possible that much of the village extended to the east but was destroyed by the construction of a railroad line prior to the site’s excavation.

When considering this rise in inequality and differential status over time alongside the prevalence of Late Woodland ceramic types such as Mulberry Creek Cord Marked var. Edwards throughout the site (Hunt 2017:49), the argument that Mississippian peoples were the primary proponents of this change seems to fall flat. Rather, it is more plausible to suggest that the original Late Woodland inhabitants of Austin came into contact and began interacting with incoming Mississippian groups, potentially incorporating new members into their community. However, at some point in Austin’s 200-year occupation, tensions increased and conflict occurred. This may have occurred mid-way through the site’s history, as evidenced by the appearance of the inner stockade at A.D. 1268 as well as evidence for violence in mortuary contexts, including decapitations (Ross-Stallings 2007:345). Following this rise in tensions and conflict, some of the oldest houses at the site were destroyed and rebuilt atop their previous location as larger structures. For example, House 38, built before the inner stockade, was abandoned and the much larger House 40 was built on top of its remains. Additionally, Houses
49, 50, 51, 54, and 48 all eventually were abandoned and replaced with the earthen mound. Finally, House 20, the largest building with multiple reconstructions, was built after the inner stockade at the base of the earthen mound. These changes indicate spatial continuity with the original inhabitants of Austin, while simultaneously adopting a defensive posture behind stockades. This continuity in the north, however, included increasing house sizes and mound construction, which emphasized their significance in the community.

In the context of the Upper Yazoo Basin more generally, there were many sites that were approximately contemporaneous with Austin with both Late Woodland and Early Mississippian components. The Bobo site, located south of Austin in Coahoma County, had five wall-trench houses, as well as evidence of over 80 house patterns, dating to A.D. 850, and corn remains possibly dating to as early as 1000 A.D. (Connaway 1984:206). Based on this, wall-trench architecture and maize agriculture may have occurred in this region earlier than we generally assume, and they also may not be clear indicators of Mississippian lifeways in this region.

Austin, which also has wall-trench architecture (Hunt 2017) and evidence of maize consumption (Ross-Stallings 1991), seems to have come from beginnings similar to the Bobo site. However, there were also many contemporaneous village sites located very close to Austin, but little has been published on them. Village sites like Owens, Boyd, West, Dundee, and Salomon are all less than 20 km from Austin and were inhabited during similar spans of time. Therefore, the transition from Late Woodland to the Early Mississippian likely involved plenty of interaction between neighboring groups and villages.

There are several substantial sites in the Upper Yazoo Basin dating to the Mississippian period that were occupied after Austin. Carson (Mehta 2012; McLeod 2015), Wilsford (Connaway 1984), and Parchman Place (Nelson 2016) all exhibit large, monumental earthen
mounds and many wall-trench house structures. However, these three sites, each occupied during the fourteenth and fifteenth centuries, display variations of the typical Mississippian mound center site plan. The Carson site has several large mounds, but these mounds do not appear to have been associated neighborhoods organized around one central plaza (McLeod 2015:90). In contrast to Carson, Parchman Place’s several mounds each have nearby associated house neighborhoods organized around one central plaza (Nelson 2016). Finally, the Wilsford site has only one mound along with several raised house structures all organized around a central plaza (Connaway 1984:111). Like Carson, Austin differs from both Parchman Place and Wilsford with the presence of stockades and the absence of a central plaza. In other words, there was obvious variability in Mississippian site layout in the Upper Yazoo Basin. This variability can be seen both within time periods and between them. Therefore, in order to understand how the Upper Yazoo Basin changed from the Late Woodland to the Mississippian, we have to consider these sites at multiple scales, as I have done at Austin. While inequality obviously appeared at many sites in this region throughout the Mississippian period, it seems that it did so through variable routes and circumstances, requiring archaeologists to examine the finer details of site formation and chronology across space and through time at both local and regional scales.

The initial inhabitants of Austin appear to have adopted increased status as a means to manage rising tensions and conflict in the Upper Yazoo Basin, both within and outside of their community. By spatially anchoring their newly built houses and monumental architecture to the very locations of their previous longstanding houses (Beck 2007:7) and by continuing their Late Woodland ceramic styles (Hunt 2017), the initial inhabitants of Austin both managed changing regional circumstances and maintained a connection to their Late Woodland identity. This resulted in Austin exhibiting some attributes of institutionalized inequality in which the founding
households of this village, or their descendants, claimed higher social status than newer, incoming Mississippian peoples. In the greater discussion of Mississippian emergence throughout the Southeast, these analyses of the Austin site suggest that we should continue to accept that this change and “emergence” occurred within specific regional contexts often involving unique historical and environmental factors. While general models of emergence, such as the homology versus analogy debate (Smith 1990), can be applied as useful heuristics, it seems that they are rarely able to capture the actual specific complex set of factors and interactions that result in individuals and groups making new decisions and adopting new lifeways.
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Wright, Alice P.


Wright, Alice P., and Edward R. Henry (editors)

VITA

Benjamin Garrett Davis
Benjamindavis4@gmail.com

EDUCATION
Tulane University
B.A. Honors in Anthropology 2010 - 2014
Minor in Geology
Honors Thesis: The Garrett Site: and the Mobility of Early Native Americans in Louisiana

University of Mississippi
Masters in Anthropology Aug. 2017 – May 2019
Masters Thesis: Households and Changing use of Space at the Transitional Early Mississippian Austin Site

PAST EMPLOYMENT AND EXPERIENCE
University of North Carolina in Chapel Hill
Field Crew Member May - June 2013
Provided basic excavation assistance for Vin P. Steponaitis during the Mississippi Mound Trail project.

Tulane University
Research Assistant July 2013 - June 2014
Compiled data and created maps of Mississippi mound volumes using ArcGIS software, providing me with significant experience using ArcMap.

Tulane University
Research Intern 2014
Created a database for, as well as a catalogue of, all archaeological artifacts within Tulane’s Center for Archaeology collection.

Tulane University
Crew Chief May – June 2014
At the Carson site in Clarksdale, Mississippi, I was given the responsibility of running excavations and a dig crew for a certain area of operations on Mound D under the supervision of Jayur Mehta. This included excavating a burned daub structure atop Mound D.
Moore Archaeological Consulting

**Field Technician**
Performed basic field technician duties on Luce Bayou site in Tarkington, Texas in preparation for the construction of a water pipeline.

*July – Sep. 2014*

R. Christopher Goodwin & Associates

**Archaeologist II**
Performed field technician duties on many different projects utilizing many different survey strategies.

*I also performed laboratory duties and artifact analysis.*

*Sep. 2014 – 2016*

University of Pennsylvania

**Field School Supervisor**
I performed on-site and off-site supervisorial duties during Dr. Megan Kassabaum’s field school at the Smith Creek Archaeological Project.

*May 2016 – June 2016*

University of Mississippi

**Research Assistant**
I performed various field work duties and responsibilities for Dr. Tony Boudreaux’s field school at the Starkfarm site in Starkville, Mississippi.

*May - June 2018*

PUBLICATIONS AND PAPERS

Reamer, Justin, Chandler Burchfield, Benjamin Davis, and Megan C. Kassabaum

*Mound Floors, Post Holes, and Wall Trenches: Structural Remains from the 2016 Excavations at Smith Creek*

Benjamin Davis

*The Garrett Site: And the Mobility of Early Native Americans in Louisiana.* Unpublished B.A. honors thesis for the Department of Anthropology, Tulane University, New Orleans, Louisiana.

Benjamin Davis

*Households and Changing Use of Space at the Transitional Early Mississippian Austin Site.* Unpublished M.A. thesis for the Department of Sociology and Anthropology, University of Mississippi, Oxford, Mississippi.

Benjamin Davis

*The Austin Site: Changing Use of Space in the Early Mississippian.* Poster presented at the 75th annual meeting of the Southeastern Archaeological conference, Augusta, Georgia.
AWARDS
  The Robert Wauchope Award for Excellence in Anthropology May 2014
  Senior Honors Scholar Award for Anthropology May 2014

FIELD SCHOOL EXPERIENCE

  **Adelphi University**
  Professor: Bryan T. Wygal
  Two Prehistoric Sites Within the Susitna Valley, Alaska July 2012

  **University of North Carolina at Chapel Hill**
  Professor: Vincas P. Steponaitis
  11 Mound Sites along the Mississippi Mound Trail (Mostly dating to Coles Creek) June – July 2013

REFERENCES

  **Christopher B. Rodning, Ph.D.**
  Associate Professor, Department of Anthropology, Tulane University
  Email: crodning@tulane.edu
  Office: 504.862.3051

  **Vincas P. Steponaitis, Ph.D.**
  Secretary of the Faculty and a professor of archaeology at UNC-Chapel Hill
  Email: Vin@unc.edu
  Office: 919.962.6574

  **Maureen Meyers**
  Assistant Professor, Department of Anthropology, University of Mississippi
  Email: memeyer1@olemiss.edu
  Office: 662.915.72