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History of Archaeological Research in the Yoruba-Edo Region of Nigeria: New Directions for Urban Earthenworks

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This Thesis is submitted in partial fulfillment of the requirements for the degree of Master of Arts

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In this thesis, I examine the history and trends in Nigerian archaeology, through to the development of methods and theories in the study of urban space. The nascent period of the discipline aligns with the early 19th-century colonial administration. During this period, the attention of archaeologists was on art objects. It was followed by indigenous-directed research that sees universities spring up. I discussed how this new formation sought to decolonize archaeology by pointing out that the early studies were colonial-derived, hence ignoring the accomplishments of independent African cultures. The indigenous archaeology new school served to rectify these inherent problems by establishing models of cultural development and complexity that were definitively African based in focus and in a context of nationalist historiography. In a bid to give an African-based definition to the material cultures, urbanism became a widespread research focus. I highlight the different views of urbanism by different scholars and hypothesize that in addition to criteria like population density, settlement size, and agriculture, etc., earthworks are important variables in defining urban space in the Yoruba-Edo region of Nigeria.
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Introduction

In this thesis, I examine the history and trends in Nigerian archaeology through to the development of methods and theories in the study of urban space. The nascent period of the discipline aligns with the early 19th-century colonial administration. During this period, the attention of archaeologists was on art objects. It was followed by indigenous-directed research that sees universities spring up. I discussed how this new formation sought to decolonize archaeology by pointing out that the early studies were colonial-derived, hence ignoring the accomplishments of independent African cultures. The indigenous archaeology new school served to rectify these inherent problems by establishing models of cultural development and complexity that were definitively African based in focus and in a context of nationalist historiography.

This shift in scholarship provides a more in-depth understanding of artifacts by their association with indigenous African ingenuity. In a bid to give an African-based definition to the material cultures, urbanism became a widespread research focus. I highlight the different views of urbanism by different scholars and hypothesize that ‘in addition to criteria like population density, settlement size, and agriculture, etc., earthworks are important variables in defining urban space in the Yoruba-Edo region of Nigeria.’

Studies of earthworks are relatively recent research interests taken up by scholars of African history and archaeology. Its importance cannot be overemphasized as earthworks are present in most stratified societies. Although they are neglected sources (Connah 2000), they have the potential of substantiating already existing
archaeological investigations on African urbanism. I use the presence of earthworks, their sizes, and pattern to argue that they are key elements of urban centers.

Some researchers have argued that the functions of earthen architectural features in the form of banks, walls, and ditches vary from simple domestic usage to formal military defense of cities (Connah 2000; Darling 1998; Usman 2003). Others have argued that they are defensive structures employed by elite and non-elites in their respective zones (Norman 2008). In patterns, some earthworks appear in packed and clustered forms and are mostly boundary markers between landed property owners. Others are linear and extensive, enclosing a community. In the Yoruba-Edo region of Nigeria, these earthworks vary from small-scale enclosures surrounding modest compounds to walls around towns, and large-scale embankments enveloping urban centers. I conclude that earthworks follow a central place model in their configuration, construction, and function. I argue that this pattern of a central place is conversant among the earthworks of Yoruba-Edo region in that the center of an earthwork is usually the place that houses the centralized government. I infer this from previous scholarly works as well as new data from earthwork studies, and their contribution to the models of local urbanization and social complexity.
Chapter 1

Overview of History and Theories of Archaeological Practice in Nigeria

Archaeological research in Nigeria goes back to the colonial era (Frobenius 1913; Andah and Folorunso 1992). The first archaeological research was carried out at Ile-Ife, South Western Nigeria in 1910 by a European Scholar, Leo Frobenius (Frobenius 1913; Folorunsho 2011). These early efforts followed the method and theory of the day with a focus on recovering art objects rather than documenting the archaeological context of finds. Frobenius recovered naturalistic terracotta and copper/brass objects. These spectacular finds spurred more research and piqued the imagination of Western researchers, who later conducted further research at Ile-Ife. European scholars in the early period placed Ile-Ife art objects and Nigerian archaeology on the global scene. The scholars began to search for objects of curiosity through archaeological surveys. Bernard Fagg, who was later appointed as a representative of the Department of Antiquities, retrieved terracotta objects that belong to the Nok culture of Northern Nigeria in 1928. As an experienced colonial officer assistant and archaeologist, he organized the collection of these of objects and contributed greatly to the identifications and collection of art objects that were accidentally found in Ife, Benin, and Igbo-Ukwu (Folorunsho 2011). Up to the late 1930’s, Nigerian archaeological studies were more concerned with locating fascinating objects than with researching the civilizations that existed in the West African rainforest.

The year 1943 marked a turning point in pedagogical and empirical archaeological research in Nigeria as the Department of Antiquities (NDA) was established to oversee
archaeological works. The first ‘systematic’ archaeological excavation was carried out at Osangangan Modakeke by a team of NDA archaeologists alongside partners from the University of Cape Town, South Africa. By the late 1960’s, departments of archaeology were established in three Universities: University of Ibadan (the Institute of African Studies), University of Ile-Ife, and the University of Nigeria, Nsukka. The Ibadan school of archaeology, being the foremost department of archaeology in the country, offered combined honors with Zoology, Religious Studies, Geography, Botany, Geology, and History (Folorunso 2011). The establishment of these departments now opened the door for indigenous scholars to study archaeology and be well equipped to practice.

Between 1951 and 1986, the late Ekpo Eyo left an indelible footprint for indigenous archaeology. Through this time, he met with the then English surveyor of the Antiquity department, Keneth Murray who opens the door for him to obtain his BA and MA in archaeology at Cambridge University and the University of London respectively. By 1986, Eyo had become the first Nigerian to obtain a Ph.D. in archaeology from a Nigerian University—University of Ibadan—and published books about two millennia of Nigerian treasures in two various compendia, and eventually became the first indigene to head the department of antiquities (Folorunsho 2011).

By the early 1990's, more indigenous archaeologists had joined Eyo. Prominent among them were Bassey Andah, Bayo Folorunsho, Alex Okpoko, Ade Obayemi, etc. The new cadre of trained Africanist archaeologists, while attempting to bring honor to the continent, set the pace for decolonizing African history (Abungu 2006:145). It is in this ideology that Andah (1990) wrote that ‘our African ecological, social and political realities demand that we reject European-Arab historical vocabulary, and that, at best
Africans should be passive to these. And only when we have completed the ascent of literacy, identity, spiritual, political, and economic freedom, should we welcome them back, but on our terms, and absolutely on one’s own land.’ In a bid to complete the ascent of literacy, defining urbanism in African terms became a focus.

**Indigenous Archaeologies, ‘decolonization of consciousness,’ and Localized Histories of Urban Center Development**

Early in the development of African anthropology, colonial administrators dominated the recovery and interpretation of archaeological remains. In Paul Lane’s submission, European interlopers paved the way for “colonization of consciousness” and imposed their interpretations to all finds (Lane 2011). This ‘colonization of consciousness’ is the experience that gives credence to the western way of knowing the world without acknowledging the local, and original meanings. This consciousness proved that the discipline was part of the colonial project (Comaroff and Comaroff 1991; Stahl 2010).

While archaeological research in Nigeria was a legacy of colonial rule, its institutionalization as a pedagogical discipline was a product of the nationalist historiography that developed in the 1950s’ (Andah 1990; Andah 1995; Abungu 2006). Tafawa Balewa, the first Nigerian prime minister, passed an antiquity bill in 1953. This bill sought to preserve of Nigerian material culture (Folorunsho 2011) with the aim of sustaining national history in the absence of ‘writing.’ This nationalist idea set the pace for a shift in scholarship where scholars began to decolonize archaeological practices through post-colonial experiences. The Post-colonial programs advocated for the adoption of indigenous perspectives, both in forms of inquiry as well as in the interpretation of material culture (Schmidt 1995; Andah 1995; Segobye 2009; Leone
2009; Stahl 2010; Lane 2011). It provided a new lens of viewing urbanism as local, independent creativity rather than being diffused into West Africa.

**Early Critiques of the Colonial Period: Local Independent Creativity as against Diffusionism**

Early critiques of the Colonial Period transformed the practice of African archaeology. In his 1969 inaugural address at the University of Ghana, Merrick Posnansky opined, that ‘one of the objectives of African history, once it freed itself from an over-dependence on colonial sources, was to look at the past from an African viewpoint with origins rooted in Africa’ (Posnansky 1969). Peter Schmidt (Schmidt 2014:453) illustrated how Ugandan colonial authorities underwrote the Ugandan subaltern history that eventually became a ‘permanent distortion’ to their historiography. As he noted, colonial authorities had gathered an odd collection of oral history while sifting out unwanted evidence, and for over two hundred years, the academic studies of the Bacwezi and Bigo populations are replete with their unattributed accounts.

This trajectory also transcends the archaeological records where local cultures were misinterpreted as foreign. For example, early-20th-century archaeologists refused to acknowledge the African origin of Mali’s Tondi-Daro megalithic sites, highlighting diffusionism as the harbinger of the structures. Archaeologist Jean Maes, referring to the megalithic sites, stated that “for he who knows the psychology of Negroes, one can surely ascertain that this undertaking was not executed by the representatives of the Negro race because it represents such a considerable amount of effort, without any immediate utility and bearing no relation to the regular requirements of feeding and
reproduction, the only functions which are really appealing to the Negro” (Maes in Holl 1997:62). Conversely, current interpretations of these megaliths now demonstrated that they were associated with burials of the Malian agrarian ritual (Connah 1987; Koff 1997). Using the size and efforts exerted in constructing a feature as a yardstick for diffusionism would erroneously mean that architectural ingenuities in Africa were not built by and for local people. This also explains why, despite the innumerable evidence of object of arts from Ile-Ife, Benin or the feasibilities of earthworks across Nigeria, the earliest interpretations of African material cultures were embedded in diffusionism (Koff 1997). According to this theoretical framework, the archaeological records were a product of an outside civilization and not inherent to Africa (Frobenius 1913).

Localized histories of urban complexes

The 1970’s new cadre of university-trained archaeologists set the pace for reconstructing history. They shifted from the collection of art objects to the object’s identification as heritage. These indigenous archaeologists returned to their hometowns for research and ensured the preservation of their already disappearing material cultures. Over time, a question-oriented and hypothesis-driven research design replaced the former *modus operandi* of art collection and interpretation as foreign signatures, to interpretations as the physical manifestation of African cultures. Indigenous archaeologists began to amplify localized concepts of urbanism by attributing all pre-Atlantic materials to Africa. The tenets of indigenous archaeology now constructed an African history that was free from such outside underwriting (Atalay 2006: 283; Schmidt 2014: 463) by defining an urban space in its original African context.
Urbanism at the time was seen to be problematic to the African context. One of such was Childe (1950)’s near East urban descriptions. He considered an urban center as a mixture of traits including a system of writing, calendrical and mathematical science, foreign trade, full-time specialization, high population, large settlement size, and fortification. These criteria were not universal and did not encompass urbanization processes as they occurred in most African settlements (McIntosh and McIntosh 1984). New conceptions of complexity in Africa focused on their highly urbanized environment as being one of high social-political complexity even in the face of lacking a writing system. Following these reconceptions of African cities and their sophistication without systems of writing, several researchers argued that West Africa was not devoid of urban centers. They argued for the importance of oral traditions in African indigenous knowledge systems, which, like writing, served as a form of information dissemination. Finally, several researchers argued that there is no such thing as the categorization of African urban space as one which lacks social and political complexities because of the absence of writing systems (Connah 1981; Andah 1990; Ogundiran 2013).

Africanist Archaeologists have also worked to broaden the definition of urban cultures. For example, Effah-Gyamfi who considers a settlement as being urban “if the particular settlement is mentioned in, oral sources or known through archaeological surveys and excavation; as being large, relatively dense and, above all, dominating the neighboring settlements in the areas of its location, in economic, social, religious and political respects” (Effah-Gyamfi 2009:319). In such criteria as population and settlement size, Basom (1955:446) also opines that ‘the Yoruba people of Western Nigerian have large, dense, permanent settlements, based on farming rather than upon industrialization, the
pattern of which is traditional rather an outgrowth of acculturation.’ It is these high population density and settlement size criteria that make them one of the most urban of all African peoples.

Other scholars have problematized the notion that ‘urban centers must be devoid of agriculture,’ turning to other conceptions of urbanity and the economy (Andah 1976; Okpoko 2009; Adekola 2009). The canonical idea that urban centers do not engage in agricultural activities (Redman 1978) negates the eligibility of West Africa’s ancient settlements to be termed ‘urban.’ Andah (1976) echoes the importance of agriculture as the *sine qua non* and opines that it is only through increased food production and improved distributive networks that urban centers began to concentrate on new technology and socio-political activities. He sees urbanism in West Africa as a relative phenomenon based on such factors as international trade, food production, geography, social functions, the influence of Islam, and the presence of mineral resources.

One can argue then that Africa, like many other continents, has urban traditions. Diverse lines of evidence, such as archaeology, sociology, and oral evidence reveal this truism (Effah-Gyamfi 2009:318). Historical conceptions of urban centers largely differ because they were developed from regional case studies. Childe’s definition focused on cities in the Near East. Andah’s definition takes cognizance of the trans-Atlantic/Saharan trade. McIntosh and McIntosh, among the first to approach West African settlement as truly urban, pointed out a shift in West African urbanism paradigms from being characterized by city-centric variables of feature to the dynamic functions of cities (McIntosh and McIntosh 1984). As they argued, a city-centered approach does not “promote the formulation of useful questions relating to urban process” (McIntosh and McIntosh 1984).
Therein lies the need to explore the urban qualities of a settlement in relation to their neighboring zones.

African-based work since the 1980s has begun to explore the social dynamics between primary centers and peripheries. In this purview which was contrary to the erred view of Sub-Saharan African complex societies—as being the result of outside influence (Saunders 1969)—the rise of Yoruba urban centers was independent of acculturation from European cultures. Indeed, in the conglomeration of West Africa into Grain, Ivory, Slave, and Gold Coasts around the second half of the fifteenth century, the European sailors were not aware of the complexities at the hinterland (Connah 1987). It was thought that the forest zone of West Africa was only inhabited by hunters and gatherers until their integration into the European bullion market (Wilks 1993). However, the hinterlands had centers of economic activities that sustained outlying settlements. It took travelers several years to decipher the complexities of these West African settlements (Bascom 1959; Connah 1987). Since the early 1990’s, the archaeology of West Africa provides a new look into the West African past to the novel discussion of cultural, technological, political, and economic complexities before contact with the Europeans (Monroe 2012; Chouin 2012; Chouin and DeCorse 2010). We now know of the classical/post-classical empires of Kanem-Bornu, Wolof, Benin, Oyo, Nri, Nok, Asante, and Ijebu amongst others. As urban centers, they thrived in no just making naturalistic artistic objects, but building magnificent structures as revealed in earthwork studies.
Chapter 2

Trends in Nigerian Earthwork Studies

Earthwork has been viewed in different ways; some as art forms, and others as architectural features. In any of these views, they are important archaeological variables. In West Africa, they are usually not regarded as an archaeological variable and often neglected as a source of information in the understanding of the urban past (Connah 2000). When perceived as ‘artworks,’ the aesthetic and fascinating character of sculptures and naturalistic objects obviate earthworks as other expressions. However, earthworks as architectures, mostly performing territorial functions are the most pervasive and spectacular art forms in West Africa (Prussin 1982). Prussin (1982) provided an encompassing definition of earthwork as ‘earth itself whose form has been molded and formed meaningfully and expressively into the works of art and architecture.’ Prussin, as an architect, emphasized architectural examples of mosque buildings, shrines and ritual places in West African savannah as earthworks. However, exploring further, the encompassing nature of his earthwork definition, city walls, banks and their ditches are subsumed as earthworks. They are features made by altering the natural spatial landscapes. They are not intended to perform any artistic model of expression but leans more to the social and political structuring of complex societies. These earthworks are also called embankments or enclosures. Some enclosures are not earthen, instead, are made of timber stockades or grass (Connah 2000). The limited number of these non-earth enclosures are due to the preservation problems of organic materials.

There are two main kinds of earthworks: free-standing walls and dump ramparts (Connah 1967). Free-standing walls are built from mud and bricks by molding or stacking
muds or bricks over a uniform landscape to form a vertical wall. Dump ramparts are formed by digging earth from one side to be accumulated on the other side, thereby, building a wall or a bank formed at an angle of inclination. The side which is being dug forms the ditch. Therefore, for every bank formed, there is a ditch (Figure 1). The bigger the bank, the wider and deeper the ditch. Some free-standing walls may also have ditches that expressed more, their militaristic function. The northern part of Nigeria which is situated in the Savannah mostly have free-standing earthworks. However, the Yoruba-Edo region in the rainforest have the dump ramparts.

![Figure 1. Showing dump rampart (1) and Free Standing wall (2).](image)

Historical analyses demonstrate how, until recently, researches by indigenous archaeologists in Nigeria did not fully explore the potential of Earthworks. Adeyemi Adedayo (2015) surveyed the archaeological investigations carried out by undergraduates at the University of Ibadan, South Western Nigeria between the year 2000 and 2007 (Figure 2). In his analysis, 242 projects were carried out. 195 (81%) in the Yoruba-Edo region. The projects were carried out under the supervision of 14 faculty members. Among the faculty members, 4 have at one time researched
earthworks (Aremu 2002; Ogundele and Babalola 2007; Opadeji 2011; and Folorunsho et. al 2006). However, this does not reflect in the student’s project as only 1 out of 242 students worked on earthworks through reconnaissance surveys. The little efforts shown towards the archaeology of earthworks may result from the complexities in excavating earthworks, their sizes and volume lend them to the mechanized technique of excavations, and there is no fund to carry out mechanized excavation coupled with the lack of a tradition of systematic salvage excavation and CRM wherewith people are not trained in the techniques of excavating earthworks.

Figure 2. Archaeological Research Projects carried out by students at the University of Ibadan 2000-2007. After Adeyemi 2015. [https://www.google.com/maps/d/u/0/viewer?mid=1sxOKa8pE6b0cOdKN7By1qbDU&ll=21.97457590156444%2C70.7058341499999&z=3](https://www.google.com/maps/d/u/0/viewer?mid=1sxOKa8pE6b0cOdKN7By1qbDU&ll=21.97457590156444%2C70.7058341499999&z=3)

Conversely, earthworks are common features in ancient Yoruba landscapes (Connah 2000; Usman 2004; Ogundele and Babalola 2007). The lack of student research on
earthworks may also suggest a lack of knowledge about the potentials of earthworks in addressing questions of settlements, urbanism, and social complexities. Surveys over the past three decades has shown that settlements like Old Oyo, Benin, Old Ijaye, Ile-Ife, Okemesi, Ijebu, Orile-Owu, Orile-keesi, Illea and Ikija in the Yoruba-Edo region had defensive ditches and banks/walls surrounding them (Soper and Darling 1980; Soper 1993, Ogundele and Babalola 2007; Aremu et al. 2013; Lasisi and Aremu 2016). It appears that these landmarks are requirements for the establishments of most ancient towns, cities and their outlying settlements in West Africa. It becomes pertinent to see the overarching connection of fortified centers and their neighboring zones. In doing this, we can also understand, their particular functions as to whether they are defensive, monumental, or defining social space. Below I discuss earthwork research in Oyo, Benin, and Ijebu to illustrate the urban features of earthwork through their central place placement.

Old Oyo Empire and Its fortifications

Since the early 20th century, the Old Oyo Empire has been the subject of archaeological research (Clapperton 1929; Clarke 1938a/b, Walters 1954; Willet 1960; Sowunmi 1979; Soper and Darling 1980; Agbaje-Williams 1983; Soper 1993; Ogundiran 2003; Usman 2004, Folorunso et al. 2006; and Ogundiran 2012). Old Oyo empire is often regarded as a kingdom that attained the status of an imperial state (Law 1977; Ogundiran 2012). It was ascribed the capital of the Yoruba state that conquered their neighbors for a while until its decline in the early 19th century due to the Fulani Jihad, while its response to the impact of the Atlantic era gives it the status of an Atlantic-age empire (Ogundiran 2012).
The Empire was surrounded by multiple walls, up to 6 (Soper and Darling 1980).

Another Oyo settlement with walls is Koso. The Koso wall encloses the former capital of Oyo Empire (Agbaje-Williams 1990; Aremu 2007). From surveys carried out by Soper and Darling between 1973 and 1979, the Old Oyo wall system’s shortest length is 6km while the longest is about 18km. Folorunsho et al. (2006) reported that the Old Oyo walls, which are now dilapidated, have ditches that are barely visible in both inner and outer positions. The inner wall is the palace wall, while the outer wall surrounds the whole empire. Aremu (2007) described the system of one of the walls, which is the Koso wall. It houses the erstwhile capital of the empire. Being the former capital, Koso was also the commercial center of the city. Based on the situation of palace ruins in Koso, Aremu (2016) argued that the wall was built to protect commercial activities, to demonstrate authority and power over frontier settlements, and to serve as a center port that controls trade routes. Other walls, particularly the outer walls were built to protect the whole empire against the warring activities from Nupe up North.

The Old Oyo fortifications are very important variables in addressing not just core-periphery relationship but city-hinterland relations of the past. The inner fortification protects the political quarters of the elites, while the outer one protects the whole empire against the Nupes warring community. Usman (2004) argued that outlying settlements outside the old Oyo empire have earthworks that surround them. These earthworks are like those found in political centers. Such is the case with Igbomina in Yoruba Northern frontier where the enclosures in frontier zones can tell more about the political centers especially when they have similar configurations. Usman (2004) established the earthwork construction relationship between Oyo Empire and Igbomina (Figure 3) in the
frontier zone as a defensive strategy. The need to construct stone barriers and mud walls in Igbomina land was due to the warfare between Yoruba land and Nupe. The incessant war forced Igbomina to construct walls for protection purposes (Usman 2004) since they are situated between the two warring communities.

In observing the connections between earthworks of both the empire and the frontier zones, their functions are dependent on one another. While the Oyo earthworks were grounded in the protection of palace area as well as the whole empire in the event of controlling commercial activities, adjacent Igbomina enclosures were strictly for protection since they are vulnerable and situated between two warring communities of Nupe and Oyo. These explain the defensive nature of earthworks in both core areas and the frontiers.
The Earthworks of Benin

Archaeological investigations on the Benin earthworks began in the mid-1950s (Andah 1982; Connah 1963). A.H.J. Godwin of the University of Cape Town was the first to conduct excavations in Benin and was followed by Frank Willet (1960s), Liman Ciroma (1960s), Graham Connah (1960s -1970s) and Patrick Darling (1970s). They surveyed the earthworks and recorded the extents. It consists of a 15km long massive city wall up to 20 meters deep, and a set of inner interlocking rings aggregating c. 16,000 km. It encloses over 500 interconnected settlements and a total of about 6,500km², making it the world’s longest ancient fortifications when joined (Guinness Book of World Records 1974; Ogundiran 2005). According to Darling, the builders built the enclosures to surround their landed properties with different ceremonial rituals attached to the process. These massive and complex constructions are believed to be the material evidence of a centralized political organization, and territorial markers that are indicative of a complex society. With its associated cultural materials dated to be before the fourteenth century AD (Connah 1987), the earthwork exemplifies the state’s formation, socio-political development, and demographic changes in Benin (Darling 1998:145) before the Atlantic period.
In the Benin case, archaeology revealed that there are five former ‘king’ palace sites clustering in the shaded area (Figure 4/5). This area thus was the elite political headquarter of the Benin Kingdom for several generations (Connah 1975). All roads also conglomerate at this center while navigating through the earthwork trails of other non-royal occupants in the kingdom. The interpretation is similar to the Savi area of the Huedan Kingdom where Norman (2006) illustrated how earthworks in the form of ditches had been used to fortify centers and demarcate between elite and non-elite areas. The interconnecting earthwork all around Benin kingdom is suggestive of a
practice whereby the non-elite mimicked defensive strategies used by the political center.

![Figure 5. Zoomed image of the center of Benin Kingdom](image)

**The Archaeology of Ijebu Kingdom**

Ijebu is a vast kingdom in the southwestern part of Nigeria. Early historical records showed that Ijebu was a center of commercial activities. The meaning of the capital of Ijebu kingdom “Ijebu-Ode” also attests to this reality. “Ode” suffix to Ijebu means “outside.” It simply describes a place of convergence wherewith commerce, trade, and other economic activities take place. Pacheco Pereira. Pereira, an early sixteenth century by a Portuguese chronicler described Ijebu-Ode as the capital of the Ijebu polity
(Law 1986). Pereira must have visited ‘Rio de Lago’ which is the Lagos Sea, at the close of the 15th century. His writing was the first piece where Ijebu was mentioned as ‘Geebu.’

At this time, the Ijebu kingdom was accessed through the Lagos Lagoon. Pereira’s description picturizes Ijebu as a socially and politically independent kingdom that is economically prosperous. He states that “…………above this river is a great city called Geebu, surrounded by a great ditch…….. (Pereira 1905), highlighting the presence of earthworks in the early 16th century.

The oral and written histories on Ijebu opens the door to the possibilities of carrying out archaeological research within the proximity of Ijebu-Ode and the outlying settlements. To date, there have been up to eight archaeological inquiries on Ijebu. Seven researchers, including the present author, attempted to explore the archaeology of Ijebu earthworks. The most significant of the earthworks is Sungbo Eredo, which is approximately 180km in circumference and surrounds the whole of Ijebu kingdom (Figure 6). Peter Lloyd (1959) was the first to mention this earthwork in his survey report. Patrick Darling (1997) continued to hunt for earthworks in the Yoruba-Edo region, taking a cue from Benin to examine the extent of Sungbo Eredo. David Aremu (2002) seeks to ensure that the earthwork is conserved and listed as a world heritage while Joanne Mary and the present author worked with him in excavating portions of the earthwork (Lasisi 2014) to reconstruct its depositional history. Olusegun Opadeji discovered classical iron working sites of over 500 furnaces within the proximity of Sungbo Eredo and concludes that this site might be the production site of iron objects needed to dig a part of the 180km long earthwork that is up to 10m deep at some points. A major problem in Ijebu archaeology was the contextual and chronological relationship with the Ijebu polity as the
previous dating of the earthworks was inconsistent with oral traditions (Oduwobi 2017). It was Gerard Chouin (2016) who used C14 dating to address these questions and addressed the matrix of the outer earthwork which he determined aligns with oral history. All of these archaeological endeavors point to the Earthwork of Ijebu as a significant tool and driver of the economy and polity based on the massive size of the structures as well as the technological requirements of building it.

Sungbo Eredo

Sungbo Eredo is the outer enclosure of Ijebuland, southwestern Nigeria. It is approximately 180km long, forming a large feature that shows how involved the socio-political system was long before the opening of the Atlantic trade (Chouin 2016). It is a system of ditch and bank that surrounds the whole of Ijebu Kingdom. Indeed it is the most significant earthwork of the ancient ramparts, boundary embankments, ditches that stretch across Nigeria (Aremu 2002).

Although Llyod in the late 1950’s, and Patrick Darling in the late 1990’s carried out reconnaissance survey of Sungbo Eredo (the outer enclosure of the whole Kingdom), its archaeology is just beginning to take shape only within the last six years (Darling, 1997; Chouin, 2014; Lasisi and Aremu 2016; Chouin, 2016). Aremu et al. (2013) opine that the site of Sungbo Eredo at the Oke-Eri axis Northern axis is about 5000 years Bp (Figure 6). This date has been debated to be an outlier. It has been clarified to be incoherent with the classical construction of Sungbo Eredo around the late 14th or early 15th century (Lasisi and Aremu, 2016; Chouin 2016). In 2014, working under the supervision
of David Aremu, I excavated a test unit on the Oke-Eri bank. In asserting or refuting the earlier date, my unit was marked closed to the trench that yielded a date of 5000 years Bp in 2014. The dates gotten from this excavation further complicated the chronology of Sungbo Eredo as it goes back to 10000 years Bp (Lasisi and Aremu 2016). However, the charcoal samples dated came from an older surface that existed before the construction of the earthwork thereby establishing the possibilities of two occupations; the Late Stone Age, and the medieval period. After this work, which contributed to the understanding of the depositional history of a part of the outer ditch, I took part in the 2016 season of the Ife-Sungbo project jointly led by Gérard Chouin (William and Mary) and Adisa Ogunfolakan (Obafemi Awolowo University, Ile-Ife). This time, the team was able to obtain a full stratigraphic profile of the ditch-and-bank enclosure at Ilara-Epe, Lagos State, and dated to the late 14th to early 15th c. This date is relatively similar to dates published by Connah on the earthworks of Benin City (Chouin 2016) to coincide with periods of rising, migration, and the collapse of kingdoms in West Africa.

A large polity must have constructed this ditch. While it is important to be careful not judge Ijebu urbanism by an outside yardstick, it is likewise important to test it against what is termed urbanism in and outside Africa. It is on this note that the Rome’s massive oval amphitheater, Colosseum, and Egypt’s pyramid of Giza will be used for the inference.

In Thomas Homer-Dixon (2006:36)’s analysis of the Colosseum project, the amount of energy exhausted to implement the massive construction requires a caloric intake from a specialized food production/agricultural system. This also extends to the expanse of land required to grow the food to feed both human and animal labor. In the purview of Ijebu
construction, the 180km long earthwork has 90% of it is up to 20m high. According to Darling, the Ijebus' built this massive embankment that is among the largest human-made monuments in Africa with an estimated 3.5 million cubic meters of moved earth and sand (Darling 2001). That is, 123,601,333.5 cubic feet was moved to make up the ditch and bank system. In comparison with the great ancient Egyptian's pyramid of Giza, with moved earth 85,730,400 cubic feet (Levy 2006), the Ijebu earthwork has a surplus of 37870933.5 cubic feet. This surplus is 2.5 times larger than the Colosseum moved raw material of 1 million metric tonnes (14674600 cubic feet). This means that the Sungbo Eredo moved earth is 8.4 times the Colosseum project. The Colosseum required 44 billion kilocalories (Homer-Dixon 2006), Ijebu earthwork required 8.4x44 billion kilocalories, which is 369 billion kilocalories. The Colosseum project hence requires 2135 laborers working 220 days for five years. Similarly (not an approximate value because of geographical difference, feeding mechanism, as well as the different nature of projects), to build the Ijebu earthwork, at least 17934 laborers are needed to work 220 days per year for 5 years. Today the population of this kingdom is only the same as the laborers who might have worked for five years. This suggests that the Ijebu as a kingdom reached its apogee at the time the structure was built. This peak transcends through the population density to their food production, defense, and socioeconomic/political systems. The lack of continuity with the earthwork among present-day Ijebu descendant shows that there was a gap, which can only be understood within the discourse of societal collapse and contradicts that the builders came from outside as it will be challenging to move 634095 outsiders to Ijebu for the sole purpose of building an embankment for local business.
Figure 6. Sungbo Eredo Photo@Ife-Sungbo archaeological project
Chapter 3

Central Places in the web of Urban Earthenworks

Monumentality commonly goes hand in hand with interpretations of social complexity, and in West Africa are often used as markers of social complexity. The “surrounding” configuration of the enclosure now draws on the centeredness of town and cities which can be explored by applying the ideas of the Central Place Theory. ‘Central Place Theory’ was developed by Walter Christaller, a German geographer in the 1930’s to analyze and explain spatial and functional attributes of cities and towns (Christaller 1933; Renfrew and Bahn 1996). It has since gained more ground in anthropological discourse over the last four decades. It is now applied to identify spatial organization of societies isolated from modern economic systems. The theory states that in a uniform landscape, the spatial patterning of a settlement should be perfectly regular and evenly distributed. That is, central place(s) should be situated equidistant from each other (Figure 7) while being surrounded by smaller satellites. The distance of the different cardinals of the enclosures to the core is approximately balanced, hence situating the core at the center of their spatial extents and influence. The center, therefore, controls and distributes goods and services to its surroundings. As I will argue, this is typical of most towns and cities in the Yoruba-Edo region. The center serves as the birthplace of trade, commerce, and polity.

In the context of Nigerian archaeology, central place theory has not been applied. I hypothesize that for every enclosure, there is a central place, and if a central place, a centralized government or an imitating non-elite frontier zone is evident. African earthworks demonstrate this pattern by enclosing centers of ritual, political or
commercial activities (Connah, 2000). This hypothesis gathers strength from the above earthwork studies from Oyo, Igbomina, Benin, and the new data from Ijebu.

Following this, I view embankments enclosing central places, as a powerful criterion of an urban settlement. I also argue that embankments that surround the periphery are a function of the core themselves. These periphery earthworks are not standalone features but closely connected to the central places.

![Central Place Theory Model](image)

Figure 7. Central place connections with the periphery

The analysis of Ijebu organization of space is crucial to defining Ijebu as an urban center. The use of space produced a ‘social map’ using Ardener (1981)’s term; wherewith space became bounded and shaped as it exerts its influence (Holl 2006) over subjugated territories. Analyzing this space helps to identify the social and political territories around the center. In looking at Llyod (1959)’s survey map (Figure 8), one could see the traces of inner ditch system within the center of Ijebu Kingdom. Although
the exact location of this inner feature could not be deciphered from the map, google earth satellite maps played a pivotal role in locating the features. In the summer of 2016, the present author surveyed the capital of Ijebu kingdom, Ijebu-Ode. It is now established that Ijebu kingdom has both outer (Sungbo Eredo) and inner enclosures. It was not difficult to propose that the polity which commanded the construction of a longer outer 180km long earthwork might have its political and commercial headquarters within the inner enclosure.

Figure.8 Sungbo Eredo after Llyod 1959
The survey was only able to recover parts of the inner ditch as most of the enclosure have been destroyed in the course of community developments and road constructions. To get a full extent of the inner enclosure, it is pertinent to rely on the tenet of the central place wherewith every rubric of a society diverges outward. One important model to employ is the XTENT model to calculate the size of Ijebu-Ode enclosure up to the spatial extent of its influence. It does this by relating all neighboring villages to the center (Figure 9). The XTENT model assumes that the influence of a center is analogous to a bell or bell-tent in shape. This model thus produces a formation that helps to deduce ditches that have been wiped off by the ravages of time. For example, if Ijebu-Ode ditches, has only 1/6 of its length left evident, the radius of the available ditch from the center will be calculated and inferred from the whole circumference using an approximate formula of a circle.
Ijebu-Ode and its system of ditch and bank is situated at the center of a larger outer ditch that surrounds the total area of Ijebu Kingdom, giving it a concentric configuration of ditch enclosures. The centered geographical proximity of both the inner ditch and Ijebu-Ode to the surrounding matrix places Ijebu-Ode in a position of authority, attraction, and commerce. Advanced XTENT’ and ‘Central Place theory’ sets Ijebu-Ode’s centrality as a yardstick in placing the kingdom in an urban category. By inference, Ijebu-Ode’s architectural ingenuity, unique hegemonic space management, and communal corporation in construction attest to its high level of social complexities.
The functions of Ijebu earthworks are numerous. The survey report from previous works has only been able to show that it serves as a boundary marker, separating the capital from the rest of the kingdom. However, new data from the British Nation Archives showed a more detailed map of Ijebu-Ode during the British expedition (Figure 11). This map showed the inner enclosure with six different gates to gaining entrance into the capital. Like, Benin and Oyo, the palace of Ijebu titular head is situated at within the inner wall, turning light into both boundary marking and the protection of the capital of Ijebu kingdom. The capital, which must have been the commercial, economic, political, and cosmological headquarters of the whole kingdom.
The Ijebu-Ode earthworks is a proof that Ijebu-Ode was an urban center at the time the earthwork was functional. The map that showed the centrality of Ijebu Palace outstretched by gates and wickets followed Llyod’s description of a typical Yoruba urban space. Llyod (1974) noted that in characterizing Yoruba capitals, one should look out for “a rampart and ditch enclosed a densely built-up area in the centre of which was the Oba’s palace—an assemblage of courtyards with specific ritual and secular uses, facing
a large, open concourse, the whole covering several acres. In front of the palace was the main market of the town, with roads radiating to the towns gates and beyond to the subordinate towns of kingdoms.” This description can be clearly seen in the early Ijebu colonial map. One advantage is that it will also help in the search for old palace and market square in future works.
Chapter 4
Recommendations and Conclusion

Earthworks in Africa are neglected sources (Connah 2000). Attention to studying complex societies have been on other material cultures. The few focuses on earthwork archaeology in the Yoruba-Edo region have revealed its importance in the making of urban space. It also provides a good platform for materials analysis. For example, excavating a system of wall gives a cross-section view of the embankment. In analyzing the technique of construction, the creativity and ingenuity of the builders turn on the light on complex African societies and their technology. This approach also makes it easy to study the stratigraphic relationship of different periods, the depositional history, mode of construction, and juxtaposing the materials before and after construction, thereby make inference about urbanism.

The topic of urbanism has been seen by different scholars using many different benchmarks. I approached urbanism in the Yoruba-Edo region based on such structures as earthworks. Earthworks which encloses a central place controls the activities of the polity. The functions of earthworks in the Yoruba-Edo region are mostly defensive and used to mark boundaries (Table 1). This functional dimension of earthenworks is not an end in itself, but a means to an end which raised a question about the polity being protected and marked. It is these broader questions of the workings of complex societies that propelled this paper, to the description of African urbanism, and in particular, the Yoruba-Edo region under the rubric of what constitutes an urban center.
<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Earthwork</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mabogunje and Omer-Cooper</td>
<td>1971</td>
<td>Owu-Ipole</td>
<td>Protection/Defensive</td>
</tr>
<tr>
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<td>1960</td>
<td>Ile-Ife</td>
<td>Palace protection</td>
</tr>
<tr>
<td>Paul Ozanne</td>
<td>1969</td>
<td></td>
<td></td>
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<td>Robert Soper and Patrick Darling</td>
<td>1980</td>
<td>Old Oyo</td>
<td>Defensive</td>
</tr>
<tr>
<td>Patrick Darling</td>
<td>1997</td>
<td>Sungbo Eredo</td>
<td>Boundary Marker</td>
</tr>
<tr>
<td>David Aremu</td>
<td>2002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gerard Chouin</td>
<td>2015</td>
<td></td>
<td></td>
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<td>Ogundele and Babalola</td>
<td>2007</td>
<td>Orile-Keesi</td>
<td>Protection/Defensive</td>
</tr>
<tr>
<td>Aribidesi</td>
<td>2004</td>
<td>Igbomina</td>
<td>Defensive</td>
</tr>
<tr>
<td>Usman</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graham Connah</td>
<td>1975</td>
<td>Benin</td>
<td>Delineate boundary between Elite and Non-Elites</td>
</tr>
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</table>

Table 1. Earthwork Functions in the Yoruba-Edo Region of Nigeria
Moreso, the presence of earthworks demonstrates the strength of the builders, and it requires only an organized polity to command the building of earthworks. As (Connah 1972:33) argued, it takes a considerable amount of labor force for a centralized government to build defensive walls. The extensive nature of earthworks in Yoruba-Edo region now reveals the nature of the polity and provides unique criteria for defining an urban center. It opens the door for the possibilities of establishing African urbanism by assuming that if earthworks are present, the population must be remarkably dense, and the agricultural system must be well organized as the builders will need high-calorie food intake. Earthworks also provide the opportunity to locate sites of ancient palaces and places of convergence. This is because when an earthwork has been situated, it becomes certain that ruins of a centralized polity can be found at the center of the geographical space it encloses. Despite these potentials, earthworks have not been fully utilized in Nigerian archaeology.

The reasons why earthwork archaeology has been largely ignored ranges from funding problems to the lack of technical know-how of excavating them. The problems of funding render this area of research undone, large internationally funded research programmes would efficiently harness this domain of archaeological investigation of complex societies (Connah 2008). An excellent example of well-funded earthwork archaeology is Ife-Sungbo archaeological project. The five-year project scheduled to be carried out between 2016 and 2019 is a part of the GlobAfrica project that seeks to place African material culture within a global context. Directed by Gerard Chouin of the College of William and Mary, and Adisa Ogunfolakan of the Natural History Museum, Ile Ife Nigeria,
this project surveyed and excavated earthworks associated with classical Yoruba civilizations, and for the first time the mute pervasive late 14th century stratigraphic gap across most Yoruba towns was interpreted to be a time of abandonment characterized by communities warring against one another and the possible spread of epidemic disease that killed large populations. This period was shown in the archaeological record to be re-occupied at a later time that aligns with earthwork building and modifications of previously built ones.

The above contribution of earthworks in archaeological investigations is an addition to Nigerian archaeology. It also shows that Nigerian archaeology has come a long way despite the tardy and shaky development of earthwork studies to substantiate research designs on urbanism. It is expected that with further focus on these features, more answers to the Nigerian past civilizations will be unearthed.
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