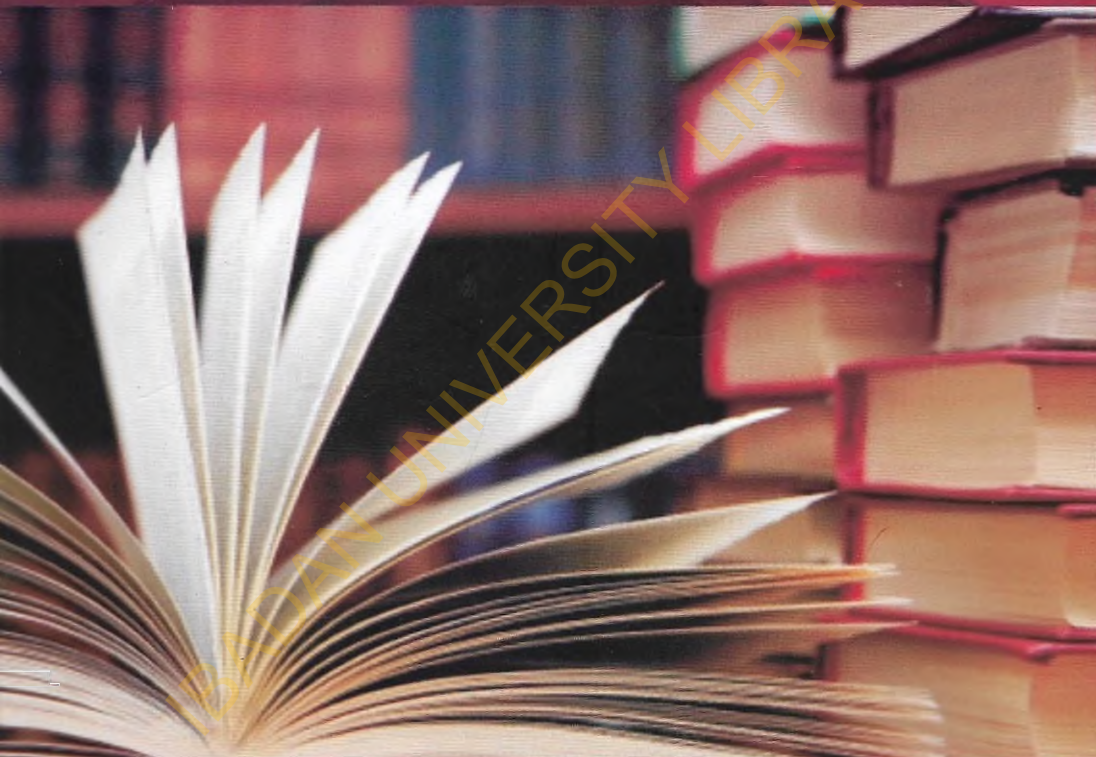# THEORIES AND METHODOLOGIES
## IN THE
## HUMANITIES

A. B. Ekanola
A. Raji-Oyelade
R.O. Olaniyi

# THEORIES AND METHODOLOGIES IN THE HUMANITIES

*Edited By*

## A.B. EKANOLA
## A. RAJI-OYELADE
## R.O. OLANIYI



**IBADAN UNIVERSITY PRESS**
**2019**
Ibadan University Press,
Publishing House,
University of Ibadan,
Ibadan, Nigeria

**etetfund**
TERTIARY EDUCATION TRUST FUND

**PROJECT NO: TETF/DESS/UNI/IBADAN/AMB/14/1**

# CONTENTS

# FUNDAMENTALS OF RESEARCH IN ARCHAEOLOGY AND ANTHROPOLOGY

*R.A. Alabi and Chinyere Ukpokolo*

## Introduction

This chapter attempts to introduce to the students the rudiments of carrying out archaeological and anthropological research. Specifically, the chapter pays attention to the nature of archaeological and anthropological data with the aim of exposing to the students the type of materials that an archaeologist or an ethnographic researcher is expected to gather at the field. Attention is also given to methods of data analysis in archaeology and anthropology.

## Methods of Data Acquisition and Processing in Archaeology

Before an archaeologist ventures into the field on any archaeological expedition, he must have a clear objective and research design in mind. These would determine the methods he would adopt in retrieving archaeological data. There are basically three methods of data acquisition and processing in archaeology—methods for discovering archaeological sites; methods for collecting and retrieving archaeological data and methods of analysing and interpreting retrieved data. The method(s) adopted by the archaeologist would depend on the nature of the site being investigated, logistics, human and financial constraints. The discussions in this paper follow this pattern.

### *Methods for Discovering Archaeological Sites*

The principal methods of discovering archaeological sites are reconnaissance and survey. These are field-based methods. Although, most archaeologists tend to combine reconnaissance and survey together, with the coinage 'reconnaissance survey', we believe they are somewhat different in meaning and procedure and as such should be treated as separate entities.

## Reconnaissance

This is "the systematic attempt to identify archaeological sites" (Ashmore and Sharer 1996:79). As Ashmore and Sharer (1996) note, this includes both the discovery of sites and the precise determination of their geographical location. According to Ashmore and Sharer, reconnaissance data can be useful in formulating or refining hypotheses to be tested in later stages of research, which is especially true where prior archaeological information has not been obtained. Archaeological reconnaissance yields information about the form (that is, size and internal arrangement) of sites as well as their total number and spatial distribution within a region (Ashmore and Sharer 1996). Thus, reconnaissance is done to locate sites with promising evidence of human settlement and occupation for further archaeological survey and excavation.

Reconnaissance is somewhat synonymous with field walking, but it goes beyond this, in that it could also connote other forms of site discovery techniques. Reconnaissance is thus conducted in a number or variety of ways, with the technique(s) or procedure(s) adopted often depending on the kind(s) of site(s) being sought. The methods used for locating surface sites differ greatly from those used for locating deeply buried or subsurface sites. Moreover, some environments are more conducive to reconnaissance than others. In a dry and open environment, for instance, it is quite easy to move about freely and to locate sites visually, as is the case in the northern parts of Nigeria and West Africa and such areas as of the Nigerian and West Africa coast with savannah vegetation, coastal Peru, highland Mexico, Southwestern USA and the Australian desert, among others. Reconnaissance is, however, tedious and cumbersome in a forested or mountainous environment.

There are three major types of reconnaissance: ground reconnaissance, aerial reconnaissance and subsurface reconnaissance. The first (i.e. ground reconnaissance) is the oldest and most common, and is usually conducted by walking and with reliance on the eyes. It is the most thorough and, as Ashmore and Sharer (1996) opined, its efficiency may be increased by the use of many teams to cover extensive areas.

Aerial reconnaissance deals with reconnaissance from the air, that is, aerial photography. Aerial photographs are photographs taken from great heights through an aircraft in order to reveal archaeological features and monuments not observable from the ground through the eyes. This method is said to have first been put into practice in India in 1891; but it was not until the period of the First World War (1914-1918) that the first series of aerial photographs of archaeological sites were produced by Theoder Weigand for the German Armed Forces (Andah and Okpoko 1994). The photographs revealed several abandoned sites in the Palestine area and under the surface of the desert. Aerial photographs were subsequently used by the British Air Force to reveal, among other things, the enigmatic Stonehenge, one of the most imposing of the European megaliths located in southwest England (Andah and Okpoko 1994). They have also been used to detect Roman Empire's and North African ancient road networks (Aleru 2011).

With aerial photographs, it is also possible to understand the relief, drainage and vegetation patterns of a particular area. The area(s) of human activity can be known by the differential growth of crop and vegetation (Andah and Okpoko 1994), as well as the darkness and lightness of soil marks. Other forms of aerial photographs are Infrared photography, Sideways-looking Airborne Radar (SLAR) and satellite images. It is to be noted that geologists and geographers also make use of aerial photographs in studying geological systems and relief and drainage patterns. The photographs are studied with a pair of stereoscope.

Subsurface reconnaissance includes methods used to locate buried sites, principal among which are magnetic and receptivity surveying. These methods measure the magnetic disturbances and electrical resistivity of the earth which are detected and measured with earth-probing equipment. Such equipment include proton magnetometer and resistivity meter. The proton magnetometer measures the differences in the magnetic intensity of the soil whereas resistivity meter measures the ability of the soil to conduct electricity. Magnetic surveying is used to locate buried metallic objects, buried pits and kilns whilst resistivity surveying is used to

locate underground buildings, prehistoric roadways, and ditches and embankments. However, while proton magnetometer is affected by pieces of metals, cables, pipelines and buildings, resistivity meter is not, which is why it can be used in the middle of settlements, but its reading is itself affected by recent rainfall.

There are simpler types of equipment for probing the earth besides the above. One of these is the auger. The auger consists of a large cockcrow attached to a straight metal shaft or rod, surmounted by a T-handle. As it penetrates the soil, additional length of rod could be added by detaching the screw from the shaft. It can penetrate up to 5 m of depth. It has been used to trace for over 1 km, the Abbot's way, a 4000-year old timber road (Coles 1974). But besides its use to locate buried features, it can be used to collect sediments for palaeoenvironmental study. Indeed, many colleagues in the Archaeology and Anthropology department of the University of Ibadan, has used it to obtain sediments from different parts of Nigeria.

New versions of equipment have today been developed. These include Total Station and Ground Penetrating Radar. The GIS tool has also become very important in archaeological data documentation and retrieval. The Total Station has become handy equipment for mapping archaeological sites and features. It is particularly useful for mapping artifacts *in situ* during excavations (Aleru 2011). It is capable of calculating both linear and angular measurements, with the data generated later downloaded into the computer from which various maps could be generated.

Geographic Information System (GIS), whose use in archaeological enquiry began in the 1980s, first in the United States and later in Britain, has been important in obtaining high-resolution maps and digital cartographic database for Africa, for instance, Katanga in the Congo (Olukole and Aremu 2002), and to document the archaeological and cultural landscape of some areas in Nigeria, for example, Ijebuland, Old Oyo, Badagry area, and Egba forest cultural landscapes (Aleru et al. 2005; Olukole and Aremu 2002). It was also used to examine and document the rate of deforestation within the Osun grove landscape (Olukole and Aremu 2002). "The GIS is a computer-based system that records,

stores and analyzes information that make up the earth surface" (Aleru 2011:25). Thus it is "a database system with specific capacities for spatially referenced data as well as a set of operations for working (analysis) with the data" (Olukole and Aremu 2002:38).

Other means of discovering archaeological sites are chance discovery, as were the cases of the popular Igbo Ukwu in Anambra State, Nigeria, discovered when a cistern was being dug, and many sites at Ile-Ife (e.g. OdoOgbe) from where terracotta were recovered.

Oral tradition and archival sources are important tools that aid in archaeological reconnaissance. The former refers to testimonies and stories about past events that are transmitted by mouth from one generation to another. Although oral tradition is claimed to be fraught with many shortcomings and limitations, for instance, falsification and exaggeration of information, as well as loss of memory about events over time, it is nonetheless very important in locating settlement sites and in complementing and corroborating archaeological evidence. Through oral tradition, many archaeo-logical sites in the Badagry area were discovered by the first author; it was also useful in the interpretation of retrieved data, particularly the salt making sites of Gberefu and Agorin sea beach (Alabi 2000).

*Survey*
This refers to methods used to acquire data from sites without excavation(s), the choice of methods depending on the characteristics of the site or region being studied and the kind of data sought (Ashmore and Sharer 1996). Structures and features on the site are mapped during survey. It is possible to conduct archaeological research by gathering data solely from surface survey. This may be the case in places where well-preserved surface sites with little or no depth occur. In some other situations, lack of time, money or necessary permits may prevent full-scale excavation so that surface survey becomes the only means available for the acquisition of data (Ashmore and Sharer 1996).

Before survey work is embarked upon, it is necessary to seek

the consent of the local people and communities within which the survey work is to be carried out. Doing otherwise could be very dangerous and suicidal. This is so because the nature of the archaeologist's work and equipment would make him to be mistaken for a surveyor who the people would think is interested in taking their land.

Survey comprises gridding, levelling and mapping of features using plane tabling (now becoming old fashioned), Global Positioning System (GPS), and Total Station. Gridding entails dividing a site into grids at different intervals, for instance 2m, 4m, 5m, or 10m, depending on the spatial extent of the site. The grids are a network of squares. However, before the grid system is established, a datum point, usually a fixed point of reference for the entire grid system, is established. By principle, the datum point is usually a permanent or semi-permanent object or feature, for instance, a landmark (e.g. survey pillar), a building, a well or some trees such as the oil palm (*Elaeisguineensis*), silk cotton tree (*Ceibapentadra*), ose (*Adansoniadigitata)*, iroko tree (*Miliciaexcelsa*), etc. A nail or a steel object is stuck to the tree to mark the point of the datum. From the datum point, using the prismatic compass, a north-south line, called the site meridian (primary baseline) is established, as well as the east-west secondary base line. Subsequently, other grid points (north-south and east-west are established, producing an interlocking of uniform gri 's. Surface artifacts, ecofacts or features within these grid systems are then recorded and collected, as the case may be.

The grid system may be finite or infinite (Tubosun 2011). It is finite when the site or grid system is bounded by natural or anthropogenic features, e.g. defensive walls or embankments. Infinite gridding is where the grid system is not bounded by any features, wherein the grid system could be extended as work progresses. Levelling entails the determination of the heights or altitude of the different points on the site using the level (Quickset or Dumpy level or automatic level – Civil engineers usually use the theodolite). Three sets of people are involved in this exercise: the instrument (Quickset, Dumpy or automatic level) operator, the staff (Surveyor's staff) carrier, and a recorder. The height readings

taken are then used, after some calculations, to construct a contour map of the site (see Coles 1974 and Tubosun 2011 for details). The GPS can be used to determine the geographical location/ coordinates of a site, the altitude above mean sea level, and map the features on the site.

## *Excavation*

This is the principal means by which archaeologists gather or acquire data about the past. It is used both to discover and retrieve data from beneath the ground surface. Occurrence of artifacts and ecofacts on the surface often provides clues about what lies beneath the ground, which helps archaeologists to plan excavations. Data retrieved from excavations are especially important for the archaeologist since subsurface remains are usually the best preserved and the least disturbed. The two goals of excavation, according to Andah and Okpoko (1994) are first, to reveal the 3-dimensional patterning or structure in the disposition of artifacts, ecofacts or features, and, second, to assess the functional and temporal significance of this patterning.

There are two basic types of excavation, each determined by several factors which include the goal of the project, available time and resources (human and financial). These two types are referred to, respectively as 'penetrating excavations' and 'clearing excavations', and 'trench excavation' and 'area excavation' by Ashmore and Sharing (1996) and Fagan (1975). On one hand, penetrating or trench excavations are deep probes of subsurface deposits, and the main thrust of the excavation is vertical, aimed at revealing the depth, sequence and composition of archaeological remains (Ashmore and Sharer 1996); it is thus more of temporal than spatial in scope. This includes test pits and trenches. On the other hand, clearing or area excavation is primarily aimed at horizontal investigations of deposits and the arrangements of objects within the deposits (Ashmore and Sharer 1996); thus it is both spatial and temporal in nature, although it is particularly spatial in nature, as in the excavation of a living floor.

The datum point, referred to above, serves as the reference point for the excavations. It is necessary to have a grid system laid out on the site where excavation is to be carried out. However,

there may be exceptions to the establishment of a grid over the area to be excavated.  This may be the case where a house structure with different rooms is being excavated, in which case the rooms may become convenient units of excavation rather than a network of grids.

It is necessary to obtain the necessary documentation before the commencement of excavation. This includes site maps and excavation permit, given by the National Commission for Museums and Monuments (on behalf of the Nigerian government), as applicable to Nigeria. It is not legal for anyone to carry out excavation in Nigeria without obtaining this permit.

It is also the responsibility of the archaeologist who is the excavator to have a proper record of the excavation process. This includes the use of survey and excavation data sheets and field notebook or diary.  Part of the recording process is photography. Photographs should be taken at vantage positions at different stages of the excavation, and when an important artifact or cultural material is uncovered. Likewise, it is important to record the context in which any material(s) is/are located as this may become very important during analysis and interpretation of data.

Excavation usually proceeds at spit levels or intervals, which could be 10 cm or 20 cm or more in thickness, but sometimes it could proceed by natural layers. Artifacts or ecofacts from each spit level are collected, bagged in special clothe bags, or where such are unavailable, polythene bags and appropriately labelled. The recovery of the artifacts is made possible through sieving soil collected from the levels of the excavated unit.  The excavator owes the responsibility of monitoring the collection, recording and proper labelling of the materials. He must also ensure that fragile materials, e.g. charcoal, small bones, cowries and shells (snail and other types of molluscs) are carefully handled and are not bagged with more durable ones.

Artifacts found together, i.e. at the same level presumably came from the same time period. The physical medium with which the artifacts or ecofacts are found is referred to as *matrix*. This could be soil, gravel or sometimes rock. The provenance of the materials is their 3-dimensional location within the matrix. The occurrence of two or more artifacts or ecofacts together in the matrix is known as an association.

Excavation continues until sterile layer is reached. The sterile layer is the layer with no embedded cultural materials, that is, the natural bedrock. Once this layer is encountered, the excavation stops. The different natural layers are then delineated and the stratigraphic section drawn on a graph sheet. The excavated unit is subsequently back-filled. One of the reasons for this is the prevention of accident (for instance, mistaken fall into the pit).

It is not impossible during the process of excavation for the excavation to be inconclusive or uncompleted (i.e. sterile layer is not reached). When this happens, a non-biodegradable material (e.g. polythene) is spread on the level reached in the excavation. The pit is then back-filled. It is opened up whenever the excavation is to be continued. The polythene helps to demarcate the level of the initial depth of excavation, since excavation is a systematic process.

*Stratigraphy*
This is one of the concepts in archaeology, though it is borrowed from geology. It is the study of deposited layers or strata. The strata or layers are formed from the transportation of mechanically or chemically weathered materials. These materials are laid down one on another in succession. This layering or deposition is known as stratification. The layers are defined and delineated on the basis of colour, texture and structure. An important principle in stratigraphy is that the lowermost layer is deposited first, followed by the successive top layers. Thus, it is assumed that the lower layers are older than the top or upper layers. This is known as the principle of superposition. This principle was first proposed by the Danish scientist Nicolas Stenno in the 17th century. This principle is important to both geologists and archaeologists because of its application in relative dating. In other words, in the absence of absolute dates, it can be used in the dating of deposits or archaeological materials contained within them. This is built on the premise stated above—sediments or materials at the lower levels are older than the ones above. The individual stratum of an archaeological deposit may represent either the super-imposed remains of different occupations at the site, or the sequential disposal of material (Andah and Okpoko 1994). It is, however,

possible that materials from two different strata could be contemporaneous. But as Renfrew and Bahn (1996) note, archaeologists have in recent years developed an ingenious and effective method of checking this—by fitting together the pieces of materials, in particular flakes and re-assembling them in the shape of the original.

Archaeological stratigraphy is sometimes not simple but complex. For instance, one stratum may grade into another in a not-very-distinct pattern or there may be lenses of deposits within another wider deposit, for example, an ash lense may lie within (i.e. encircled by) a layer of very compact clay deposit. It is vital to the archaeologist to record all these details in his/her notebook and stratigraphic section drawing; clear photographs must also be taken.

## *Methods of Analysing Archaeological data*

The first stage in the analysis and interpretation of archaeological data involves the cleaning, conservation and cataloguing of materials and their preliminary classification. It is important to free artifacts from their associated matrix - in this case sediments and other materials, e.g. salt residue - before any further work is done on them. The cleaning could be done by simply brushing off the associated matrix or by washing with solvents, e.g. water or ethanol. However, not all artifacts can be washed. Charcoal, for instance, is among this category.  It may be necessary to carry out some conservation work on the materials, most especially pottery and stone tool prior to detailed analysis. This should be carefully done with adhesives and consolidants (epoxy resin, glue, paralloid B-72, and polyvinyl acetate (PVA) being common ones). The cleaning and consolidation (if necessary) are then followed by cataloguing and preliminary classification.

Classification, also known as typology, is a very important aspect of the analysis of archaeological data. It refers to the ordering of assemblages of artifacts into types. By this, artifacts with similar features or attributes are grouped together as belonging to the same type. The grouping of artifacts into types is not only useful in data analysis; it is also useful in relative dating. According to Renfrew and Bahn (1996), two sets of notions underlie the application of typology to relative dating. These are,

first, the products of a given period and place have a recognizable style. This style could be their distinctive shape and decoration, which more-often-than-not is characteristic of the society that produced them. The second notion is that the change in shape and decoration of artifacts is often gradual or evolutionary. This, Renfrew and Bahn (1996) noted, is patterned after Darwin's evolutionary theory of the evolution of species and was embraced by 19th century archaeologists, who believed that particular artifacts produced at about the same time are often alike whereas those produced centuries or millennia apart would look different. This is based on the dictum, 'like begets like'. Thus, when artifacts are found together, they are first grouped into likes, from which a sequence or chronology is built. For a researcher working in West Africa, the commonest artifact retrieved during excavations is pottery. Other often occurring, though not in large numbers are smoking pipes, cowries, snail shell, particularly that of the giant land snail (*Achachatina* species), animal bones (these are easily destroyed in the acidic soils of West Africa), iron slag, stone tools, metallic objects, etc.

Classification involves analysis of the excavated materials according to spit intervals or levels. In other words, the bags containing the artifacts are opened in the laboratory. A general inventory of finds is then carried out. The procedure is simple: like artifacts are grouped together, that is, the materials are classified into pottery and non-pottery finds. For the former, the pottery is further classified into body and rim sherds whilst the non-pottery ones are classified into organic and inorganic types. Organics are animal and human bones, fruits, seeds, ivory, antler/horn, stem of plants, snail shell and cowries, among others. The inorganic types include lithic tools, metallic objects, iron slag and tuyere, smoking pipe, beads and bottles, among others.

After this initial sorting, the materials are then catalogued. The cataloguing is for ease of reference to these materials in the future; it is also meant to keep track of them in case there is a mix-up or loss in the laboratory. One way of cataloguing is to assign numbers to each of the artifacts. The numbering should provide information about the site name and provenance of the material (i.e. spit level). Thus, the level and the number of the artifact among its group are easily known upon picking up any of the artifacts.

Further classification of the materials is then carried out. The procedure follows the pattern of the initial classification. For pottery, in particular, classification goes along two lines: first, on the basis of morphology (form) and second, decorative techniques and motifs. The former involves classifying the sherds into body and rim forms. This is then followed by sorting into decorative categories. Various decorative techniques are known, for instance, impressions, roulettes, grooves, comb, applied, etc. These are further classified into decorative motifs. For example, among the rouletted group are carved wood roulette, single and double string roulette, and maize cob roulette, whilst the impressed group includes wavy line impression and multiple horizontal line impression. The applied group includes bossing, and the combed group, comb dragging and comb stabbing. Of course, there is no general agreement and standard about nomenclature among scholars of typology. What a classifier sees as multiple horizontal line impression could be seen by another as multiple grooves. Indeed, a great deal of typological confusion is created in the literature. What is important, therefore, is that each classifier should describe his or her procedure and nomenclature, with illustrations.

One important attribute of pottery vessels is function. In deriving information about the function of pottery vessels, only rim sherds are of importance. Thus, pottery vessels are classified on the basis of rim morphology. The rim sherds are first classified into pots or bowls, and then according to size into big, medium and small; based on rim diameter and sometimes thickness. The diameter chart is used in obtaining the rim diameter whilst the vernier calliper is used to obtain the rim thickness. There is also no standardization, as such, about what diameter constitutes the various size categories. What is classified as a big-sized pot may be seen by another as medium-sized. It is thus advised that each scholar must be as objective as possible and must indicate the diameter range s/he adopts for the various size classes. The morphological categories of rims are variously referred to as everted or inverted, flared, out-curved or in-curved/out-turned or in-turned; the rim lip may be ridged or carinated as the case may be (see Shaw and Daniel 1984 for good illustrations of these).

On the basis of rim morphology, it is possible to reconstruct the vessel shape. For Yoruba pottery, the vessels are classified usually into *ikoko* (big-sized pots or jars), *ape* or *oru* (medium-sized pots or jars) as well as miniature pots. *Ikoko* are usually utilized for industrial purposes (dye making, soap making, food processing) while *ape* or *oru* are important in water storage, cooking, etc. There are other functional categories, e.g. perforated pots (*ajere*) used in meat or fish smoking and drying, and bush lamp—very small pots for lighting. Bowl forms include *isaasun* (soup bowl) and *agbada* (frying bowl). We have explained these in some detail because, as earlier pointed out, the predominant materials at most archaeological sites in West Africa are potsherds. The classification of other non-pottery materials does not necessarily follow the same procedures as pottery. Lithic tools are classified on the basis of attributes such as size, shape, and point of percussion, etc. The classification of other materials is not as complex as that of pottery and stone tools. Cowrie is known, for instance, to be of two types, that is, the annulus (*Cyprae annulus*) and Moneta (*Cypraemoneta*). While the former is larger in size than the Moneta, the latter is perforated. Smoking pipes are classified into locally-made or foreign categories and the decoration on them, bottles into fragments or whole and their sizes and colour shades.

The identification of plant and animal remains (ecofacts) recovered from archaeological excavations is usually and often done by experts in Botany and Zoology, respectively. This is because there are hardly any experts in these areas in most departments of Archaeology in West Africa, particularly the latter. But these experts, referred to as archaeobotanists and zooarchaeologists are found in many other institutions in Europe and America. Our students have always been advised to take up research work in these two areas. Nevertheless, the department of Archaeology and Anthropology of the University of Ibadan boasts of experts in another botanical field - Palynology. Indeed, the department's Palynology laboratory boasts of being the best in West Africa, and Palynologists working in many parts of the region were/are trained in that laboratory. Through the palynological studies that have been carried out in that laboratory,

it has been possible to reconstruct the vegetation history of Nigeria and West Africa, determine the beginning of agriculture in the region, as well as human impact on the environment. Honey samples from different ecozones of Nigeria have also been analyzed to determine their purity and the type of trees visted by the bees.

### *Interpreting Archaeological Data*
The goal of any form of analysis of archaeological data is to interpret the human past as much as possible. As Hodder (1999) notes, good archaeological science depends on carefully made and well-grounded interpretation, and that it is the interpretative component in data that makes data useful. Interpretation is therefore, an important bedrock of any archaeological investi-gation. In interpreting archaeological data, archaeologists must bear in mind the need to be objective. Although it is true that artifacts cannot speak in and for themselves, in which case archaeologists have to make meaning out of them, there are ethical considerations an archaeologist must bear in mind. For instance, he is not expected to manufacture data that are not there. Usually, an archaeologist looks at the available data from two perspectives: the etic and the emic. The etic approach is looking at the materials from an outsider's perspective. In other words, he bases his or her interpretation on his/her perspective, being an outsider to the culture he/she is studying. This was the approach of many Europeans studying the early history of Africa - they interpreted African cultural history based on their own (outsiders) perspective. The second approach, the emic, is interpreting the people's cultural history from the people's (insider's) perspective. This was the approach of African scholars who began to study African cultures after the Europeans. They had to deconstruct much of the European concoctions about African cultures and reconstruct the cultural history as Africans see it.

Central to archaeological interpretation is the issue of chronology (or dating). Interpretations may be flawed if not put on a chronometric framework. Age determination helps to remove ambiguity about which material is older than which. It is not impossible to allocate a prehistoric age to an otherwise historic material, where there are no dates. Two forms of dating methods or

age determination are known in archaeology. These are relative and absolute dating. Relative dating involves assigning dates to materials based on the manner of superposition, that is, it is assumed that in a normal sequence, materials below are older than the ones above. This is based on the principle of superposition, earlier referred to. The ages assigned to such materials are not to calendric years. Absolute dates involve assigning calendric ages to materials. However, there are statistical errors in such dates, and such error margin is indicated along with the date, for example, 32,350±380 years. The statistical error margin here is 380 years. Relative dating methods include seriation, patination on stone, and bone chemistry. Absolute dating methods include radiocarbon dating (C-14) (this is the commonest method of dating in our part of the world), tree-ring dating (dendrochronology - common to temperate areas), potassium-argon (k-Ar) dating - applicable more in areas with volcanic activities such as East Africa. Indeed, many of the Early Man sites in East Africa - e.g. Oldovai gorge, Laetoli, Lake Turkana, and Bouri - were dated by this method (discussions on dating methods can be found in any archaeology text, of which the most important references are found in Science in Archaeology, edited by Brothwell and Higgs (1971).

In interpreting archaeological data, three major approaches have been adopted. These are the cultural history, cultural process and contextual approaches. The major features of these approaches are only presented here. For the cultural history approach, emphasis is placed on chronology and spatial configuration of archaeological data. The approach dominated archaeology in the first half of the 20th century. As noted by Andah and Okpoko (1994), the synthesis of individual chronologies within a single site forms the foundation for cultural historical reconstruction. By this approach, the past is reconstructed using the normative model of culture. The normative model holds that a culture is a set of rules or norms that govern behaviour in a particular society (Ashmore and Sharer 1996). Furthermore, its interpretation is also based on the descriptive model which could be synchronic or diachronic. By synchronism, the description is based on a particular point in time whereas by diachronism, it refers to changes that occurred to archaeological data through time.

The cultural process approach emphasises how culture changes through time. This approach is more interested in the reason or causes of change in culture than mere description of change as with the cultural history approach. "It does not stop at identifying and describing similarities and differences across time and space, but proceeds to delineate the cause-effect relationships bringing about (that is, responsible for) the observed distributions" (Andah and Okpoko 1994: 207). The testing of hypothesis is a common feature of this approach. Other features include the adoption of models in the interpretation of data, the most important ones being the systems model, cultural ecological model and the multi-linear cultural evolution model.

The contextual approach developed due to the perceived shortcomings of processual archaeology. Whereas cultural processualists treat culture as adaptation to the environment, some archaeologists began to argue for a more humanistic approach that would recognize the importance of non-materialist factors in peoples' lives (Ashmore and Sharer 1996). The contextualists opine that change in culture needed to be understood from the content or point of view of each particular culture's values, attitudes and beliefs. Moreover, while the other two approaches are concerned with collective behaviours at the level of the society, the contextual approach is more interested in the role of the individual in the society.

### The Nature of Anthropological Research

Anthropology is a discipline that studies humans holistically – humans' environment, biology, social, cultural and their interconnectedness. A good ethnography reconstructs the lived life of a people from 'within'. Through the dialogic encounter, the researcher's input contributes to what eventually becomes 'an ethnography.'

Brewer (2000) identifies two ways the term 'ethnography' is used in anthropology: 'little ethnography' and 'big ethnography.' For Brewer, little ethnography is 'ethnography-as-fieldwork,' or 'field research' or 'fieldwork' while 'big ethnography' is 'ethnography-as-approach.' By implication, ethnography is actually both a method and a methodology. In this sense, Brewer

reasoned that ethnography-as-approach becomes 'one particular way of doing qualitative research.' 'Little ethnography' as Brewer conceives it is: The study of people in naturally occurring settings or 'fields' by means of methods which capture their social meanings and ordinary activities, involving the researcher participating directly in the setting, if not also the activities, in order to collect data in a systematic manner but without meaning being imposed on them externally (Brewer 2000:11).

What do we mean by 'field research'? Burgess (1982) gives us a clue, and notes that 'field research' involves "the study of real-life situations. Field researchers therefore observe people in the settings in which they live, and participate in their activities. The methods that can be used in these studies are unstructured, flexible and open-ended (Burgess 1982:15 as cited in Brewer 2000:18).

Both Brewer and Burgess are describing the same practice—that the researcher visits a site, stays for a relative length of time, participates in certain activities as much as possible, and, using certain methods that allows for 'face-to-face interactions,' generates needed data that meet the objectives of the research. The crux of ethnographic research, therefore, bothers on the fact that the researcher lives with the people for a relative length of time "in order to document and interpret their distinctive way of life, and the beliefs and values integral to it" (Atkinson et al. 2007:1). The ethnographer is interested in accessing meanings, 'observe activities,' which also involves "close association with, or partici-pation in, a setting or field" (Brewer 2000:18). The ethnographer is not a tourist. Far from it! Though the anthropologist, like the tourist, visits sites, the anthropologist 'battles' with something deeper as s/he contends with the epistemological foundation of knowledge production in the discipline. In other words, for the anthropologist to lay claim to authentic and objective knowledge, s/he must be aware that s/he is confronted with the crises of representativeness, legitimacy and praxis as identified by Denzin and Lincolm (2005), and these differentiate anthropology from tourism, and raise the bar of 'involvement' higher for the anthropologist than the tourist. For the ethnographer, it is a cultural encounter that seeks to transform both the researcher and the researched; that leads to self-discovery both on the part of the ethnographer and the subject or the 'Other', as a result of the

shared or common humanity of both the researcher and those s/he seeks to discover. He/she purposefully interacts with a space with the intention of understanding and in the process generating data to meet the needs of his/her research. Such data generated is referred to as 'ethnographic data'. The idea of 'naturally occurring setting', as Brewer noted, captures the nature of the setting where the ethnographer studies. In other words, the ethnographer studies real-life situations in action. This is what is meant by 'naturally occurring setting'.

Ethnographic data are generated from a setting that is uninterrupted through any form of artificiality or 'manipulations' created by the research. It is different from experimental research. For this, to an anthropologist, creates a form of 'disruptions' and the generation of unreliable data. Anthropological research is also characterised by the methods of data generation (this is treated below), which pay attention to the meanings behind the activities observed. The researcher is a participant as well as a researcher in the setting, and this places ethnographic research within humanistic model of social research. Are you an insider-outsider or outsider-insider? Or even occupies a space in-between? This bothers on the issue of positionality and reflexivity. Whichever point on the continuum the researcher finds herself/himself, the researcher must be able to understand and deal with the strengths and weaknesses associated with it. The crucial issue is objectivity. Meanings must come from within the setting and not externally imposed. Returning to 'humanistic model of social research', Brewer (2000) identified four major criteria that qualify a research to be the humanistic model of social research. He hinted that the researcher:

(i)    Asks people for their views, meanings and constructions;
(ii)   Asks people in such a way that they can tell them in their own words;
(iii)  Asks them in-depth because these meanings are often complex, taken for granted and problematic;
(iv)   Asks to address the social context which gives meaning and substance to their views and constructions' (Brewer 2000:35).

These can only be achieved through face-to-face encounter and interactions. What comes from this interaction is the description of a culture from the perspective of the insider. This is what is referred to as 'emic' approach. The field researcher is interested in capturing the life ways of the people the way the people see the things they do, and he/she studies these social and cultural phenomena as they take place. This does not imply that the past is irrelevant. Indeed, the ethnographer equally takes note of the changes that have occurred over time, what initiated such changes, and the people's response to them.

Ethnographic data by nature is raw, voluminous, loose and indeed, superfluous. There are many loose ends: ⸺ incomplete sentences hanging here and there, jottings, etc. that characterise such data. The nature of the data that the ethnographer generates is seemingly useless and meaningless to other people. But the ethnographer understands them, and can make sense of them, following the set of research questions and objectives. For this reason ethnographic data is assumed to be personal to the researcher! Indeed, while generating data, the ethnographer bears in mind the aim and specific objectives that inform the research. His/her research questions are like the compass with which he navigates the 'fieldspace'. This does not foreclose expanding and, at times, changing the research theme on the field! However, in the case of a student researcher, he/she must do this in consultation with the supervisor. To avoid changing the topic of research mid-way, it is highly recommended that prior to the presentation of the proposal to the department, a pilot study is carried out at the site to enable the researcher discover how viable the research topic is and also to speak authoritatively on the merit of the research topic during pre-field presentation. A postgraduate student of ours once shared his experience after he received a grant to carry out a study. When he got to the field he discovered that the issue he wished to study never existed! He wanted to know what to do. Our candid advice was that he should return the money! Yes! Grant-giving organisations have specific issues they want to sponsor or invest their money in. This kind of cross-road would have been avoided if the researcher had carried out a pilot study prior to submitting the proposal to the grant-giving organisation. If the researcher is

simply carrying out a personal research, he/she may freely adjust the subject matter of his/her research, depending on the discovery in the field or at times he/she may even come up with a new topic entirely!

Language is crucial in an ethnographic research. Because ethnographic data is mainly generated through interviews, focus group discussion, and other face-to-face interactions methods, the data are predominantly in linguistic form and come in form of words and sentences generated during interviews, which capture the views of the informants/research participants. They also include extracts from the field notes, which also contain the documented observation of the researcher. For this reason, the researcher must pay attention to what the interviewees say as well as what they do, and document whatever s/he observed as much as possible in the field note.

Visual recorders provide additional sources of data (see below for a further discussion on this) in form of pictorial materials, which validate and authenticate the oral data. These are later included at relevant sections of data presentation and analysis as illustrations and tagged 'Plate' and numbered sequentially following the chapter where they are inserted.[1] Extracts from local magazines, newspapers, bulletins, diaries of key informants, minutes of meetings and resolutions, and certificates from institutions such as birth and death certificates, and divorce certificates may be relevant, and therefore constitute part of data the ethnographer generates. Some of these have immeasurable values and are added as appendices but referred to in the body of the work. Documentary materials and statistical information from hospitals, schools, gender representation in school enrolment, gender distribution in career ranking etc. are part of data and may be represented as numerical data. This implies that ethnographic data can also come in form of figures, that is, quantitatively! Atkinson et al. (2007) identified some of the ways documents can enhance the data generated in ethnographic research—

(a) Provide information about the setting being studied, or about their wider context, and particularly about key figures or organisation some of which may not or even cannot be available from other sources

(b) May provide important corroboration, or may challenge information received from informants or observation.

(c) Finally, documents may be of value in stimulating analytic ideas' (Atkinson et al. 2007:122).

The spatial/physical context of fieldwork is crucial, and so maps are generated. The researcher must solicit from the appropriate quarters the map of the locality, and if not available, a sketch map must be generated by the researcher. That too constitutes part of the data, and later represented as 'figure' at the appropriate section of the work, and this is used to communicate ethnographic data more succinctly. The physical context of ethnographic research enhances the quality of ethnographic work. Material artifacts can appear in form of architectural designs and structure, settlement patterns all of which give deeper understanding on, for instance, gender relations and the landscape of power.

Technological development has affected our everyday life in diverse ways, and thus expanding our understanding of the concept of 'field' in anthropology. For instance, telephone and emails communications can be sources of ethnographic data. There is no doubt that virtual anthropology has emerged and providing the subject matter of research. Increasingly the cyber space has given birth to cyber ethnography which "deals with social action and social organisation in such virtual setting" (Atkinson et al. 2007:138). The implication therefore is that the notion of 'field' in anthropology has expanded to include such concepts as 'virtual field', and so 'virtual fieldwork' has become a reality (Atkinson et al. 2007:138). Internet as a space has created a form of 'naturally occurring communities' in virtual, digital space where informants, and researchers can encounter one another. Such interactions within a space conjure a sense of 'community' no matter how vague. The concept of 'community' of course connotes shared values, neighborhood and common interest. The community is located in cyberspace as "virtual communities" and can only be studied ethnographically through the same medium (Atkinson et al. 2007:138). One thing is clear: technology has expanded the arena of cultural encounters. As Atkinson et al. (2007) rightly cautions:

Our historical preferences for face-to-face communities and intense local sites of interaction should not blind us to the fact that contemporary forms of communication can transform our sense of what is 'local' into widely distributed networks, and that 'communities' can (and do) exist in many different forms (Atkinson et al. 2007:138). Responses generated from the researcher's interactions with members of the community leads to a 'product' representing a 'thick description' (Geertz 1973) of the people's lifeways. For any ethnographic write-up to be regarded as 'thick description,' Denzin (1989) notes that it must [P]resent detail, context, emotion, and the webs of social relationships. Thick description invokes emotionality and self-feelings. It establishes the significance of an experience or the sequence of events. In thick description, the voices, feelings, actions, and meanings of interacting individuals are heard. It captures and records the voices of lived experience (Denzin 1989:83).

Emerging from the above is the fact that ethnographic data are generated from a holistic study of a society. This entails the description of the culture one is studying from a general perspective—belief system, marriage and kinship, economic, social and political organisations, and as they interconnect and lead to a holistic understanding of the people being studied. In other words, the researcher must pay attention to many variables that exist in a culture, and how these variables connect to the issue he/she is studying, the meanings and significances held by members of the society. From our discussions above, certain features can be identified as the nature of ethnographic data:

*In-depth and limited in scope*: Ethnographic data is a product of in-depth study of a culture. It is not so much about the extensiveness, but depth. The ethnographer is not interested in generalisation. However, this does not mean that data of ethnographic research generated from different places and times cannot be used for generalisation.

*Insiders' views:* The emphasis in ethnographic research is the insiders' perspectives of their lived experience, which the researcher in a dialogic encounter with the people comes up with.

***Naturally occurring setting***: Ethnographic data are generated not in an artificially created setting by the researcher. People are studied in their natural habitat as cultural phenomena take place.

***Inform of extract from natural language:*** Data appears in form of natural language, as words are used to represent and express experience. As a product of a form of qualitative research, ethnography deals with data generated through face-to-face interactions: interviews focus group discussions and so on. Through language, words are ascribed to social phenomena, rather than numbers.

***Superfluous in nature:*** Ethnographic data is voluminous in nature as the ethnographer generates much data in the field. This is because the researcher is interested in capturing the lived experience of the subject as much as possible. Some of the data are later streamed lined to generate those that meet the objectives of the researcher.

***Numeric in nature***: In some instances, ethnographic data may also include numerals where statistical information represents part of the data generated. Data generated through statistical processes are referred to as quantitative data. These are numerical data as figures/numbers are ascribed to the data e.g. birth rate, death rate, gender distribution in hospital attendance, staff enrollment and school enrolment. The use of questionnaire for data generation in anthropological research has also led to the generation of numeric data.

## Generating Ethnographic Data: Choice of Methods

Before discussing the choice of methods in ethnographic research, it may be useful for the researcher to start the section by telling the story of his/her 'entering the field' or 'pre-field experience'! Yes, this is important, particularly for dissertation and thesis of M.Phil. or Ph.D. programmes respectively, which has extended length of time for its completion. What is the story surrounding the researcher's choice of research topic? Any scenario that brought this about? What of the trips to the research site? Anything worth talking about? Did the researcher travel in a public transport? Any

discussion in the vehicle that depicts human complexities or the dynamics of human culture and behaviours? The researcher may not necessarily be actively involved in the discussion, but he/she is a participant in a process; a process through which one navigates his/her way both at the micro and macro levels of human existence. The joys? The pains? Or a mixture of both? Anything dramatic while in the field? All these come under 'entering the field'! Fieldwork is an emersion, and it starts right from the moment of generating a research topic and continues through fieldwork! The narrative that comes from this may give direction to the subject matter of the research, foregrounds and further problematises it. In other words, it is not a meaningless story but one that establishes interconnectedness with the research theme. The language, of course, must be concise! The narrative must not be beyond four pages at most. Though this is a narrative, it is expected to be lucid and dramatic in content, and comes out as a stream of consciousness.

## Research Methodology

Often times students skip discussion of methodology even though it may appear as a sub-title. This is most common among the undergraduate students. Methodology implies the approach to be adopted in carrying out research. According to Brewer (2000) as indicated earlier, ethnography is both a method and a methodology, depending on whether one is using it as 'little ethnography' or 'big ethnography'. Broadly, there are two types of research methodologies—qualitative and quantitative approaches. The students must justify the choice of the approach adopted, bringing out how a particular methodology adequately suits his/her research goal. Ethnographic research is a form of qualitative research as it involves face-to-face interaction methods, for example, interviews. It, therefore, offers a broader and qualitative data on the social phenomena under investigation. In a study of a socio-cultural phenomenon, this method offers the researcher an opportunity to interact with the social group under study as well as observe and record socio-cultural practices in action. Qualitative methodology brings in data encoded in language (see the nature of ethnographic data above).

Quantitative methodology on the other hand generates numeric data. The primary instrument of generating quantitative data is questionnaire, with close-ended items from where the respondents select. School enrolments and gender distribution; hospital attendants and number of births and deaths within a period; employment and transfer within a given period and demographics are better presented quantitatively in anthropological research. There may be the need for the students to combine methodologies. In that case, both quantitative and qualitative methodologies will be needed. For the sake of validity and authentication of findings, the questions raised in the interviews must be the subject matter of questionnaire design. Although quantitative approach has the advantage of wider coverage, qualitative methodology is the bedrock of an anthropological research.

**Study Population**
Study population represents the people upon whom research findings can be generalized. It is from this population that the research informants/respondents are selected. A study that focuses on children suffering from cholera in Sabo, Ibadan, cannot be generalized on children living in Akobo, a high brow area in Ibadan. Part of the reason for the inclusion of study population is that every population has its uniqueness in terms of the socio-cultural and economic demographics, and these have influence on the data collected and any form of intervention or policy formulation following the conclusion of a research. Research population also enables the defining of the group of people upon which the hypothesis can be said to have been tested, and may give credence for those interested in carrying out similar research in some other communities. It therefore authenticates and validates the research findings, hence its inclusion.

**Sample Size and Sampling Procedures**
A sample is a subset of a population and is therefore taken from research population. The student is expected to state the number of people participating in the research, and the number of those selected for each method adopted. For instance, what number constituted the key informants, and who are they? What informed

the choice of these people? What of the in-depth interviews? Who are these participants? Chavez (2008) talks about 'making your research process public'. This reflects how scientific your research is. 'Making your research process public' entails laying bare your methods and all that you did with the methods. All the research participants constitute the sample size. What justified the choice of these people? Is there any gender sensitivity in the selection, and why? Sampling procedure on the other hand indicates the manner in which the sample was arrived at, in other words, the process of selection of the sample. How did the researcher arrive at such samples? Give details of the sampling techniques adopted. The two main broad types of sampling are probability and non-probability sampling. Due to space constraint we can only list different types in each category. Under probability sampling we have simple random sampling; stratified random sampling; systematic sampling; and cluster sampling. For the non-probability sampling, we have accidental sampling; quota sampling and snowball sampling.

**Methods of Data Collection**
This could be broadly divided into two: *primary* and *secondary methods*. When multiple sources are combined in a research it is referred to as 'triangulation', and makes room for authenticity, validity and verification of findings.

***Primary Sources***
Primary data are data generated through face-to-face interactions. Multiple techniques of data collection are advised in ethnographic study as it helps to overcome the flaws inherent in the use of one method. Patton (1990), writing on the advantages of multiple methods of data collection, notes that a study which adopts one method of data collection in social science research is likely to fall into the error of that particular method. He, therefore, recommends multiple methods of data collection, which includes "combinations of interviewing, observation, and document analysis". He further submits: "Different types of data provide cross-data validity checks" (Patton 1990:187-188). In line with this observation, a combination of techniques is advised, among which are:

(a) participant observation, (b) semi-structured interviews, (c) key-informant interview, (d) focus group discussions, (e) life history. These are briefly examined below.

*Participant Observation*

Kluckohn (1940) defines participant observation as a "a conscious and systematic sharing, in so far as circumstances permit, in the life activities and, on occasion, in the interests and effects of a group of persons" (Kluckohn 1940:331). A participant observer sees himself/herself as a member of the community he/she studies. He/she is not ethnocentric which implies using one's culture as a yardstick/standard for measuring other cultures. He participates as circumstances permit in the activities of members of the community. Participation in ethno-graphic research is a continuum. Ethnography is *not complete without participation*. The researcher needs to explain the degree of that participation. A student researching on prostitution does not need to become a prostitute in order to establish that he/she participated in the process. The mere appearance of the researcher in the field introduces and effects processes around the space. He/she is already a participant! And, in situations where the researcher is an insider for instance, if one is a member of the community he/she is researching, one is already a participant by the virtue of the fact that he/she hails from this community, and often participates in the communal life of the people. In other words, there are different degrees of participation, and the researcher needs to establish the degree of his/her participation. A male ethnographer researching on women and pain in pregnancy and child-delivery may share in the psychological agony of a woman in labour. The worries and anxiety which the husband shares also makes the man a participant. He does not need to be in 'labour' himself!

*Semi-structured Interview*

In the field, a researcher does not restrict herself/himself to pre-determined questions, but freely raises issues on the problem under investigation as the need arises. And, of course should not be discouraged when an informant deviates from the interviewer's questions if the interviewer hopes to "collect valuable information

coming up in areas outside his knowledge" (Adekola 1999:180). The researcher must, therefore, be prepared to alter the question as the need arises in line with the informant's responses. This is the crux of an in-depth interview.

*Key-informants Interview*
A key informant is someone highly knowledgeable in the subject matter of research whose opinion is crucial in unravelling the problematics of the research and thus enriches the collected data. He could be the traditional ruler of a community, the chief priests of the community, the leader of women's group in the community, or a youth leader. In a research on people living with HIV/AIDS for instance, key informants include the medics (who offer expert knowledge), the carrier of the disease, close relatives who are care givers, and neighbours who may help to establish whether there is stigmatisation or not. Maundu (1995) suggests that before data collection, the researcher should already have "developed the right relations with all key players in the project, by sensitizing them" (Maundu 1995:3). Consequently, to assist in data collection, visits need to be made to these leaders before the day fixed for proper interviews. This is to establish a rapport with the interviewees and thereby prepare them psychologically. Again, this helped the interviewer to schedule his/her programmes accordingly. The interviewees must also know the purpose of the research and how the whole exercise would be of some benefit to them, if not in the short run, at least in the long run, or, if not directly, indirectly. It is also important to state the specific places the interviews were consulted, and what informed such choices. The dialogic mode, that is, medium of interview may be included. Any translation? What of orthographic issues?

*In-depth Interviews*
In-depth interviews and key informant interviews are similar to an extent. The difference is in the area of the identity and role of the participants in the interview. Any other individual interviewed in the process of generating data is a participant in in-depth interview. The intensity of the interview marks in-depth interviews.

## Focus Group Discussions

To give a wider room for qualitative data collection, a small group of male and female research participants needs to be interviewed. This technique of data collection gives insight on issues as it provides opportunity for issues to be discussed and debated upon by the more knowledgeable members of the group. It is suggested that the size of the group be within five (5) and ten (10) so as to have a manageable group. The number of sessions of the Focus Group Discussions (FGDs), the approximate length of time each lasted, and if possible where the FGDs were conducted should be stated. In fixing the time for the discussion, the discussants' convenience must be put into consideration in order to ensure that the interviewees were in the right frame of mind to provide information.

Pre-interview household meetings before proper interview days need to be fixed. These are the capacity of providing the researcher with clues of areas of possible challenge that may arise in the course of interactions with the research participants. Before conducting the interview, the interviewees need to be prepared psychologically to create a rapport between the interviewees and the researcher. Research participants must be aware of the purpose of the research and how the exercise would be of some benefit to the people. In constituting participants in FGDs, the researcher must be gender sensitive. Yes, interviewing men and women in one group may mean that the women may speak less while men monopolise discussions.

## Life History

This method enables the researcher to generate data through life experiences of select individuals whom the researcher believes have 'seen it all'. Through this method, the researcher can discover how people cope with society. Such experiences could be used to recollect the subject matter of research over time. The weaknesses of life history as a method have been discussed extensively by scholars of qualitative research (see for instance Stearns, Gail J. 1998; Mintz, Sidney W. 1979).

## Secondary Sources

Knowledge production in the discipline of anthropology leads to the production of what is referred to as 'ethnography'. A good ethnography must represent the cultural realities of a people. To carry out a good ethnography, the student must first, select research topic that is researchable, that is measurable. To achieve this, the student must engage in extensive consultation of extant literature materials. This enables the student to also discover what has been done in the area, and identify gap in scholarship. Research is about cutting edge of knowledge. What is the researcher bringing on board? One cannot re-invent the wheel! Selecting literature also implies discovering the most current debate on the area of research, and possibly understanding the history of the debate. The researcher must endeavour to be up to date in the consultation of the literature. These materials are useful at the point of literature review and subsequent data analysis and discussion. This is the 'desk work' stage of any research endeavour. These materials include newspapers, journals, reports, articles, books, Internet and other published and unpublished materials. Today eBooks are available through the Internet. Many institutions also subscribe to e-library such as Jstor where students can have access to millions of journal articles. Also, data from secondary sources may be in quantitative form. Aransiola pointed to the problems that may arise from the use of secondary data, and so researchers must guide against these by ensuring the following:

(i)     What is the source of data?
(ii)    Does it cover the geographic location the researcher wishes to cover?
(iii)   How current is the data?
(iv)    In situations where the researcher is combining it with other data they must be the same in terms of units and time (Aransiola 2010:353).

Also, often times some students make the mistake of not taking into cognisance the context of their research in the selection of literature. For instance, a study on witchcraft in a local community

in a country that does not pay attention to the reportage of the phenomenon in the local newspaper depicts a very weak literature consultation.

## Research Equipment
These include:

### *Camera*
Camera has the capacity to capture rich ethnographic data, including interview sessions. This gives authenticity to the research. Cultural artefacts, markets, participants in cultural events may be covered using this equipment.

### *Video Camera*
Video camera can be used as tool for data collection in an ethnographic study. A research on festival may well be captured with video camera. The instrument can also be used to cover interview sessions. Not all the data generated using this technique may be used in a particular research but they represent a reservoir from where the researcher can draw at a later time.

### *Radio Cassette*
Radio cassette or midget is very handy in ethnographic research. Interviews must be recorded and later transcribed before translation, if need be. This could take weeks to complete.

## Interview Questions/Question Guide
Maundu (1995) submits that a researcher going on a fieldwork should have "formulated questions to use during the study" (Maundu 1995:3). As the research is a qualitative one, the researcher must prepare some questions as Question Guide, and this is to be administered to the selected informants in the field through oral procedure. Question guide are generated from the specific research questions and objectives. We often advise students to generate between two to five questions for each objective. Question guide are not sacrosanct as they can be expanded or some skipped during oral interviews, depending on the responses of the informants. The Question guide is later included as 'Appendix' in the final report of the research.

## The Use of Theory

Research in anthropology must be guided by a theoretical underpinning. The student needs to identify relevant theories that can be used in the chosen area of research. This has impact on data collection, analysis and discussion. The researcher may use one theory or more. The use of multiple theories is referred to as eclecticism. However, the problem with the use of multiple theories is that often times many students lack the capacity to properly integrate these theories in the analysis of data and discussion. There is the need for the researcher to choose from the multiplicity of theories in social research rather than continuing to use such over-flogged theories as Malinowski's functionalism, Radcliffe-Brown's structural-functionalism and so on. For instance, scholars like Jacques Derrida, Michel Foucault, Herbert Blumer, George Herbert Mead, Victor Turner, and Clifford Geertz are some more contemporary theorists whose thoughts a student may pick from, depending on the subject matter of research. However, the choice of theory must be worked out in conjunction with the student's supervisor.

## Data Analysis

How are the collected data to be analysed? The researcher is expected to state this under this sub-heading. Data analysis involves bringing out the underlying meanings inherent in the actions of the subject which have been described and explained. Let us begin with qualitative data. Interestingly, there is no particular approach that is 'the approach' in data analysis. The fundamental issues remain that ethnographic study must be rich in data and concepts and must represent 'thick description' (Geertz 1973). Such concepts guide and drive analysis. While at the field, the research must constantly 'think through' the data, and this will help to identify concepts that will be handy during 'proper' data analysis.

To arrive at 'think description', there must be description and interpretation, where the researcher describes, interprets, and comments on a wide range of issues raised during fieldwork, bringing out the explicit and hidden meanings that represents the 'how', 'why', 'when', and 'where' of the research. Direct

quotations are also included in the write-up to offer the reader the opportunity of having a 'feel' of the thoughts of the people studied, and possibly generate further meanings! However, this should not replace analysis and interpretation. Through interpretations, meanings are given to the data. The analysis should be guided by first, the specific objectives of the research, which guides the formulation of the sub-headings in the chapter on data presentation and analysis. What are the meanings and significances thrown up in the findings? Unravelling these thrust up the people's thought ways that shape their attitudes and actions and inactions. The researcher may also seek for the appropriate softwares for the analysis of qualitative data.

Quantitative data are analysed using statistical testing of data/analysis. There are various statistical softwares available for the analysis of quantitative data. Students should seek assistance from experts where one is not competent in using useful softwares. Isiugo-Abanihe (2002) identified structural bias as a major challenge of quantitative methodology. This arises in situations where the researcher allows his/her biases to influence the choice of research participants, through manipulation of sample and sampling procedure, even in administering and filling the questionnaire! These must be avoided if the sanctity of objectivity of research findings must be achieved. In the final report, both the qualitative and quantitative data should make a complete whole and not contradict or run parallel to each other. The researcher is therefore expected to use one to buttress or validate the other.

A research in anthropology is not complete without the *discussion* section. Often times this is a new chapter. However, for an undergraduate project, it can be the last section of data presentation and analysis. The discussion section is where the researcher integrates research findings with what exists in the literature along the line of the theory the researcher has adopted. The theory must be suitable and guide the discussion. At this point of the write-up, the researcher must prove that the theory fits and is appropriate. At the discussion section the researcher makes concrete statements thrust up in the research, the contributions of the work to existing scholarship by offering new insights. Going through the discussion section, these insights must be obvious to

the reader. The language of ethnographic research is simple and easily comprehended by those who read it. The language must be lucid for easy comprehension.

## Ethical Issues

Ethnographic research involves studying people in their 'naturally occurring setting'. Humans are social beings and so the researcher must guide against endangering people's social lives as a result of their participation in one's research. The first thing, therefore, is to get informed consent of the research participants and to respect their privacy. When the research participants are not in a position to give such consent, in situations where babies or very sick persons are involved, the researcher should seek the consent of appropriate individuals such as parents or care-givers respectively. A student working on the area of medical anthropology should also go further and get permission from the Ethics committee of the institution. University of Ibadan for instance has Ethical Policy. This needs to be studied and the relevant part of the document that applies to one's discipline should be adhered to.

## Conclusion

We have attempted in this chapter to examine the fundamentals of research in the disciplines of archaeology and anthropology. In any archaeological work, the aim is to derive as much information as possible about the makers of the materials recovered through either survey or excavation. Thus the recovery of data hinges heavily on the methods adopted. Besides the recovery of data however, the type of analysis carried out on the archaeological data is very germane to the interpretations that are made. The entire methods of studying the human past are sequential and more or less dependent on each other. Everything proceeds from one stage to the other; from reconnaissance to survey, excavation, analysis and interpretation.

In essence, Ashmore and Sharer (1996) have highlighted six stages of archaeological data acquisition and processing. These are:

- Implementation: permits, funding and logistics
- Data acquisition: reconnaissance, survey and excavation

- Data processing: cleaning, conservation, cataloguing and initial classification
- Analysis: analytical classification, temporal and spatial frameworks
- Interpretation: application of cultural history and cultural process approach and contextual interpretation.
- Publication.

For anthropology, data are generated through methods that allow for face-to-face interactions between the research subject and the researcher. The data come in form of words, but may include statistical information, which could be arrived at as a result of attempt to put figures to human experiences. This enriches the data. Both the quantitative and qualitative data must be well integrated in data analysis. We also noted that technological development has affected our everyday life, including the concept of 'community', as the cyberspace has equally created a form of community where the researcher can access research participants. Internet provides space for data generation through such encounter, thus enriching ethnographic data. Finally, we observed that the discussion section is an integral part of research in anthropology, and this must be incorporated into the final report.

Fundamentals of research in anthropology entail being conscious of the nature of knowledge production in the discipline, and ensuring that objectivity, validity and reliability are achieved. This is only possible if the researcher makes the research process public (Chavez 2008), using methods of data collection in the discipline to produce a good ethnography, while taken into consideration ethical concerns.

## Reference

Adekola, O.O. (1999) "Anthropological Field Method: A Researcher's Approach" In *A Handbook of Methodology in African Studies*. ed. Layiwola, Dele, Ibadan: John Archers Publishers. 176 - 188.

Alabi, R.A. (2000) Gberefu and Agorin sea beach: Intensive salt making sites on the southwest coast of Nigeria. *West African Journal of Archaeology* 30(1&2): 28 - 49.

Aleru, J.O. (2011) "Concepts and Use of Modern Equipment for Mapping Archaeological Sites" In *Theory and Practice of Mapping Archaeological Sites in Nigeria*. A publication of the National Commission for Museums and Monuments, eds. Hambolu, M. and O. Akinade. Abuja: Cephasprint Production, pp. 21 - 30.

Aleru, J.O., O.A. Opadeji and A.O. Adegbite (2005) GIS documentation of archaeological sites, conflict and landscape archaeology in Egba forest, southwestern Nigeria. *West African Journal of Archaeology* 35(1&2): 1 - 32.

Andah, B.W. and A.F. Okpoko (1994) *Practising archaeology in Africa*. Ibadan: Wisdom Publishers Ltd.

Ashmore, W. and R.J. Sharer (1996) *Discovering our past: A brief introduction to archaeology*, 2nd ed. California: Mayfield Publishing Co.

Atkinson, Paul and Martyn Hammersley (2007) *Ethnography: Principles in practice* (3ed.). London: Routledge.

Babchuk, Nicholas (1962) The role of the researcher as participant observer and participant-as-observer in the field situation. *Human Organisation* 21(3): 225 - 228.

Brewer, John D. (2000) *Ethnography*. Buckingham: Open University.

Brothwell, H. and E. Higgs (1971) *Science in Archaeology: A survey of progress and research*. London: Thames and Hudson.

Burgess, Robert G. (1982) *Field research: A sourcebook and field manual*. New York: Routledge.

Coles, J. (1974) *Field archaeology in Britain*. London: Methuen and Co. Ltd.

Denzin, N.K. (1989) *The research act: A theoretical introduction to sociological methods*. 3rd edition, Englewood Cliffs, NJ: Prentice Hall.

Fagan, B. (1975) *In the beginning: An introduction to archaeology*. Boston: Little, Brown and Co.

Geertz, Clifford (1973) *Religion as a cultural system. The interpretation of cultures*. New York: Basic Books. Inc. 87 - 125.

Hodder, I. (1999) *Archaeological process: An introduction*. Oxford: Blackwell.

Isiugo-Abanihe, Uche (2002) *Quantitative research techniques. Currents and perspectives in sociology*. (eds.) Isiugo-Abanihe, Austin N. Isamah and Jimi O. Adesina, Ibadan: Malthouse Press Limited: 52 - 72.

Kluckhohn, Florence R. (1940) The participant observer technique in small communities. *The American Journal of Sociology* 46(3): 331- 343.

Maundu, Patrick (1995) Methodology for collecting and sharing indigenous knowledge: A case study. *Indigenous Knowledge and Development Monitor* 3(2): 3 - 5.

Mintz, Sidney W. (1979) The anthropological interview and the life history. *The Oral History Review* 7: 18 - 26.

Murchison, Julian M. (2010) *Ethnography essentials: Designing, conducting, and presenting your research*. California: Jossey-Bass.

Ogunbameru, Olakunle A. and Bankole O. Ogunbameru (2010) *Contemporary methods in social research*. Ile-Ife: Kuntel Publishers.

Olukole, T. and D.A. Aremu (2002) The use of geographical information system for documenting archaeological and tourism resources of Ijebuland, southwestern Nigeria. *West African Journal of Archaeology* 32(2): 35 - 61.

O'Toole, Paddy and Prisca Were (2008) Observing places: Using space and material culture in qualitative research. *Qualitative Research* 8(5): 616 - 634.

Patton, M.Q. (1990) *Qualitative education and research methods (*2nd Ed). New York: Sage Publication.

Renfrew, C. and P. Bahn (1996) *Archaeology: Theories, methods and practice*. London: Thames and Hudson.

Shaw, T. and S.G.H. Daniels (1984) Excavations at Iwo Eleru, Ondo State, Nigeria. *Special Book Issue of the West African Journal of Archaeology,* ed. P. Allsworth-Jones and A.I. Okpoko. 14: 269.

Stearrns, Gail J. (1998) Reflexivity and moral agency: Restoring possibility to life history research. Frontiers: *A Journal of Women's Studies* 19(3): 58 - 71.

Tubosun, B. (2011) "Survey and Geographical Positioning of Archaeological Sites" In *Theory and Practice of Mapping Archaeological Sites in Nigeria*. A publication of the National Commission for Museums and Monuments, eds. Hambolu, M. and O. Akinade. Abuja: Cephasprint Production, pp 31 - 48.

## About the Book

In *Theories and Methodologies in the Humanities,* the contributors present in-depth analyses of the diversity of methodologies employed by researchers in the humanities. This book is an attempt to articulate and preserve academic traditions in the humanities in respect of the study of various aspects of society and culture. The chapters in this book are drawn from departments of Arabic and Islamic Studies, Archaeology and Anthropology, Classics, Communication and Language Arts, English, History, Linguistics and African Languages, Music, Philosophy and Religious Studies.

## The Editors

Prof. A. B. Ekanola, Department of Philosophy; Dean, Faculty of Arts (2015 – 2017); Director, Office of International Programmes (2017 – 2019); and current Deputy Vice-Chancellor (Academic) University of Ibadan. Email: debakanl@gmail.com

Prof. A. Raji-Oyelade, Department of English; Dean, Faculty of Arts (2012 – 2015) and currently, a Senate Representative in the Governing Council, University of Ibadan.
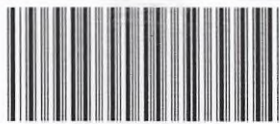Email: remraji @gmail.com

Prof. R. O. Olaniyi, Department of History and Sub-Dean Postgraduate, Faculty of Arts (2014 – 2017) University of Ibadan.
Email: rasolaniyi@gmail.com