

# AN ARCHAEOLOGICAL PERSPECTIVE ON CONTEMPORARY POTTERY PRODUCTION PROCESSES

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## **Abstract**

*Pottery is an aspect of African technology that expresses the ingenuity of man through clay, that is modeled, decorated, dried, and fired. Traditional Pottery in Africa, helps in culture identification and function as objects for storage, cooking, rituals, as well as ceremonial; status symbols. In archaeology, the use of pottery is imperative due to its durability and occurrence in archaeological sites. It is regarded as artefacts which help to interpret the early human occupation, culture history and culture changes as observed in different human societies. Hence, the invading of contemporary ceramics and decoration seems to erode the unique values of traditional pottery in terms of their motifs of decoration, method of production and socio-cultural context. Contemporary ceramic production however, involves the used of mechanised devices and glaze coatings in production. This glazeware are not as environmental friendly when compared with traditional pottery (potsherd), whose existence in sites and farmlands seems to promote the growth of soil fertility enhancing weeds such as Awolowo weed (*Eupatorium odoratum*). Its existence as glazed wares has imposed great challenge to interpretation of African culture when compared with traditional pottery derived for Archaeological investigations. This paper examines the traditional pottery production, contemporary pottery production, the relevance and functions of traditional pottery to Africans and Archaeological investigations.*

## **Introduction**

Traditional pottery is the most indestructible cultural remains recoverable from archaeological sites. It depicts the culture history of the people, technological development and possible early human sedentism. However, it serves as a road map through which African societies is better studied and understood. Most African societies through traditional pottery has been brought to limelight showing their culture history and the technological ingenuity. Agbaje-Williams (1989) posited traditional pottery in Ulaira, Old Warra and Kagoge to reveal the technological skill of the people and their architectural pattern. In Ipapo Ile, potsherd discovered especially in baobab-like forest at Old Oyo indicated the area as early human occupation site (Agbaje-Williams, 1989). Simiarly, potsherds found in Urewe and north-west Chad helped to unravel the culture similarities and trade movements

between the two communities Soper (as cited in Phillipson, 1985). In Nana, Central African Republic, the roulette decoration found on pottery, served as cultural marker to delineate the different people that lived in the same area. It also helped to trace the movement of the group of people and their eventual settlement in a place David and Vidal (as cited in Phillipson, 1985).

Consequently, traditional pottery holds valuable archaeological information. It appears meaningful as potsherd to Archaeology and is regarded as artefact. Archaeology is the study of the past revealed through cultural remains for the purpose of reconstruction of past human culture. Pottery being a cultural remain reveals data of past human activities due to the durability of potsherd. Potsherd account up 80% of material remains drieved from Archaeological sites as a pot could be broken into several

pieces and last long. Archaeologist, relies heavily on it to reconstruction various culture histories and establish sequence of human occupation. It aids to show human interaction with the environment (natural resources). As environmental affability, it enriches the soil. By studying the production techniques of pottery, archaeologists discover the technological development of the community, the ethnographic information on the pottery typology and the uses of pottery. Decorative techniques throw light on continuity of pottery tradition and depicts its societal values and heritage in Africa society.

Conversely, the incursion of contemporary ceramics in Africa has hampered the imperative nature of traditional pottery. Otimayin (2008) described contemporary ceramics as a sprout of pottery making due to the introduction of modern techniques. Presently, contemporary ceramics production has consistently been on the increase in African societies, resulting to gradual loss of indigenous knowledge and technology of pottery production. This further creates lacuna in archaeological reconstruction of the past through potsherds, uses and roles performed by pottery in indigenous communities. Based on this, the paper tends to emphasize the relevance and sustainability of traditional pottery to African society which has gradually been hampered by modern ceramics.

#### **Traditional Pottery Production Processes**

Pottery production is an act of formulating pottery wares from clay. Cardew (1970) emphasized that in pottery production, clay preparation appears the principal part of the potter's art. Clay is an endowed resource found within the environment from the earth crust. It is the raw material and disintegration of the feldspathic rock through weathering which contains kaolinite as primary mineral with aluminium oxide, silicon oxide, and water. Clay may be obtained at the foot hills, mountains or river beds which sometimes appears in primary or secondary form. The primary clay originated from the feldspathic rock while the secondary clay involves the clay sedimentation away from the place of origin through river flow. More often the secondary clay serves as the basic raw material for pottery formation due to its plasticity achieved during sedimentation in movement and its easy maturity during firing.

The essence of the plasticity is for the clay to take the shape given to it during formation. Clay is locally mined usually during dry season or purchased from miners. The raw material is used both in traditional and modern pottery formation.

#### **Tools for Traditional Pottery Production**

Tool used for pottery production are usually, locally produced. They are simple tools that vary from societies but perform similar functions. These tools are obtained within the environment of the potters. It could be derived from nature or reconstructed. All tools used by Nigerian traditional potters are improvised and based on trial and error (Igwilo, 1983). Some tools serves as object for pounding, scraping, smoothing, burnishing, for adjusting the pottery and for application of decorations. It is the imprints of these tools (designs or motifs) that is very important to archaeologist in their attempt to understand cultural relationships.

#### **Manufacturing Processes**

Significantly, the preparation technique of pottery production determines the quality and durability of the pottery. Once the clay is mined, it is sun dried for a while, for easy slake in water, and then pounded with wooden mortar and pestle. While pounding, unwanted debris is sieved out and water added gradually to make it plastic. Simultaneous kneading commences which aids in removal of air bubbles from the clay. Occasionally, the clay is pounded and kneaded with addition of tempering material which gives it a homogenous consistency. The tempering material added depends on traditions. Some traditions use dry powdered clay, animal dungs, dry squeezed grasses and ground baked clay. The purpose of the tempering is to improve the workability of the clay, avoid shrinkage and cracking during firing. The tempering creates small invisible openings which promotes transpiration. This contributes to the cooling of water in the pot. After the addition of tempering and proper kneading, by either hand, foot or pestle, the clay is wrapped to sustain its moist till the period of usage.

#### **Method of Pottery Formation**

Hand building is the earliest method employed in pottery making. It is commonly used before the invention of potter's wheel through modernisation. Hand building methods

includes coiling, slab, pinching or lump methods. In pottery formation, the base of the pottery is the first point of call. It is made using rolled lump of clay with a thumb insert at the middle to obtain a mini bowl which is adjusted all round with additional lumps of clay to produce the body. The base is placed on the neck of broken pot which acts as a stand to the new pottery. The pottery base is given full concentration since it bears the strength of the pot and determines the durability of the pottery. In some communities, experts or older potters form the base of the pottery and allows the continuation by the young ones. Once the base has been gotten, the building up of the body continues either with coiling or pinching (lumps) which are the general basic forming processes in African society. After the formation, the smoothing process commences which is mostly done either by river pebble, aquatic smooth shell or any smooth leaves. Then, the decoration of the pot that is based on the tradition of people. Pottery decoration, starts few minutes after the pottery has absorbed some air, set and assumed a leather-hard stage to avoid collapse or being stuck to the decoration tool. After which is allowed to dry gradually on a shaded area.

### **Firing**

Firing is usually done on a sunny day. Its preparation is made through gathering of fresh and dried grasses. The pottery is first preheated before the main firing. On the main firing, the pots are arranged according to sizes the big ones at the base while the small ones on top and fired to 500°C-600°C. A steady temperature is maintain at 500°C. Igwilo (1983) posited that the maximum temperature is 600 °C (1200<sup>o</sup>f) and must not exceed. At this temperature, the pottery produces red heat indicating its maturity. Ali (2004) emphasised that maturity of pottery is determined by spying through the exposed area of the burning mass, the ware assuming red heat. After firing the fire is allowed to go down before the pottery are off loaded with long stick.

### **Contemporary Pottery Production Processes**

It is imperative to understand that contemporary ceramic production has been of great effect to the field of archaeology. Contemporary ceramic production as it implies is the latest 20th and 21st century production of pottery. It involves the use of mechanized

devices such as potters wheel, kiln and glaze a form of decoration. Though the production processes appears systematic with traditional pottery, but differs in structure and electronic application. The production begins with throwing method, where the lump of clay is thrown on rotating wheel or device designed according to pattern of desired production helped with external force. This gives a quick and rapid productions. The produced objects are heated in a kiln at 960°C- 1000°C more than open firing making the ceramics stoneware and impervious. Kiln is a thermally insulated chamber or a type of oven, used in heating pottery at a given temperatures, giving rise to chemical changes of clay to ceramics or glazed ware. Ibeanu (2006) emphasised that only in kiln can over 900°C (1652°F) temperature be found giving such changes in pottery production. The surface decoration is glazed being the last stage of production. Glaze involves a glass-like mixture of minerals and silica that produces a glossy, hard finished ware when fired. Egbeji (2000) defined it as a thin glaze-like coating fused to a clay surface by the heat of the kiln to produce hard surface for aesthetic purpose. Thus, the focus of contemporary ceramics is on aesthetic, pursuit of global tourism market and values. Its advancement in contemporary firing (kiln) has affected the communal life and particularistic skill that exist among traditional potters and beliefs system. It has created reduction of potsherds used by archaeologist in reconstruction of the past.

### **Methodology**

The study adopts ethnoarchaeological research method which involves the Archaeologist to collect ethnographic data to interpret the materials derived from Archaeological sites. According to Stiles (1977) defined ethnoarchaeology as the use of ethnographic method and information of the present to aid in the interpretation of and explanation of archaeological data. All terms at definition of ethnoarchaeology by different scholars Geertz (1973; Shaw, 1964; Okpoko, 1989) is to link material remains to human behavioural pattern that produce and use them. In this study, the writers are looking at traditional pottery potsherds derived at archaeological site comparing them with the present contemporary ceramics wares. In doing this, they term to look at the similarities in techniques and motifs decorations as well

as looking at the socio-cultural context of these traditional pottery wares.

### **Discussion**

Traditional pottery (earthen ware) has dignified values and roles it performed in African tradition and archaeological field. In Africans, traditional pottery serve diverse purposes such as burial, ceremonial, rituals, in some cases are named after the function they perform in such society rather than attributes. Decorative motifs and pottery shapes reflects the environment and culture of the potters. The tempering materials used such as cow dungs, grog helps to open up microscopic pores which prevents cracking during firing and cooling of water stored in the pot through the process of transpiration. This is why water store in traditional pottery appears cold and soothe to the throat giving satisfaction to thirst than contemporary vessels. As objects for religious activities, it is used for ritual sacrifices which such pottery are mostly produced by specified persons. Traditional pottery serves as objects for local therapy both for preparation and preservation. For instance most traditional men recommend cooking herbs or root with traditional pottery than contemporary ceramics. It is also believed that the use of traditional pottery for local therapy welcomes the spirit of the gods for quick solutions to problems. During ceremonial activities and festival, traditional pottery are used and it invokes a sense of belonging and pride in the cultural heritage of a people. Politically, it serves as requirements for coronation and as object of service that distinguishes the titled men from mere people. Thus, it further helps to depict sense of communal relationship among potters during production.

Archaeologically, the roles of traditional pottery can not be over emphasised. It serves as object of reconstruction and interpretation of culture history, technological ingenuity of the people both past and present, it is used to decipher the culture contunity of a given society. Potsherds excavated aids in knowing the early human occupation and possible dates, using scientific analysis know as thermoluminescence. Due to the crude or local tools used for decorations, decorated potsherd communicates to archaeologist the creativity and skill of the past and further serve as a medium of socio-cultural

interaction of potters with the environment. Decorated potsherds, informs archaeologist the techniques used for decoration. Traditional Pottery decorations, help archaeologist to know the various roles performed by pottery in a given locality. For instance, pottery used for liquid activities such as storage of water and oil, its decorations appears rouletted. Ritual pots excavated in Igbo-ukwu by shaw (1970) appeared burnished, some have representation of animals while some were perforated. Through decoration of potsherds excavated, similarity of culture and areas of communal transactions are identified. Traditional pottery acts as a source to valuable heritage resources which are transferred to generations.

Consequently, contemporary ceramics on the other hand focus on aesthetics designs that tags tourism market not necessarily addressing the socio-cultural values. Contemporary ceramics is more of resemblance than indication of indigenous knowlegde and particularistic of society. Its incursion has introduced rapid reduction of traditional pottery production in Africa, indigenous knowlegde and beliefs system of traditional pottery. Imperatively, contemporary ceramic is can never be related to culture in Africa. It is an art that continuously evolved from just mere expression of personal feeling to fine art and industrial wares. It has moved from local bisque to glazy ware, hand moulding to potters wheel, from use of crude tools representing culture and skill to monopolistic pattern, communal activity to individualistic resulting to extinction of communal life of Africans. Leach (1976) emphasised that most indigenous technology are facing imminent extinction while modernized ceramics are on rapid growth in African society. The rapid growth of this contemporary ceramics emerged since the introduction of contemporary ceramics centres such as Okigwe pottery centre and Suleja (Abuja) Ladi kwali pottery centre in 1952. This relegated the indigenous techniques and significant of traditional pottery. The contemporary ceramicist today find it difficult to relate ceramics to culture, thereby making their wares to possess lost of identify. Most ceramics products found in the global markets cannot be traced to the place of production or culture this become a problem to African

society. It is pertinent to understand that that traditional pottery stands as the bases to contemporary ceramics. It is as a result of exposure of traditional potters to western techniques that this challenge emerged. Ladi Kwali a reknown traditional potter expresses her feelings, thought and culture on her traditional pottery. This could be found on potteries like Gwari pots, tulu, randa and ceremonial pots. Some pots excavated in Igbo-ukwu by Shaw in 1960 Onuzulike (2009) suggest traces of Kwali decoration styles. But after her encounter with Michael Cardew and acquisition of western techniques her production advanced to modern ceramics. For instance, the randa pot that possesses modernized forms. The implication of these foregoing contemporary ceramics is so crucial in the field of Archaeology. Its presence in sites makes the area non archaeological site. Furthermore, due to the increase existence of ceramics industries, most archaeological sites are threatened. Areas like Afikpo, Okigwe and Enugu that posses archaeological data. The mass mining of clay has exposed cultural remains, altered soil strata used for stratigraphy and reconstructions and has

introduced vegetational changes from rain forest region to savannah. There is need for sustainability of traditional pottery production and salvage operation of archaeological sites on challenges imposed by contemporary ceramics. This could be done through enlightenment of indigenous potters to continue in their local form of pottery production. Contemporary ceramicist to sustain culture identity on their wares and still produce more earthen wares than stonewares and porcelain.

### **Conclusion**

Traditional pottery in Africa has indeed established its importance to the field of archaeology in diverse ways. As a source of information to the past reconstructions of human activities, culture identity, origin, indigenous technology and its continuity. Overtime these technology has been hampered by comtemporany technology giving room to indigenous lost and archaeological reconstruction which if not sustained through awareness, trainings and finance allocation affects heritage transfers.



**Plate 1: Clay mining site**



**Plate 2: Kneading**



**Plate 3: Prepared clay**



**Plate 4: Base formation**



**Plate 5: Pottery making**



**Plate 6: Open Firing**

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