ADAPTATION OF ZARIA WALL DECORATIVE MOTIFS FOR CERAMIC WALL TILES

SANI R. M.
Department of Industrial Design,
Ahmadu Bello University, Zaria
Rakiya1234@gmail.com

Abstract
Traditional Design and our culture generally are rapidly fading out of existence. Today many designs especially those traditional ones on structures as signs of decoration, beautification and symbolism are being demolished due to modern technological development and advancement in Architectural structures, designs and contemporary building materials There are two schools of thoughts whereby the first school of thought is of the opinion that traditional art should be discarded, whereas the second school of thought argues that tradition should be merged with modernity to bring out high technological standard product for use and for the development of our country and the world at large. This paper is of the opinion of the second school of thoughts. The paper therefore will discuss on the exploration of Zaria wall decorative motif, a potential source of inspiration for decorating, designing and producing ceramic Wall, floor and ceiling tiles for the ever changing, beautiful and contemporarily conscious society.

Introduction
In art, critical arguments have come into focus in the discourse of traditional and modern African art. The traditionalist argues that African art is ritually conceived and forms the total way of life of the people (culture), and should be treated as such, the modernist argues that art is a form of entertainment, which is conceived and creatively done for the general appreciation of the people. Adou, (1988) states that "The traditional art-forms scholarship thought argues that the traditional technology is crude and archaic and cannot measure up to the current, fast and appealing technological advancement of the modern world. While the traditionalist argues that the modernist technological advancement is rooted to the traditional one. Meanwhile, this write up is not to make a case for either of the two schools of thought but to appreciate the analytical perspective of both schools of thought as they will allow us to understand better the mechanism, genesis, and functions of both and their dialectical relationship with one another in the advancement and development of Nigeria and the world at large.

In recent times and with the coming of the Western society, there came a change that today eventually brought about the recent discourse in modern and traditional art in Nigeria, (Zaria in focus) Fowowe (2004) wrote that: "Western Education, Ch religion and, of course cultural diffusion had brought a new dimension into artistic creation.

The coming together of the modern art and traditional art-forms according to Fo (2004) observation is very important at this point in time. Relying on this observation, one is therefore tempted to conclude that indeed modern art-form did borrow from traditional art-form. Hence both can further enhance the development of each other. The dispute that proposes that modern seems to be better than traditional and vis-à-vis is a form of classification that threatens the appreciation of both.

Historically, man has desired to create living spaces which are beautiful, durable and user friendly. Ceramic tile has been made and used by man for 4000 years. Beautiful tiles surfaces have been found in the oldest pyramids, the ruins of Babylon, and the

ancient ruins of Greek cities. Tiles have its root in the socio-cultural development of the Africa people. It dates back to the Egyptians in about 4000 BC, where they used them on walls and floors as tile covering. (www.designboom.newsletter). It also goes back to the history of art in Africa as Jacqueline Chanda notes that the history spans a vast period, beginning as early as 25,500BC and continuing to the present day. Today, technology and the everyday desire of man to live in a clean, beautiful, healthy and comforting environment, he beautifies his abode with various sizes, shades, shapes, textural, designs and colours of tiles. So, today there is virtually no house or structure that does not have tile applications partially or completely. Pictures of some tiled shops to be displayed.

The diminishing power of Zaria traditions and culture prompted the exploring and adapting of Zaria traditional wall motifs as a potential source of inspiration for decorating and designing ceramics tiles for the consumption of Nigerians and the world by and large. Historically these motifs according to Mallam Jafaru Garba (chief motif designer and builder) narrated that this designs were brought to Zaria from turkey by a man called Ibrahim but fondly called Baban Gwani who first decorated the first Friday mosque in Zaria city and that in subsequent time, other design motifs were inspired by their immediate environment and that the designs were also made only by the wealthy, influential, newly married couples and those in the royal lineage. This is because they are believed to have the financial means or strength to execute such projects. He further explained that the motifs are used in the past to construct the bed, shelves, bed side locker of a newly married lady and that the whole wall and ceiling are also covered with various pattern of the motifs leaving a colourful and beautiful compositional units of designs inside the interior of the (amarya) lady's apartment. These are to Mallam Jafaru can today be executed by any individual who is so interested and willing to explore the design unto his/her structures.

Mallam Jafaru, is presently the chief builder and head of all designers in Zaria metropolis, he said the art is an inherited occupation that passes from father to son and from generation to generation. As for him, he is the third generation that has taken over this profession from his father and that his son will continue after him. He also lamented and expresses his pains and worries over the neglecting attitude of some of their children towards the decorating profession. He further stated that "modern structures and the material are taking over their beloved inherited This is in line with Williet, 1975. Ogunduyile 1985 in Moh Most traditional buildings or structures today are greatly influenced by Western building styles and designs." Tradit loses more of its characteristic features as a result of civilization and that, civilization seems to be taking much of Art without putting it in a position to draw on mythical element of traditional Art for new artistic purposes. This trend is gradually putting traditional wall decorative designs out of existence.

Schwerdtfeger (2007) in his Hausa Urban Art" asked if wa return back from its demise and feared that the skill has being lost forever. Toward the tail end of his write up, he stated and confirmed that an "art form may n fashionable or may even disappear altogether, but the idea will survive in the splendor of hand embroidered gown or in the adornment of items of everyday use. Today tiles are part of building materials that are irresistible by anyone building a house or houses today; the tiles could be wall, floor, or ceiling tiles. So, this study is on the track of exploring and adapting the Zaria wall decorative motifs and making it survive also in the hands of splendored tile producers both locally and industrially for our ever flourishing and desiring homes, shops, restaurant, hospitals, offices, etc.

Methodology

Material and Method of Application (Local Method)

The secondary materials for these designs are clay, sand and dry grasses. These materials first, are evenly mixed together with water and covered with polythene for two, three and sometimes left for even seven days for maximum maturity and workability. After which the builder or designer and his assistance who are mostly his immediate family members help to knead the mixture using both feet to pound, turn, squeeze and

homogenously mix the materials together into a whole bulk of mass of clay/mud.

They used the throw and catch method for the production. That is the sequence of design development which usually involves the activity of two persons for easy and faster execution of the design. One person is left standing on the ground by the mix, fetching, moulding and throwing the clay lump to the designer (builder), who in turn grabs the ball of clay and spread it onto the assign surface and subsequently spread it evenly to a required thickness and allow to attain the leather hard quality before the builder then begins to unknowledgeable applying the elements and principle of design onto the surface of the wall. He begins to engrave the various shapes and sizes of motifs onto the surface and gradually a beautiful compositional unit of motifs comes out in a relief form. It is left for days to dry up and the desired colour is thereafter applied to bring out the visually aesthetic qualities of the finished design. Below is a picture of Mallam Hasssan Ado spreading clay/mud on a wall surface in preparation for creating the decorative patterns and motifs symbols. The Northern (Zaria) traditional or cultural motifs are part and parcel of the Hausa community as it is well cherished especially by the royalty, wealthy and the influents. Some of these motifs are shown Plates v and vi.

A snapshot of Dagi, Zane, butterfly floral motifs and several others were taken from the wall of the Emirs palace and other residence in Zaria and Kano city. Dagi motif is one of the oldest and most cherished motifs among the Northern states. This motif signifies unity, strong hold and a binding force among the Hausas. Because of the importance attached to this motifs and the wake of modern technological advancement, the motifs are correspondingly redesigned to catch up with the contemporary train of the design of today, but still on walls and not on tiles as this study is delving into. Floral motif is used for both wall and ceiling covering. This design is likewise popular among traditional northern design and as esteemed as the Dagi, Zane, and other traditional decorative motifs and symbols. Below are pencil drawings of the above designs after careful study of various design motifs, they were drawn and then traced on tracing paper for easy transfer onto the flat plain clay slab. The motifs in Figures 1-4, were adapted from wall surface design, drawn and traced for onward production into tablets of ceramic tiles in the following sequence of design development putting all the elements and principles of design in place.

After getting the desired designs in pencil lines on paper and on tracing paper, a clay slab of about two centimetre thick (2cm) is made, followed by the manual tracing of the outlined design on the clay slab and trail up with detailing of the design with the aid of ceramic modelling tools. As seen below;
In plate ix, the clay is being spread evenly on a table using a metal hand shovel as a substitute for roller which are used as working tools in ceramic production, while the second figure shows a well spread out clay slab, ready for measuring, sizing, cutting and subsequently administering Northern motif or symbols on the surface.

After completion of the two stages above, the next step is to cut out the sizes of the desire tile using ruler to get the measurement and thereafter use a knife, cutter or any sharp suitable object to cut out the measured areas. Plates x and xi show the measuring, sizing, cutting and execution of outlined motif design for further progression and production of traditional motif inspired tiles

Zane Model Making
In making the mold for the Zane motif, a lump of clay was placed on a flat surface, rolled over and over to form flat, smooth and thick flat clay, where the shape and size for the Zane designed motif is neatly cut out. The placement was accurate as four sticks were used to create a frame in order to support the slab.

(a) The drawn motif was traced with the use of tracing paper onto the clay slab, in preparation for the Zane motif (model)
(b) The Zane motif was later engraved on the slab by subtracting the unwanted clay in order to bring out the Zane design.
(c) The outlined form was smoothened in a careful manner following the flow of the design outlines, bringing out curvilinear effect of the Zane design, as seen in plate xvi above. The detailing then give rise to what we called model. Model is a piece of work or a prototype for

sequential or onward production of a particular design.

Dagi Abstracted model
The Dagi Abstracted model was designed and produced using the relief method. The motif was drawn on a plain clay slab, while clay lump was at the same time use to create the relief effect of the Dagi motif which thereafter displayed the characteristics of both relief and engraved method of making design. The same process was adopted in making models for Dagi, floral butterfly, floral and abstracted Dagi 2. The dagi Abstracted are formed or redesigned with more geometrical shaped forms. These combinations helped and assisted in giving the design a rigid and flexible effect.

Floral butterfly model
The model made from the floral butterfly motif was designed and obtained using the relief method of design. After tracing the design on the surface of a plain clay slab, small quantity of clay lump was then used to build up the designed outline. Modeling tools were then used to press smoothen the relieved design to give it a neat and perfect finishing as indicated in plate xviii.

Dagi Model; The procedures encountered in the Dagi model is also the same as the procedures in the Dagi abstracted model, the only model that had a different procedure or technique in making it, is the Zane motif which at the course of engraving, the motif was given deep impression on the slab and also deep projections to give it a different perspective and aesthetical look.

Floral Model
The floral design was also traced on a plain slab. The oval egg shape design was then followed up with modeling tools to properly bring out the right features of the motif. However the only difference is the cutting and smoothening of the motifs on the slab due to its rhythmical flow in order to bring out a complete relief projection for proper casting and creating of the templates.

After the above procedures, on the making of the floral motif, Dagi, Abstracted dagi, Zane and Floral butterfly motifs models, the following processes were used in producing a mould for the models. After the exploratory and developmental stages, cast from the acquired models were made using the plaster of Paris (P.O.P) to achieve a strong and durable mould which was subsequently used to produce and reproduce as many tiles as possible.

Procedures for making moulds; After obtaining all the desired model of the Zaria wall motifs for modern ceramic wall tiles, the process of the transformation or the birth of a new face of Zaria wall motifs begins with the cast of molds that are replica of the designed model which is used for onward reproduction of the wall designed motif in a uniform, accurate, neat and industrial approach. Each Model is placed on a flat surface with the designed area facing upward, wad of clay, bricks and strong planks or board were all used as Cottles or retention wall built round the model to keep the liquid plaster of Paris in place until it sets and solidify upon the model. Liquid soup, groundnut oil, engine oil any form of grease available will then be applied onto the surface of the model to serve as separator for easy detachment of the mould from the model when the plaster became set.

The measurement of plaster of Paris by Kenny (1949) Singer and Singer(1963) Pottery craft catalogue(1989) and Sullayman (1991) suggested and agreed that the ratio of plaster to water is preferably 130;100. Based on this, the research used the ratio 130:100 for the mixture of plaster of Paris and water for mould making. The measured plaster was poured into a container, containing the required amount of water based on the ratio stated earlier and was mixed harmoniously and evenly. The viscous plaster was poured into the retention wall allowing it to set onto the model. On setting, the Cottles are removed and the mould is lifted to face upward, left to set for about 15 to 20 minutes after which the mold is carefully and gently hit on a hard table or surface to release and free the model from the cast mould. It then form a replica of the model in its negative form. The mould is taken outside and left under the sun for about four to five hours for proper drying. This same process was used in making all the other four moulds. Plates xxv to xxvii are some of the cast moulds showing replica of the models produced in Ceramic Studio, Department of Industrial Design, ABU, Zaria.

Results and Discussion

The adaptation of some selected motifs of Zaria wall decorative symbols for ceramic tile design and production was carried out after exploring the motifs by going to the field to take snapshots of some of the motifs and subsequently making sketches of the motifs in black and white for easy and better interpretation of the motif into producing ceramic tiles.

Ball clay was soaked, blunged with kaolin, sieved and poured into molds for considerable thickness of workable mass. It was slightly plastic for effective spread and easy cutting of slab into the various sizes. Kneading went a long way to help eliminate air bubbles in the clay mass and also gave homogenously mixed clay body. Moulds were made for the entire model with the plaster to water ratio of 130:100.which gave the plaster of Paris a good setting time and a thick strong three dimensional mould. The plaster to water ratio of 130:100 by (Sullayman, 1998) and Sullayman, (1991) was found to be ideal for making moulds meant for wall tiles production.

The process of slab making for models was effectively executed. The slabs were cut into various sizes, designed with selected motifs, engraved in depth and also in relief form of decoration for all the five models which then represent each motif concept in the course of transferring the traced motif onto the sized clay slab. After the decoration, the slabs were covered with polythene bags and the designed slabs were often turned upside down and at certain interval to prevent warpage and cracks.

The molds were then exposed to direct sunlight for about 4 to 5 hours for proper dryness. The dried molds were thereafter used to perfectly produce many tiles within the shortest time as the proper materials for production were all explored. Despite the pressure of manually pressing clay into the mould, it was able to withstand the pressure and produce as many as 50 tiles in 3 hours. Above is a team of designers using the created mould to mass produce the inspired traditional Zaria wall motifs ceramic tiles while below are some of the produced tiles arranged in a repeat pattern and framed to give a neat finishing.

The wet and dry lengths were all measured respectively before subjecting them to firing. Firing signifies the end of any pottery or ceramic production process Achuma (2010). The production process could either be terminated at the biscuit fired stage (pottery) or at the glazed fired stage (ceramics). The firing process is the stage when molecular water is drawn out of a clay product by the process of heating or firing it to a certain temperature to make the ware hardened. The same slabs used for the dry shrinkage test were measured and then subjected to biscuit firing. At about 900 to 950°C and calculated according to Rhodes (1957), (Stephen, 2006) and (Achuma, 2010).

The slab and press methods were effectively used for the production. The slab method is the very first method used for starting the production process where all motifs were traced on a sized and cut out slab. The transfer of the five selected motif designs of the Zaria city walls onto the plain slab using a tracing paper and subsequently perfecting by making in-depth drawings of the designed motif and engraving faster and easier. Aside cut out slab for the motif designs, there was also cut out slabs which were used for production by pressing the clay slab into molds, but in this case the researcher had to fill in more slabs into the mold to have a good and well featured replica of the initial design. While the pressing method of clay lumps into the mold gave a better and more reliable outcome as a strong wall tile was achieved with one lump of clay been pressed into the mold. The differences in this two methods was that, in the pressing method, one lump of clay was able to produce a tile after being pressed into the mold and excess clay trimmed off. Whereas in the slab method, more than one slab is pressed into a mold to achieve a tile with very little clay being trimmed off. Both were quite interesting to explore but the lump press yielded better result.

The tiles were fired both at biscuit and glazed finishing levels and all tiles came out well. The vitrified and glossy nature helps keep off dust and dirt from the surface of the tiles, as this is a characteristic of tile. The wall tiles produced in this study can serve the same purpose and even better off when used both locally and internationally.

Conclusion

The new dimension of transforming the traditional Zaria wall design from its local form of production into contemporary method will help in creating job opportunity for both men and women. The purdah women (matan kule) can be doing production in their various homes while the men take the product out for firing, sales and usage. Instead of one or two persons standing all day long spreading and creating patterns, several persons can be engaged in placing the tile on different angles of the walls assigned to individual persons. Small and large scale ceramic industries can dual into producing tiles with the Zaria pattern this in turn will generate income for Nigeria economy while at the same time serves as a preservative medium for Northern traditional motifs. Incorporating the motif into contemporary design can enhance aesthetically the decorative production of ceramic tiles in the industries. Even thus some of the motifs have been redesign to suit the present day style, it is still stressful as the designers will still have to stand all day long to execute the designs. This method will reduce cost, energy, time, over used labour as there will be division of labour. More participants will be involved and there would be more fun compare to having only two persons under taking the designs under favorable or unfavorable weather conditions.

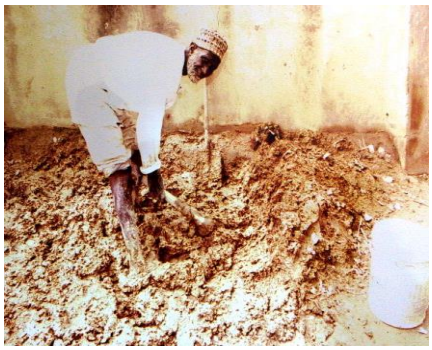

Plate i: Kneading and mixing of grog clay and dry grass



Plate ii: Spreading the finished composed clay mass unto the wall with bare hands





Plates iii & iv: Newly created design in engraved and relief forms (Dagi and Zane)



Plate v: Dagi motif



Plate vi: Zane motif



Plate vii: Floral motif



Plate viii: Abstracted Dagi motif

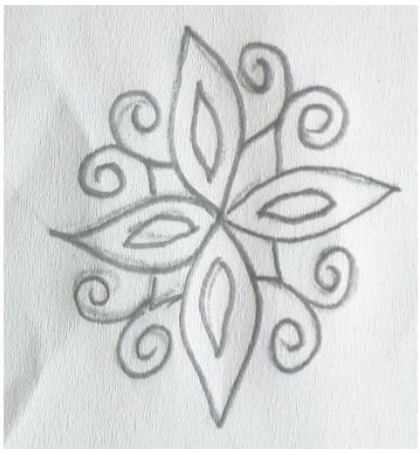

Figure 1: Butterfly motif



Figure 2: Abstracted Dagi motif

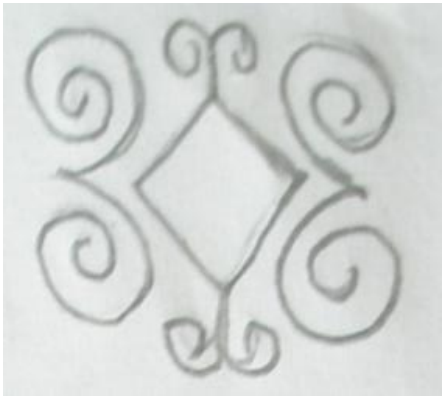

Figure 3: Zane (Drawn) motif



Figure 4: Floral motif



Plate ix: Spreading of clay



Plate x: Clay slab ready for tracing of motif



Plate xi: Cutting out sizes of desired slabs



Plate xii: Traced slab with Zane motif



Plate xiii: Detailing the design with ceramic tools



Plate xiv: Engraved Zane motif

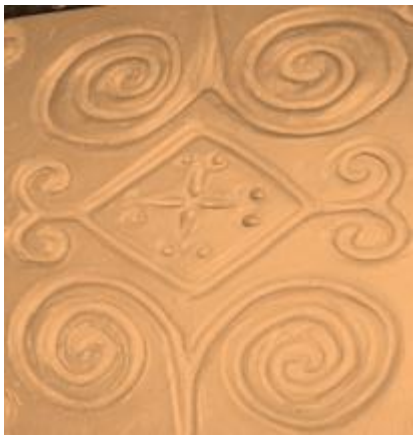

Plate xv: Zane motif ready for cast

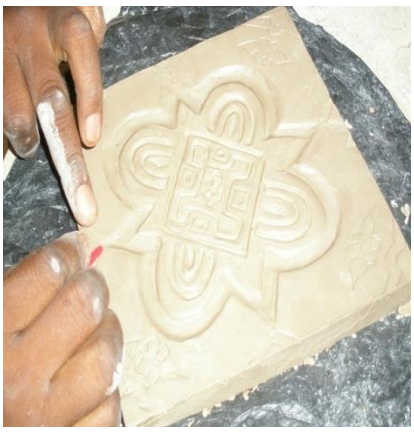

Plate xvi: Final touches on Dagi motif



Plate xvii: Abstracted Dagi model ready to be cast



Plate xviii: Floral butterfly motif in relief tile design



Plate xix: Dagi motif



Plate xx(a): Floral design as ceiling decoration in Zaria

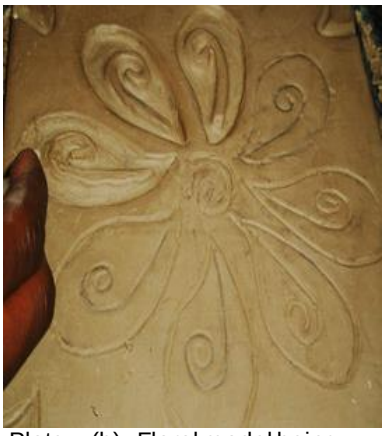

Plate xx(b): Floral model being worked on by researcher



Plate xxi(a): Preparing model for casting



Plate xxi(b): Retention wall built around the model



Plate xxii: Cast Zane (mold)



Plate xxiii: Cast Dagi (mold)



Plate xxiv: Abstracted Dagi motif



Plate xxv(a): Biscuit fired Zaria wall motif designed tiles

Plate xxv(b): Biscuit fired Zaria wall motif designed tiles

Plate xxvi(a): Some of Zaria inspired wall motif tiles in glazed finishing

Plate xxvi(b): Some of Zaria inspired wall motif tiles in glazed finishing