

An Adaptation of Tropical Plant Leaves as Motif for Sculptural Furniture Production in Nigeria

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Abstract

The study investigated the prospect of plucking plant leaves from the vast tropical rain forests of south-eastern Nigeria, then drawing their natural features artistically into stylized motifs. The motifs which are research drawings or designs were subsequently produced via sculptural process to become sculptural furniture pieces with the anticipation of countering the foreign furniture importation calculus. The setback of not emphasizing local content, innovation and technology in the production of furniture in Nigeria which affects the Nigerian economy adversely is a challenge which this research project examined. The research interrogated the possibility of these research designs being functional, and if the research designs could incorporate cultural identity/input and add value to the national drive for inclusion of local content for cultural development and economic gains. The research methodology used for this project involved both qualitative and quantitative research methods. The substantive findings of this research study indicated that the research designs/productions for sculptural furniture are acceptable as artistic production. Local content is expressed in these research productions and cultural identities are inputted in the research productions. The research designs are functional and fit as utilitarian works to challenge the imported artistic productions of the Orientals and the Westerners. In conclusion, the study proved that tropical plant leaves could be adapted as motif for sculptural furniture and consequently significant and recommended that the research gains could impact sculptors, add value to Nigeria's gross domestic product (GDP), as the national wealth base could be broadened and economic expansion stimulated by the encouragement and support of this genre of creative arts

Introduction

The research is focused on the observation of plant leaves from Nigeria and the possibility of using their pattern as motifs for the production of sculptural furniture. This created the platform upon which the research drawings, models and subsequently completed project designs/productions were achieved for the research on 'An Adaptation for Tropical Plant Leaves as Motif for Sculptural Furniture Production in Nigerian'. As Voltaire (2012) emphasizes, "Originality is nothing but judicious imitation". Plant leaves are products of nature all created by God, however the artist who is awake to the realities of his environment sphere can tap into this sphere to re-create his environment, or use products of his environment to create. "All true art is literally a mirror of the artist's mind, a reflection of the artist's

imagination at work,” Abrahams (n.d.) opines. “All our knowledge has its origins in our perceptions” (Da Vinci, n.d.)

Cahill, (2016) asserts that furniture design has been a part of the human experience since the beginning of history. Evidence of furniture survives from as far back as the Neolithic Period in the form of paintings, wall murals discovered at Pompeii, in sculpture examples have also been excavated in Egyptian Pyramids and found in tombs in Ghiordes (modern day Turkey). A excavated site dating from 3100-2500 BC in Skara Brae, Orkney uncovered a range of stone furniture. Due to a shortage of wood in Orkney, the people of Skara Brae were forced to build with stone, a readily available material that could be turned into items for use within the household. Each house was equipped with an extensive assortment of stone furniture, ranging from cupboards, dressers and beds to shelves and stone seats. The stone dresser was regarded as the most important as it symbolically faced the entrance in each house and is therefore the first item that was seen when entering a house.

From Neolithic, Ancient Egyptian, Ancient Greek, Medieval and Renaissance times up till the modern times man has made furniture of sorts from sundry materials. Cahill stresses further that the forms of modern furniture sought newness, originality, technical innovation, and ultimately conveyed the present and the future, rather than what had gone before it as revival styles had done. This interest in new and innovative materials and methods produced a certain blending of the disciplines of technology and art. The use of new materials, such as steel in its many forms; moulded plywood and plastics, were formative in the creation of these new designs. They were considered pioneering, even shocking at the time especially in contrast to what came before.

Furniture include, chairs, tables, beds, cupboards among others, which are put into a house to make it suitable and comfortable for living or working in (Furniture, 2017). A look at the central subject of the project reveals that sculptural furniture is not entirely novel on the global scene, though it was produced during the pre-colonial era in Nigeria, it had little or no relevance or recognition in present Nigerian art, and the practice appears to have gone into extinction. Conversely, a greater percentage of the populace in Nigeria do not know about sculptural furniture and by this implication lack words to describe sculptural furniture. Sculptural furniture is closely related to functional sculpture. Mang (n.d.) emphasized that a functional sculpture is an artistic object designed with creative intention to meet a utilitarian goal. It may or may not invoke an intuitive or emotional process but will provide functional purpose in daily life. The assessment of myriads of plant leaves in this research as a reference source grants the much needed compendium upon which diverse leaves were studied and sketches made from the basic structural element of each leaf, some aspects were delineated and subsequently models were created using straw-board paper before actual finished works were done in more durable materials such as metal, fiberglass, latex, wood, granite stone, aluminium and glass. Thus the plant leaf which is very useful in myriads of ways in the ecosystem is now artistically modified to have a firm place in homes and outdoor spaces.

The researcher’s attempt to pursue the project is hinged on his ultimate convictions and reflections in Dali’s (2012) statement; “those who do not want to

imitate anything produce nothing”. The researcher had generous access to harness the super-abundant plant leaves in the expansive ecosystem of eastern parts of Nigeria, adopting and artistically re-creating their shapes into sculptural forms. Furniture pieces such as, wine racks, chairs, sofas, chaise lounge, suspended table, armchairs, mirror frame and beds were all executed by carefully considering various edible and non-edible leaves and artistically applying them as motifs for sculptural furniture designs . Project works executed in this research are titled in Igbo language, to highlight the researcher’s biased proclivity to project the mother tongue and vocabulary of his people.

The idea is not only about emphasizing local content, but insufficient innovation and technology appears to be a major setback in Nigeria’s quest for self reliance and advancement of our indigenous technology. Most of the furniture used in Nigeria are imported from Western countries, China and Middle East. This negatively affects the economy of Nigeria and reduces the country's drive towards self reliance. Against this background the researcher has decided to take the bull by the horns by emphasizing local content and advancing Nigerian indigenous technology and innovations. The project attempts at indigenizing the idea of furniture by using tropical leaves found mostly in south eastern part of the country as motifs for creating furniture with sculptural attributes.

The study will hereby focus on deriving art forms from leaves from plant life and turning the leaves into art designs by drawing their basic shapes and applying stylization which is an aspect of the conventional techniques in visual arts to depict motifs for sculptural furniture production. The research productions derived is hoped to foster the much anticipated leverage in altering the foreign importation calculus that adversely affects indigenous creative furniture productions.

Objectives of the Study

The objective of the study thus shall include, to;

1. Produce research sketches and drawings for the production of sculptural furniture using plant leaf as motifs, using sculptural techniques.
2. Create research designs/productions for sculptural furniture pieces which have aesthetic and functional values.
3. Emphasize incorporation of local content and innovation into the artistic productions of sculptural furniture in Nigeria.
4. Incorporate cultural identity/input in sculptural furniture productions.
5. Creation research designs that would challenge creative furniture productions of the Orient and Westerners.
6. Produce a written report on the outcome of the project in a scholarly manner.
7. Exhibit the research works produced in the course of the research for examination, appreciation and evaluation by examiners and the university community.

Literature Review

In the research of ‘An Adaption of Tropical Plant Leaves as Motif for Sculptural Furniture Production in Nigeria’, there are variable artistic factors that

interplay to create summations of the possibility of producing attainable results in this research. The literature covers a variety of themes /topics; however this review will focus on three major themes which are salient throughout the literature review. These themes are: conceptual framework – concept of design and concept of sculptural furniture; theoretical framework- the formalist theory; empirical review – studies on form in sculpture, studies on functional sculptures/furniture, sculptural furniture in Nigeria, exploration of sculptural materials for furniture, influence of environment on art and summary of review. Although the literature presents these themes in a variety of contents, it shall however focus on ‘An Adaption of Tropical Plant Leaves as Motif for Sculptural Furniture Productions in Nigeria’.

Sculptural furniture is functional art. Allenchey (2013) observes that occupying that tenuous space between fine art and everyday functional art refers to aesthetic objects that serve utilitarian purposes. The genre is remarkably inclusive: it encompasses everything from furniture and lighting to dishes and even books.

Kendzulak (2018) writes, in the strictest sense, Fine Art is considered a visual object with no functional purpose except to be admired and contemplated as an aesthetic object. Decorative Art, however, is also visual and aesthetically pleasing but serves a useful function such as a piece of furniture, a tableware and textile and so on. Functional art has steadily gained currency and relevance in the art world as it is evidenced in Allenchey’s observation. The Museum of Modern Art was one of the first institutions to recognize the importance of functional art, opening its Architecture and Design department in 1932. The design collection contains a plethora of creatively conceived practical objects from major movements of the past eight decades, ranging from appliances and tableware to sports cars and a helicopter.

Concept of Sculptural Furniture

Art shares responsibility for the built environment: how it looks and how it works. Sometimes how it looks improve how it works, and sometimes the opposite, occurs. (Physical Function of Art, 2016) states consider the chair, until we sit on it, a chair is work of abstract sculpture; it is also a complex engineering problem. As sculpture, chairs possess symbolic value, they can look like thrones, beds, couches, swings, saddles, or wire cages reminding us of kings, queens, bishops, cowboys, or canaries. Chairs are masculine or feminine, juvenile or adult, shy or assertive. Their aesthetic and functional values are impossible to separate.

Functional art is something which is both beautiful and useful. Functional art lets us bring incredible works of creativity and beauty into our everyday lives. Functional art such as sculptural furniture grants us the opportunity of experiencing works of art on multiple levels, allowing the recipient to touch and interact with them, in accordance with the definition of a functional object. Grace (2018) opines that functional art is generally art –art created for use, not necessarily everyday use, but designed to serve a purpose and with an aesthetic in mind. It’s art that serves a function, but is designed artistically for purpose of beauty. They meet a need for us, and are works of art as well.

Zain (2018) opines that functional art creates unique and individual pieces of art that fulfill one of life’s purposes, at the same time as being an aesthetic feature to

enjoy. Most pieces draw on the organic forms of nature, blending and complementing the environment, rather than overpowering it.

In some culture, sculptural furniture can convey the idea of spirituality as concept of practical function. Swanzy-Impraim (2018), states thusly functional art refers to art forms that are produced to perform specific or several purposes. They are also known as art for life sake. For instance a stool in the Ghanaian culture symbolizes the soul of the society as well as a symbol of authority for rulers. It also serves domestic purposes. These arts are integrated in everyday life and have some form of symbolic meanings attached to them. Shelton (n.d.) observes that art and design such as sculptural furniture is not just reserved for museums and galleries, but there are overarching understandings such as; functional art is art that can be used every day. Functional art shares with viewers what is most important to a culture. Functional artists use many naturally occurring materials such as wool, clay and wood. Functional artists are concerned with how something works as well as the aesthetic design.

Unarguably sculptural furniture is functional art or utilitarian art. Brice (2017) opines that utilitarian art would be art that prioritizes function over other values such as formal aesthetics. Brice further observes that crafts of various kinds could clearly be called utilitarian arts. The Bauhaus school might be a good historical example of this way of thinking which supported the melt down of the wall that separated art and craft. Sculptural furniture has its root remotely traceable to Bauhaus that is unarguably the single most influential modernist art school of the 20th century. The furniture and utensil designs of Bauhaus artist Marcel Breuer and his contemporaries attest to the various aspects of artist and design pedagogy which were fused, and the leveling out of the hierarchy of arts which stood during the Renaissance. However, African Furniture mostly stools and chairs which are most common in West Africa gave credence to this research project. African artists most often carve stools from one block of wood.

Cross-cultural influence affects sculptural furniture in multiple ways, Jirousek (1995) states the introduction of European materials and forms influenced African forms. However, the meanings and uses have been adapted to African value systems. For example, European style chairs, merely furniture to the Europeans, were copied for use in place of the traditional royal stool but embellished with carved emblems in much the same way the traditional stools had been.

Onyendi (2018) states that “the traditional Nigerian sculptor would play sculptor and designer at the same time. It offered the sculptor of the traditional Nigerian society opportunity to design some of their functional forms”. Gier, Overbye and Olesen (2013) states that “the changing ways of living, culture, architecture and art influence on furniture and help in the development of types”. By concern of influence, furniture when viewed distinctively can be influenced by art through sculpture.

Theoretical Framework

The Formalist Theory

Formalist theory in art substantiates the artistic basis for the research work; Tate, (n.d.) explains that formalism is the study of art based solely on an analysis of its form – the way it is made and what it looks like. Formalism describes the critical position that the most important aspect of work of art is its form – the way it is made and its purely visual aspects rather than its narrative content or its relationship to the visible world. In sculpture therefore, a formalist critic will focus exclusively on the quality of form, shape, texture and composition amongst other qualities.

Coggins, (1992) opines that a formal analysis is an academic method in art history and criticism for analyzing works of art: "In order to perceive style, and understand it, art historians use 'formal analysis'. This means they describe things very carefully. These descriptions, which may include subjective vocabulary, are always accompanied by illustrations, so that there can be no doubt about what exists objectively".

Hyldreth (2018) writes, formalism emphasizes the form or structural qualities of a work over its content. Formalist sculpture's primary emphasis is in the relationships of shape and the lines those shape make. Wolf (2012) notes that philosopher Plato developed a "Theory of Forms" based on the idea or *eidos*, roughly translated to mean "stature" or "appearance". Plato applied the term broadly in his various dialogs to suggest a rudimentary universal language. Every earthly object, he posited, whether tangible (like a chair) or abstract (like human virtue), share one aspect: they all had a form.

Empirical Review

Studies on Functional Sculptures and Furniture

Functional Sculpture is utilitarian art. Allenchey (2013) observes that occupying that tenuous space between fine art and everyday functional art refers to aesthetic objects that serve utilitarian purposes. The genre is remarkably inclusive: it encompasses everything from furniture and lighting to dishes and even books. While the terms "fine" or "high" art typically apply to works that carry an intellectual and emotional sensibility alongside a dose of old fashioned beauty, functional art infuses these aesthetic ideals into things that you might never have expected to view as art.

Alenchey further states that functional art works are highly crafted artistic creations that can perform utilitarian jobs. Today many functional art objects are as avidly acquired by collectors as their fine – art brethren, and are appreciated just as much for their beauty as their use value.

Mang (n.d) opines that a functional sculpture is an artistic object designed with creative intention to meet a utilitarian goal. It may or may not involve an initiative or emotional process but will provide functional purpose in daily life. Li (2019) emphasizes that the line between art and design can be difficult to determine sometimes, when there are art pieces offering some type of function, or functional design which looks like it should be revered as a piece of art. Some works produced by artists feature interactive works that can rotate, spin, and take new shapes, colours

and forms, merging both advanced technology and traditional craft and breaking the boundary between sculpture and function.

Giovannini (2007) emphasizes that furniture is usually considered a part of decorative arts, but the blurring of the line between the disciplines of art and design opens furniture to the art category. Giovannini who calls sculptural furniture “art furniture” further states that “furniture is being marketed as art, not antiques, so it’s on topic with the way the contemporary art world works”.

(Furniture designer, 2017) hints that furniture design is a specialized field where function and fashion collide. Many interior designers believe that furniture is one of the most important aspects of an interior space. Pieces of furniture not only add function and practicality to a space, but they also add style and personality.

Imagine a world in which you walk and stand every moment! This is a world without furniture. Furniture allows us to recline, sit, work and collect. Poursani (2003) opines that furniture matters to designers like books to librarians. It’s important because interior design is concerned with the design of spaces and what makes the space is furniture. Perhaps furniture matters the most when the design is implemented as furniture brings function to space. A good example for how furniture defines and dictates the space would be airports. How would you know where to sit and wait in an airport? You look around for seating elements, right? Because furniture clearly states the intended function of the waiting / lounge area.

Poursani further emphasizes that furniture and functionality work together in the space planning phase of interior design too. By definition, space planning is the allocation and division of interior space for the client needs and activities. How to place the furniture is an essential part of space planning where maximum usage is considered in the placement and arrangement of furniture. Also, space planning involves circulation. Circulation means leaving enough space for the human flow. For the best utilization of space, furniture is placed to allow free movement. This makes the space around furniture as important as its arrangement. Thus, furniture works as a functional and circulatory element in interior design.

Bower (2012) writes that the rise of such colossal icons of 20th century modernist style as Frank Lloyd Wright, Charles and Ray Eames, Isamu Noguchi, and Frank Gehry, the boundry between design and art became blurred, especially for everyday objects, like furniture. The form and function of furniture design garnered recognition as an important aesthetic factor of built space. Bower further opines that consequently, this modernist obsession with elevating industrial design to an art form has also led to an explosion of movements and styles that find artistic meaning and expression through design’s functionality.

(Figuring space, 2007) states, both sculpture and furniture represent or reflect the human figure, and create a constant presence – standing, sitting or reclining – in spaces which might otherwise be empty.

Rybczynski (1991) writes about furniture as Art and states, in the case of furniture, the evolution raises some fascinating questions about the relationship between craft and art, between the usual function of furniture and the individual creativity of the furniture maker, and between art and utility. The studio furniture movement appears divided on these issues. On the side are furniture makers who want

to be considered artists. The work of these men and women is moving clearly in the direction of sculpture.

Ankita (2017) stresses the importance of furniture is felt by everyone. One of the things that complete ones house is furniture. The evolution of furniture from their basic utility to them being a luxury symbol and their beautiful designs are taking a leap in today's world. Furniture brings about changes in the space and its functionality. The range, variety of designs and types of furniture are making every dead and dull area a lively experience.

Ankita further mentioned that the grace and beauty of the house are complete with the placement of furniture as a part of the décor or either as a utility. The presence of furniture in the house makes your house a substantial and functional unit. The presence of furniture gives you an ease of mind towards the utility and styling, hence a peaceful and at ease experience as a whole. The endless categories of furniture make us want more to our endless utility and comfort. Furniture turns an empty built structure into a complete house with its presence. The furniture ensures a flow of space with its placement in terms of the arrangements and utility areas.

On the inseparableness of furniture and functionality, ("Furniture Functionality", 2019) states, indubitably, furniture and functionality walk hand in hand, and when choosing pieces for your home, the first thing you need to ask yourself is how you intend on using the space.

Sculptural Furniture in Nigeria

Hunt (2012) states that from the moment people learned to farm and live in permanent settlements furniture was manufactured. Some of our earliest known furniture comes from the Stone Age and is dated as far back as 2000BC. Stone provided the Neolithic builders with an available material that they could work with to turn into items for use around their homes. Peters (2018) also stress that the concept of furniture first developed as early as 3100 – 2500BC. The first items created for household use were made of stone, as wood was not readily available during the Neolithic time period. Dressers, cupboards and beds were amongst the first forms of furniture. Goodson (2012) emphasizes that African furniture tradition is not well documented. However, the total concept of furniture had a different meaning to the peoples of Africa since theirs was a nomadic life. African stools and chairs are most common in West Africa. Andreae (1996) citing Roy Sieber, an American authority on African art, points out that wood has long been the "medium of choice for most sculptural art of Africa".

Though most African furniture manifested form and was functional, Andreae further states that furniture – such as anthropomorphic stools or headrests – could confer a status on their owners by suggesting the subservience or inferiority of others. In contemporary times the relevance of African Sculptural furniture cannot be overemphasized. Evans (2006) remarks that anything goes as it's tasteful! Whatever one's call, there is huge delight and joy to be taken from using both old and new, African furniture and artifacts in one's spaces to create both a point of interest and elegance of form. African art (Paintings, sculpture, photography and installations, textiles, craft and furniture all contribute effectively to the styling of an African

inspired environment. Exteriors can also echo African nature with indigenous planting and landscape including using sculpture for dramatic focus points.

Evans further opines there are two forms of decorating using traditional or antique African décor, furniture and accessories: colonial, using antique furniture from trading or colonizing countries, tribal, using antique furniture from the indigenous peoples of Africa. These days, designs and homemakers very often mix them up in an eclectic style which combines elements of both traditional and modern furnishings and tends itself to stunning dynamic spaces.

(What is African Art?, n.d.) African carving develops from wood working skills common to most men in rural communities, who make many of the things they need in daily life. Most carvings are cut from a single piece of wood using an adze, then finished with a knife or chisel and pieces are seldom joined, in contrast to Western carpentry techniques.

From the above observation on African carving, it is obvious that the pre-colonial African carver must have produced utilitarian furniture pieces which could be recognized as sculptural furniture.

What is African Art further states that when making things for their own communities skilled sculptors usually work to commissions, whether they are fashioning decorated utensils and tools for everyday use, ceremonial objects or architectural features to enhance the status of chiefs or kings, or images and masks to embody invisible gods or spirits or to contain magical forces. The things they make, and the styles in which they work are often as distinctive and varied as the language and customs which distinguish each ethnic group from its neighbours.

One can thus infer from above statement that sculptural furniture produced at this critical period were influenced by the distinctions of variable factors such as language customs of each ethnic group as they stood clearly. In Nigeria these variable factors could be seen in sculptural works done by the Igbo, Yoruba and other ethnic tribes in the pre-colonial times. Adamu and Bello (2015) avers that wood carving is a craft that represents one of the most striking art forms in Nigeria. The Edo speaking people, Igbo, the Nupe and the Yoruba of Ogun, Oyo, Ondo and Kwara were particularly noted for their craftsmanship in carving. Generally, every cultural group has its own peculiar style of carving but the production techniques follow the same pattern.

The sculptural furniture of pre-colonial Nigeria though not well documented and scarce to come by does not cancel out the fact that it existed and was carved by the sculptors of yore. As Shyllon (2013) states, art does not exist in a vacuum. Since it is a product of people and society, it reflects the yearnings and aspirations of its age and clime.

Onwhether, traditional African art had functional value, Siegman (2013) confirms that unlike the art of Western societies, traditional African art was functional and necessary part of everyday life and it would be impossible to understand African culture without an understanding of their art. All of the arts, whether musical, oral or sculptural, were deeply woven into the very fabric of social life and played a central role in binding together all members of the community through corporate activity. Utilitarian objects such as weaving pulleys, bowls, stools and textiles were also made

with great care to beautify daily life as well as to enhance the status of chiefs and prominent persons. Siegman further emphasizes, in each case the particular culture created its own set of symbols and artistic styles which were understood in the community. Though the symbols varied widely between one community and the next, there was generally within a given community a considerable degree of consistency and thus developed a large number of reasonably discreet styles.

Shyllon further states, though the artists did not follow stylistic guidelines blindly and each added his own creativity and individuality to the objects he made, the artists generally worked within defined parameters of acceptability within the culture. However, the material most frequently used by the African sculptor was wood. Climate and insects, have taken their toll. As a result few objects of any real antiquity have been preserved.

In contemporary Nigeria art, there are artists sculptors who have made inputs towards enhancing sculptural furniture development. Uzoatu (2012) describes Tony Akudinobi; his vision and structured path could be seen in fusing nature with fantasy to reach beyond boundaries of design and aesthetic presence. The designing of furniture, for instance, thus evinces character. By characterizing, the design through structured aesthetic presence shines light onto self to define space or spaces in dialogue. Every design finds itself in dialogue with the owner and maker, but asserting in presence a light that dims, flickers or shines on its path to eventual physical destruction, but lives forever in the dialogues evolved. Uzoatu further comments, "In man's rhythm and lyrics, he works up on interface that releases energy to build culture and lifestyle that captures his design essence, Akudinobi asserts, leaning on his masterpiece known as *Okpoka*. "We bend and mould that energy to design as a channel of manifestation of the creative essence. Some call it inspiration but it goes with perspiration to manifest duly as a great design."

Onyendi (2018) states, Tony Akudinobi explores, employing carving and constructive processes; involving linearity and massiveness complementarily. His motifs and themes are redolent of nature and African tradition. Uzoatu (2013) referencing Frank Ugiomoh's observation of Tony Chidi Akudinobi's, works wrote thusly: "The works of art presented here are coded in furniture of utilitarian types that are simply alluring. They are in tandem with the African spirit where works of art are products of imaginative creative powers that are at once utilitarian as they are decorative and loud. Desiring and demanding that we appropriate them because we value them as products of our ingenuity. The value of these designs is the abandonment of the synthetic world induced by modern technology.

Uzoato further avers, where Akudinobi's designs appear rustic and bucolic they all the same define a strength that is adequate to their function. Their rustic nature which relates them to the past is mediated by available technology but leaves their origins intact. This is where the renaissance is located.

Studio Production Processes

The Creative Production Processes include the following tools and equipment used for the studio practices as well as materials used for the actualization of research drawings developed. Additionally, the creative production processes include the

following stages and techniques of studio practice: Stage 1, conceptualization, sketches/drawings and modeling of the research designs; stage 2, sculpting with clay; stage 3, casting and stage 4, finishing.

Additionally, the materials below were used for the production of Uto-Uziza wine rack at various stages.

Stage One

Conceptualization, Sketches/Drawings and Modeling of The Research Designs.

Design Consideration Models

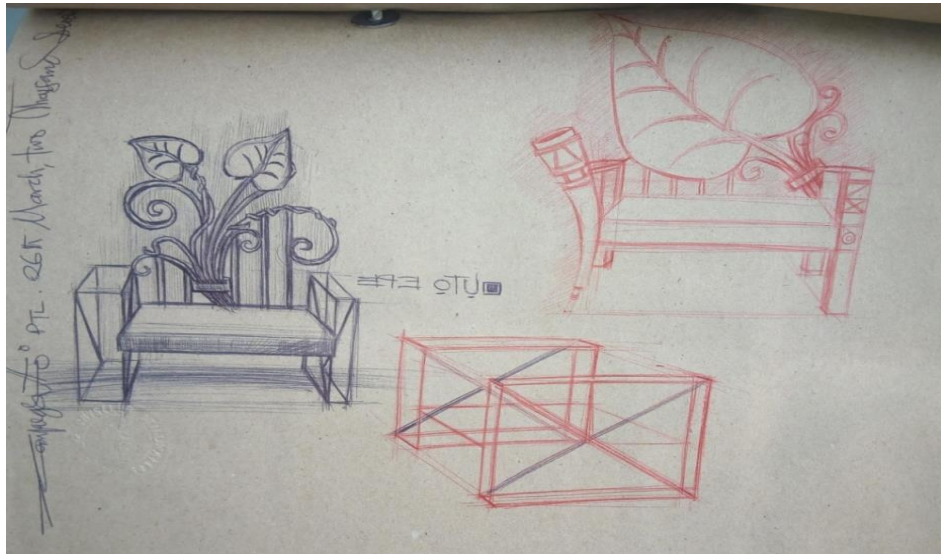


Fig. 1 Uto- Epe Armchair. Artist: The Researcher, 2017



Fig.2: Sundry Project Design Models 1 Artist : The Researcher, 2017

Sculptural Processes for the Production of Uto-uziza Wine -rack in Fiberglass.**Drawing the Outlines of the Work.**

The researcher proceeded to sculpt the drawn concept with clay. Firstly, the platform on which the sculpture will be made was prepared by the researcher and a photocopy of the drawing made from the researcher's drawing book from which yet another drawing was made on metal surface upon which the sculpture was eventually done. Using white chalk to draw the outlines of the concept on the metal surface, the researcher was careful to consider the exact curvy- linear flow of the drawing of uto-uziza wine rack.

Sculptural Processes for the Production of Uto-Ede Armchair in Metal and Wood.**Stage One: Hand Forging the Square Rods and Cutting of Patterns on Metal Plate**

Using 1.27cm square rods, all necessary parts were hand forged to their exact linear shapes. The parts forged are as follow; top arm rail, front area post (those that bear the similitude of the cow horns), curved side rail, apron or front side rail, seatback rail (to encase the seatback), and the curved support beam.

The metal which eventually was used for the seatback was carefully selected to guarantee optimal strength since it would bear voids/patterns which were realized through using oxyacetylene cutting/welding process. 0.4cm thickness metal plate was used to retain the shape of the leaf of Uto-Ede arm chair after the holes were cut and to sustain the impact of whoever sits on Uto-Ede and rests his back on the seatback.

Stage Two: Welding of Uto-Ede Metal Components to Form the Armchair.

Arc-welding technique was employed in the sculptural process of the production of Uto-Ede armchair. The two front area posts (bearing the similitude of cow horns) on the right and on the left sides of the armchair were the first to be welded. The 1.2cm square rods, 3.81cm flat bars and 0.635cm metal rods were welded sculpturally to achieve the desired creative effect as contained in the research drawings. The curved side rail which is a continuous arch was welded together with the apron or front rail and measures 81.28cm (width) by 62.865cm (depth). The curved rail and the apron eventually encased the seat which is a 80.01cm (width) by 57.785cm (depth) by 5.08cm (thickness) wood placed on two (2) parallel 12mm square rods that earlier was welded to the curved side rail and the apron.

The petiole of the cocoa-yam (*ede*) is the singular back leg post made 3.81cm round mild steel pipe. Note that the sculptural furniture has a tripodal leg formation. This singular back leg was welded on the convex part of the curved side rail. The leave of the cocoa-yam formed from 4mm plate bears the void/ patterns was welded into the seatback rail which had earlier being welded on the singular back leg.

The two horn-like front area posts and the curved side rail joined with the apron having been with the singular back leg made the uncompleted framework to become free-standing. Three metal washers 5.08cm in diameter were welded beneath the tripodal tips to make the armchair user-friendly on tiles, rugs, carpets and floors of sort. With the armchair standing, the researcher proceeded to weld the two top arm

rails that have similar shape as the two front area posts, the only difference is that unlike the front area posts, the two 'horn-like' rails which would eventually morph into the arm of the functional sculpture piece do not have linear *uli* patterns.

For sustaining stability of the sculptural furniture piece, another 1.2cm metal square rod forged to be a curved support beam akin to the shape of the curved side rail was welded to brace the tripod legs. The curved support beam which was welded so well grants the entire piece the desired strength and stability to bear human weight. Besides, two 1.2cm square rods measuring 8.89cm and a third square rod of same thickness measuring 3.81cm were used to strengthen the joint where the support beam meets the singular back leg made of pipe. These three (3) welded short braces plays pivotal role to keep the tripod armchair firm at all times.

Six (6) washers with 1.27cm in diameter were equally welded on the arm rest positions, three on each side. The hole in the washer is wide enough to permit screw nail to be used to secure the wooden arm rests of the Uto-Ede armchair.

After the armchair was adjudged strongly welded, the researcher used angle grinder to file out excess projecting welded beads from the joints. Proper sanding using cloth-paper sanding paper was useful in sanding the entire work before the application of under-coat primer paint. The brown colour the sculptural furniture piece bears was machine sprayed using automotive refinish and cellulose thinner to accelerate drying and make the auto-paint remain well stuck to the metal parts of the Uto-Ede.

Stage Three: Making the Wooden Parts

As earlier stated, the wooden part of the functional art piece resulted from the pattern made from the shape of the seat position curved rail. The shape was traced on paper and template made which eventually was useful in cutting out the exact shape on 5.08cm thickness wood. Because the depth of the seat measures 80.01cm (width) by 57.785cm (depth) the researcher joined two 30.48cm by 5.08cm thickness wood having driven nails into one side of the wooden plank. Having applied glue to the two sides of the wooden plank on the same side they will touch. The two were carefully joined by hammering with a wooden mallet.

After 48 hours the joined wood was ready to be cut into shape. Using electric jig-saw machine, the researcher cut the wood into the exact shape traced from the template. *Uli* linear designs were incised on the front side of the wooden seat and motley colours using acrylic paint to fill incisions. The arm rests were made similarly from templates taken and shape transferred on 1.27cm thickness wood, then cut to shape. Both the wood for the seat and the armrest were sanded and sanding sealer subsequently applied. Further sanding with smooth sanding paper was carried out to achieve the desired tactile finish. Additionally, a paper stencil made bearing linear patterns was used to create the stenciled linear multi-coloured patterns on the front side of the wooden edge.

Finally, wood varnish was machine sprayed over the wooden parts. With both becoming touch-dry, they were installed on their respective positions of the metal framework of Uto-Ede armchair.

The Anatomy of Uto-Ede Armchair/Technical Terminology and Dimension

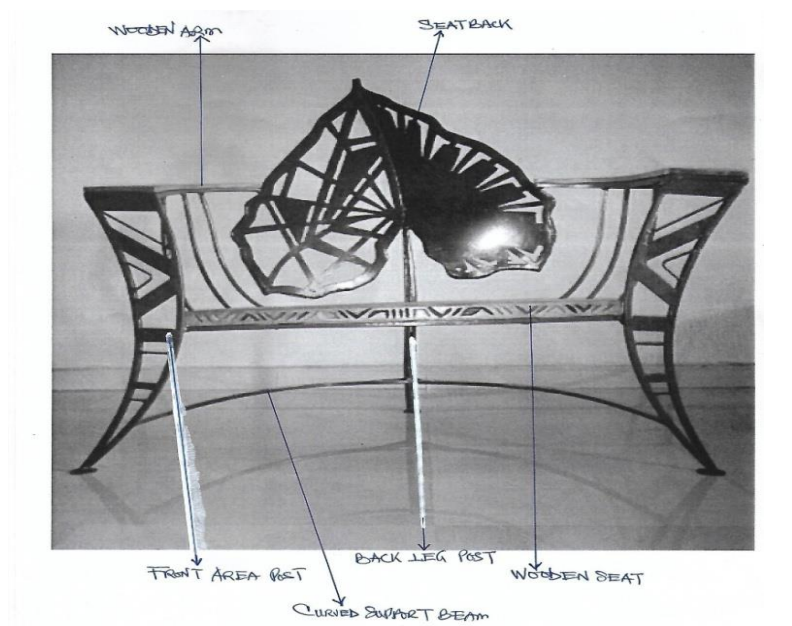


Plate 4: The Anatomy of Uto-Ede Armchair 1. Photo: Anyaegbu, Uchechukwu G. 2018

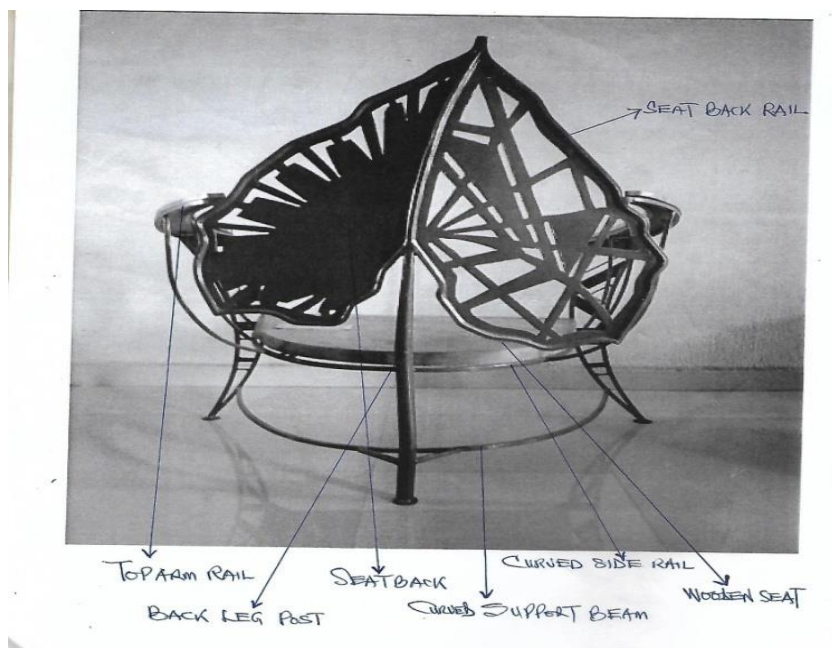


Plate 5: The Anatomy of Uto-Ede Armchair 2. Photo: Anyaegbu, Uchechukwu G. 2018

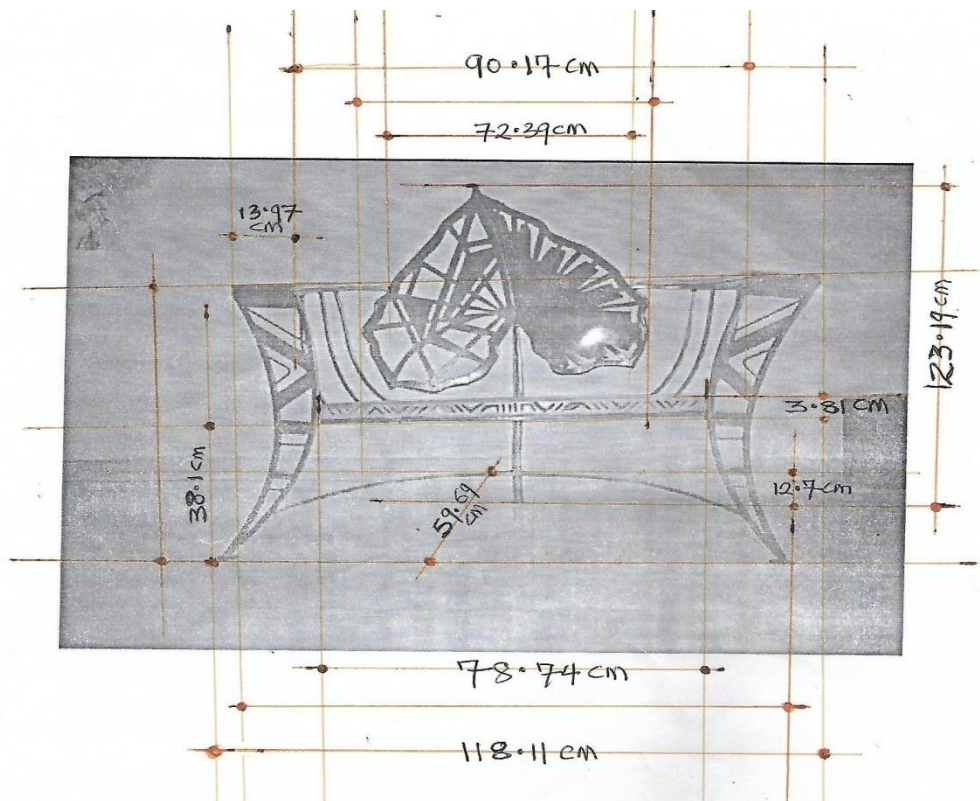


Plate 6: The Dimensions of Uto-Ede Armchair, Photo: Anyaegbu, Uchechukwu G. 2018

Project Analysis

Introduction of Descriptive Evaluation of Design Productions

The cardinal focus in the design, evaluation of design and production of utilitarian sculpture pieces for 'An Adaptation of Tropical Plant Leaves As Motif for Sculptural Furniture Production in Nigeria' was to create affinity of edible and non-edible plant leaves repurposed creatively to be adapted for use in homes, offices and outdoor meaningfully. In dealing with each plant leaf, critical review of its pristine shape was altered creatively to attain functional, aesthetic appeal, balance and tactile appeal. The fusion of aesthetics and function is the triumph of this research.

Thus functional sculptures emerged from delicate pristine plant leaves as transformed into motifs and creatively sculpted into tangible and solid art forms.

Plant leaves have been useful in art generally, applied in ceramics, textile, architecture, sculpture and painting. Interestingly, it forms basic motifs in architectural motifs through the ages, mostly used for iconic capital designs. Acanthus leaves have been used intensely by the Greeks in designing columns and capitals of buildings. The use of Uziza however, is expected to ginger up the creative appetite of artists to explore the use of sundry plant leaves as motif for their creative

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engagements. Uto-Uziza, additionally could just be a strong art piece useful in embellishing any wall in institutions, homes and spaces of choice to announce the flourishing nature of edible plant and non-edible leaves in our eco-system.

Uto-Ede Armchair

(Sweetness of *Colocassia-esculenta* Armchair)



Plate 8: Anyaegbu, Uchechukwu, Uto-Ede Armchair, Metal, Wood, Polyurethane Foam & Fabric, 2017, 118.11 X 123.46 X 59.69 cm
Photo: Anyaegbu, Uchechukwu G. 2017

Uto-Ede is designed an arm chair and measures 107.95 (Width) by 124.46 (High) by 59.69 (Depth) cm. It is composed of metal, wood, polyurethane foam and fabric accents. The metal was wrought and welded using oxy-acetylene and arc welding techniques. Templates of paper were made having traced the shapes of the arms before solid wood was procured, cut to shape based on the paper template, sand papered, treated with sanding sealer before varnishing with auto-base clear varnish.

Uto-Ede arm chair incorporates *akwukwo-edede* (Cocoyam leaf) in an upright position thus announcing the obvious motif as its centrality. The design is tripodal. In sharp contrast most chairs usually have four legs. The two arched legs in front are linear forms that represent horns of *Ehi Igbo* (Igbo cow) and are symbolic.

In Igbo tradition the harvest of cocoyam, Ede is celebrated as Uju-edede (cocoyam festival). Sundry meals are prepared dominating is Ede, which is served alongside kegs of palm wine. Palm wine is further served in conical *mpi-ehi*, (cow

horns). The fusion of Ede leaf and *mpiehi* thus gives the sculptural furniture form its title Uto-Ede (Sweetness of Cocoyam). Uto-Ede armchair is firm, imposing and dominant; it is so designed to have the desired effect wherever it is placed. Sitting on it, one immediately feels relaxed, since the work was fashioned to afford orthopedic alignment of sort. Almost a bucket seat it is cozy, comfy and exudes grandeur. The linearity of the square rods fashioned artistically is delectable, given that iron rods are not easy to be shaped into fine aesthetics. This challenge is always confronting any designer, and could be subtly surmounted by the usage of elements and principles of design. Line, form as elements of design and repetition, contrast, pattern, unity, variety and emphasis, both aspects of principles of design informed the researcher's good judgment in the production of this sculptural furniture piece. The *ede* (cocoyam) leaf with the petiole that forms the backrest is made of metal plates 0.4 cm and 1.905 cm hollow pipe which tappers at the point it joined to the ede leaf.

While the broad ede leaf is made up of reticulated patterns on the left side and abstract patterns in the right side, the two curvy legs in front has linear designs made of rods and flat bars in repetitive style that incorporates *Uli* design (that is basically linear). To achieve stability and balance, an additional arch was wrought, hand forged using half inch square rod and placed five inches above ground level and ten inches, below the sitting position and welded firmly at five points.

Three 1.27cm rods welded also on the petiole bearing the ede leaf exactly on the same height with the semi-circular bracing serves as further reinforcement to the tripod legs of Uto Ede. Bracing the work is critical as the tripodal legs needs proper weight bearing distributio : equally amongst the legs. Thus when one sits he or she may not even feel imbalance in any way. This achievement of balance accentuates the comfort one derives sitting on Uto Ede arm chair.

To further attain reinforcement in a unified way, the leaf was framed from the back with three-eighth inch square rod on the edges. This framing is three-prong in effect; One it strengthened the plate, two, it gave the leaf proper smooth finish and three, it affords the points where the joints linking the arms of the chair was welded solidly without prejudice.

The sitting frame position with a closed arch is also braced with two (2) 1.27 cm rods and four (4) 1.27 cm washers welded to serve as points, through which screw nails can be driven into the wood placed on it. For proper placement on the floor in a user-friendly manner three (3) 4.5 cm washers were welded under the tips of the tripod legs. Wood accents are visible and sharply contrast pleasantly with the dominant metal. On the arms of the chair, two (2) arched 1.27 cm wood akin to the shape of the two front legs are generously placed. They are polished with auto-base clear varnish and bears black ink marks of *Uli* on the narrow upper ends of each arch. These two pieces of polished wood is 13.5 cm in front and taper to a tip at the back. The wood pieces give a congenial effect when one sits on Uto Ede and places both hands on the arm rests. The sitting position of the seat itself assumes the same shape of the square rod that bears it. It is a solid wood that measures 3.81cm in thickness. The wood is Obeche (*Triplochiton-scleroxylon*) commonly distributed in Tropical West African Forests. It's colour and appearance is pale yellow, though its colour darkens slightly with age. Obeche is classified as a hardwood yet very soft and

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lightweight, but has a decent strength –to-weight ratio. It is described as fairly stable in service. For the purpose of application in this project, this solid wood was also treated with sanding sealer and further sanded before spraying auto-base clear varnish over it. This clear varnish makes the wood completely impervious to water.

**Uto-Uziza Suspended Table
(Sweetness of Piper guineense Suspended Table).**



Plate 9: Anyaegbu, Uchechukwu, Uto-Uziza Suspended Table, Plywood and Metal, 2017, 149.86 X 71.12 X 1.905 cm
Photo: Anyaegbu, Uchechukwu G. 2017

UtoUziza suspended table as the name denotes is conceptualized and designed stylistically a suspended table. This art piece is crafted with plywood and metal rods. It measures 149.86 X 71.12 X 1.905 cm. The work is achieved through carving and constructive production procedures. It is a significantly stylized piece of vascular plant leaf piper guineense. It is shaped like a heart, being a cordate leaf. The work has voids and incision linear marks coordinated with multi-colours to create the desired effect. Void is an opening, gap hole or empty space, often used in modern sculpture. Voids are an important features in the sculpture of most modern sculptors, for example the sculptures of Henry Moore. The surface is thoroughly varnished with auto clear coating to make it the impervious to water since it is a utilitarian piece.

The concept of suspending the table top is to create a sharp contrast from the usual consistent way of traditional furniture making which evinces tables with legs placed on floors or flat surfaces. Suspending this work this is thought provoking and elicits diverse responses from users and beholders. It should be noted that the researcher considered the functional adaptation of this sculptural furniture piece and created the voids closely knitted to guarantee stability of items that would be placed

on it. Though some voids are quite large, the essence is to make the art piece look dramatic. Its table top surface can comfortably accommodate four (4) persons served on it. Spoon, plates, saucers, flasks cups, bottled water, wine bottles amongst others could be served on it.

The metal rods that suspend the table top piece is vertically installed and anchored to stabilize the art piece. The colorations of the art piece shows off a multi-coloured epicenter and bordered by pale – green colour that is akin to the natural colour of piper-guineese leaf in its pristine colour.

This functional sculpture is created to be installed though not as a mobile art piece. Mobile art is a kinetic sculpture whose part responds to air currents. Uto-Uziza as a purely functional sculptural furniture piece demands installation. Installation art is an artist genre of three dimensional works that often are site specific and designed to transform the perception of a space. Generally the term is applied to interior spaces, whereas exterior interventions are often called public art, land art or intervention art, however, the boundaries between them overlap. Additionally, installation art can be either temporary or permanent. Installation art came to prominence in the 1970's but its roots can be identified in works of earlier artists such as Marcel Duchamp.

The thickness of the plywood from which the work is carved is 1.905cm and the edges of work have cuts mimicking torn leaf effect. The tip of the leaf is shortened and slanted while the petiole of the leaf is shortened as well to prevent sculptural weakness.

The four (4) vertical metal rods passes through four holes in the work and holds the piece by the usage of bolts (welded on the tips of each metal rod and fastened to the art piece from beneath using washers and nuts. In all there are eight washers, four bolts and four nuts used to achieve the suspended effect of the art piece. Each metal rod has one washer welded with a space of 1.905 cm gap in between before complementary washer is placed beneath the table top and locked with an accompanying nut. The 1.905cm gap is to accommodate the thickness of the plywood from where the piece is carved.

Uto-Uziza Suspended table moreover could be an effective installation art piece in a home or an interior space of an institution adding value sculpturally to accentuate such spaces in a meaningful way.

Summary of Findings

‘An Adaptation of Tropical Plant Leaves as Motif for Sculptural Furniture Productions in Nigeria’, is a research project that explored possibilities of sourcing and using tropical plant leaves as motif to produce utilitarian sculpture. Sculptural techniques/procedures were employed to achieve the research designs and considerations. The inclusion of local content and the integration of cultural identities were combined to achieve creative research designs (sculptural furniture works) which are propped to challenge the creative furniture productions of the orientals and westerners.

Sundry materials such as wood, granite, metal, fiberglass, plywood and fabrics among others were innovatively used for the actualization of the research objectives. The researcher employed tested sculptural techniques (with which he attempted

achieving results) such as; modeling, welding, carving, foundry and construction techniques to execute the research designs. The research methodology of this study incorporated both qualitative and quantitative methods. The qualitative method is purely descriptive and interpretative as supported by formalism theory which is the study of art by analyzing and comparing form and styles. Additionally, the quantitative method achieved its findings using the Likert scale data analysis survey. Likert analysis was pertinent for the procurement of an overall measurement of sentiment and opinion of respondents to the aims and objectives of this study.

Conclusion

The research findings prove that tropical plant leaves could be adapted as motif for sculptural furniture and consequently significant. The study further upholds the integrity of the research designs/productions as useful for creative output in Nigeria, and obtains merit for inclusion in local content value chain. It validates the co-option of cultural identities incorporated into the sculptural productions of the research work, and carves a robust support for the usefulness of the research designs articulated to positively confront the importation percentage of products from the Orient and Westerners alike.

Finally, numerous utilitarian research productions executed using sundry sculptural technique facilitates the exhibition of works that are tangible expressing their materiality which abound in diverse creative design options and styles. This consequently, gives credence that tropical plant leaf could be adapted as veritable motifs for sculptural furniture production in Nigeria.

Recommendations

The revelations of the research findings emphasize the research gains which could impact sculptors in their creative quests. The possibility of adoption of tropical plant leaves as veritable motifs could be employed by professional sculptors and students of sculpture to espouse this creative pursuit.

The prospect of modifying sundry plant leaves which grow abundantly throughout the vast tropical rain-forests of sub-Saharan African continent affords ample resource for artists to avail themselves of its myriads of bio-patterns for creative designs and productions.

The national drive for inclusion of local content in our national development and the need for further sustenance of economic stimulations, could be the much awaited opportunity for sculptors to be engaged meaningfully in creative productions which could improve their individual earnings.

Investors can profit immensely if they forge agreement with artists to produce sculptural furniture for both local and foreign markets. Most importantly, State and Federal governments can encourage sculptors to engage in sustainable sculptural furniture production to enhance the gross domestic product (GDP) of the nation.

This suggested move for the concerned government, will add a significant percentage to the national productivity bench mark, and will obviously add value to much anticipated economic expansion. This claim is true judging from the fact that

the importation of furniture from Western countries particularly Italy, and very recently from the Oriental nation of China impacts our national economy negatively.

Of additional importance, the involvement of artists for the pursuit of trade balance can receive positive result if artists are provided loans and enabling work environment. If government subscribe to encouraging artists thus, trade deficit, in the area of furniture importation would be substantially reduced and also there will be reduction in unemployment rate since artists would become employers of labour. The study highlights further, the need for drawing a national policy for strategic creative development which will be a win-win solution to the perennial economic tension witnessed in the Nigeria.

Finally, the current need for diversification of the economy and move towards investing in other sectors for sustainable economic development and growth, not just total dependence on oil production and its attendant revenue accrument could advice consideration of the implications of this study for solution, towards forging a steady and properly poised economic premise that could create the needful and right fulcra to precipitate healthy market economy. This will fast track the development of private businesses and government institutions. Consequently, the implementation, support and sustenance of these recommendations will reposition and broaden our national wealth base and improve the livelihood of citizens favourably.

Contribution to Knowledge

Sculptural furniture though a nascent artistic expression which embraces varied materials for its creative production, and involves emerging contemporary practitioners who have in sundry ways produced amazing corpus of sculptural works in different parts of the world is now a known genre of visual arts. Creative works abound done by these sculptors offering credible proofs of this brand of art as being relevant both sculpturally and functionally. However, the researcher in this project contributes to knowledge on the premise that the research unveils the portal for artists to behold the enormous potential inherent in appropriating plant leaves and designing motifs which could be applied for functional sculptural productions. This enlightenment will impact the development of artists, who could become proactive as entrepreneurs and morph into becoming those who can add to the growth of the Nigerian economy and reposition the gross domestic product (GDP) incrementally

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