

EXPOSITION ON TECHNIQUES OF SCULPTURE DESIGNS AND CRAFTSMANSHIP

NDUBUISI CHINYERE, (PhD)

Department of Fine Arts, Yaba College of Technology,
Lagos, Nigeria.

chinyerendubuisi@yahoo.com

Abstract

Sculpture is a three dimensional art form hence; it is favoured by variety of materials and methods. Some of the materials used for sculpture creation include clay, stone, wood, cement, plastic, metal, and virtually all other tangible material, both industrial and organic. Sculptural materials can be manipulated independently or collectively. Thus, cement can be used to create an entire form in a sculpture, but in the case of collective use of materials, it is referred to as mixed media. The material in use often determines the method applied by the sculptor, and each material attracts a unique application and usage. The significance of this work rests on revealing the materials and process of sculpture production, traditional and modern. It also creates an understanding of in-the-round and relief sculptures which are the two major forms of three dimensional sculptures. In addition, the study reviews construction, which is a contemporary method in sculpture.

Keywords: Exposition, Techniques, Sculpture, Design, Craftsmanship

Introduction

Sculpture is versatile in nature and can be created with different materials such as clay, cement, wood, paper, plastic, metal, etc. depending on the design and the purpose of its creation. Manufactured materials that are developed for more specific purposes are easily adapted into sculpture production in modern workshops and studios.

The techniques involved in the creation of sculptural objects differ from one material to the other. For instance, the techniques employed in creating clay sculptures involves additional method of modelling, while a column on a building can be created by means of casting, on the other hand wood and stone are often carved through the subtractive method. Fiberglass, which is a twentieth century material that is also used in the automobile for the exterior of automobiles, is also used in sculpture. Preble and Preble (1994:202) observe that, in recent years, many sculptors have turned to modern synthetic media, such as fiber glass, which can be cast and painted to look like a variety of other sculpture materials. Creation of sculpture often involves the techniques of firing, casting, blacksmithing, sheet-metal work, and welding, which are used for the production of other functional objects and decorative metal works. Industrial materials in sculpture can be used independently or together with other materials as mixed media. The mixed media sculpture can be a combination of two of all or the under listed materials: fiber glass, wood, metal, fabric or any other material on this Preble and Preble (1994) assert:

Today's artists frequently use a variety of media within a single work , rather than presenting a long-awkward list of materials, artists often identify such combination as "mixed media". The media used for such work may be industrial material of found objects, which can either be two dimensional or three dimensional but are combined together for a piece of art (p. 208).

In addition to the above techniques, the sculptors also embellished, fired and glazed their works in clay, though the technique that is basically known with ceramics production. The new techniques applied by contemporary sculptors are far different from the traditional methods; they are closely related to modern techniques used in manufacturing industry.

The Creative Process of Sculpture

Every successful sculpture starts with formation of ideas, then expression by means of design or sketch before the final execution in three dimensions. A sculptor often function as both a designer and a craftsman. To produce a sculpture piece in three dimensions, a particular technique or combination of techniques is applied.

The appearance and general aesthetic value of a sculptural piece depends greatly on the handling and manipulation of materials by the artist. The direct expressive handling of metal in the works of Olu Amoda, or the use of the chisel in Bisi Fakeye's carving; (both Nigerian artists) are expressions of craftsmanship and mastering of materials. For most sculptors, the actual physical process of working materials is an essential part of sculpture. The sculptor experiences the working qualities of the material, such as the plasticity as in clay, hardness of wood or stone, as well as texture which are evident in the finished work. The sculptor often visualizes a concept before it is created as a design; the design is drawn on the surface of a given medium. This could be stone or wood before the sculptor carefully reveals the image by means of subtraction. Michelangelo in Strickland (2007:36), states "The sculptor unlocks beauty from stone by liberating the figure from the marble that imprison it".



Fig 1: Marble Carving

To create a successful sculpture, design and use of craftsmanship are intimately fused together. As much as the sculptor visualizes the form before it is created, in some instances, alterations are made from the original design in the course of executing the final piece. This creates room for certain features which were not originally planned with the work to be introduced during the process of execution. There is hardly any sculpture that ends exactly the way the sketch or design was originally planned; changes about some aspects of the composition, even the most important ones are often made as the work progresses.

The fusion of design and craftsmanship of different sculptors in the creation of a particular sculptural piece is also an acceptable practice, in a situation where a project is too large or the sculptor is old or weak to do

all the work alone. Some sculptors employ assistants to help out with such projects. Despite handling it with an assistant, it is important that one sculptor conceives the idea and creates the design or sketches which is where the creativity lies. Scott (2010:25) observes, “almost every one could do a work by putting material together. The idea for a piece of art comes from the artist imagination”. As the work proceeds, the sculptor could personally manage some other important parts of the projects at the final stages.

In some projects, particularly very large ones, a sculptor may function like an architect, who only creates the design but seldom involves himself in the laying of bricks, even up to the finish of the building. He could advise, supervise and limit his job to supply of exhaustive specifications in the form of drawings and perhaps creation of marquette. Obviously, such a procedure excludes the sculptor from the possibility of direct, personal expression through the handling of tools and materials. Works of this nature usually have similar characteristics and roles as architecture and industrial design.

General Methods

Different stages are involved before the final execution and presentation of a sculptural project. The stages start with the commissioning of the project by the client, and in some instances, he may bid for the project. Once the project is commissioned; the artist starts with the preparation which usually involves creation of sketches and small scale of the intending sculpture. The sketching and creation of the marquette (small scale) is a vital stage that requires all attention since it is the stage that determines whether the contract will be awarded or not. The satisfaction of the client determines the next stage which is the preparation of materials, and this leads to the execution of the project, then finally the surface finishing, installation and presentation is done.

Most monumental or architectural sculptures are commissioned by agencies, Churches, or other institutions for public use. Creating public sculpture is the height of sculpture practice as it is a rare opportunity for a sculptor to have a direct relationship with the entire community. Slobodkin (1994:177) writes, “The highest attainment in the field of sculpture is work that has some specific relation to complete scheme of things – sculpture purposely created to occupy a definite place on earth”. Hence architectural sculpture can be said to be the ultimate function of all sculptures. Unlike the gallery sculptures, they are commissioned to stand out on some definite spot on the earth as well as have definite functions, which could be aesthetic, religious or historical.

Once the sculptor and his client arrive at a particular design, the materials are acquired and prepared for execution of the project. Most of the materials used by present day sculptors are readily available in the shops, unlike the Renaissance and Medieval periods when the sculptor had to source and prepare his materials alone. For a stone carving, the sculptor may visit a stone quarry in order to select stone and to have it cut into blocks of the right size and shape. Whereas during the Renaissance period, artist like

Michelangelo sourced and supplied their materials by themselves as observed by Strickland (2007:36) “Michelangelo always carved his sculpture from block...he roll them down from the mountain”.

A wood-carver requires a supply of well-seasoned timber from the saw mill which is sometimes shaped in block form before moving to the studio. For a work that requires clay, the sculptor needs a good supply of the right kind and quantity of clay. Large terra-cotta works may require specially prepared plastic clay. The process of acquiring the right materials is necessary before the actual work begins.

The acquisition of the right materials and necessary preparation of the materials lead the sculptor to the next stage, which is basically the shaping of the material or creation of forms by modelling, carving, or construction. Of all the above listed methods, most sculptors subscribe to modelling because a pliable material such as clay (a major material used for modelling) when used in modelling gives room for corrections. Feldman (1987:312) states, “Clay is also more responsive than stone or wood...Nothing is as personal and direct as clay”. The process of modelling with clay maybe long and arduous yet the plasticity of clay makes it an interesting material to work with. Unlike carving in which the artist is expected to start with a clear concept of the result and guide against major mistakes, modelling gives the sculptor the privilege of working and reworking the material until the expected pleasing form emerges.

Whatever surface finish that is given to a sculpture, it is vital it contributes greatly in ensuring that features of the material used to create it is appreciated. Finishing with metallic plating, polishing or painting as the case may be will create a beautiful and realistic sculpture. This will add value to the effort already invested in executing the work.

Forms of Sculpture

Sculpture in-the-round

Although most sculptures are created in the round for public spaces such as gardens, churches, parks, interior and exterior of buildings, some are made in relief form and can only be viewed from the front or side.



Fig II: Strive: The study of Human Anatomy: Sculpture in-The –Round, Osumade John

Sculpture-in-the-round is free-standing, and occupies a particular space (fig II). It is a type of sculpture in which the figure can be viewed independently as a complete three-dimensional form i.e. from all sides

therefore its composition must be appealing from every view depending on the subject. Sculpture-in-the-round is independent not attached to a wall or background (unlike relief). The major types of sculpture-in-the-round are statues, busts, and totem poles, columns, among others. Sculpture-in-the-round is different from other forms of art, because it can be viewed from several vantage points.

Majority of constructed sculptures are Sculpture-in-the-round which are disposed in space with complete freedom. To this, Spore (2000:22) summarizes thus, "sculpture defines actual space". In many instances the viewer can actually walk around under and through them. With this form of sculpture, when the image is narrative or a subject drawn from life, the concept can be easily understood, whereas the non-figurative images in-the-round is difficult to understand and appreciation which becomes challenging to the audience. Free-standing sculpture is created to have a contact with the foreground or with the base on which it is placed and it is often considered to be very important. Take for instance a reclining figure which can be positioned horizontally to blend with the ground plane and often appears to be rooted in the ground. Yet, the same reclining figure can be mounted in such a way that it seems to rest on the ground and to be independent of its base; while some others could be supported in space above the ground. The placement of sculpture can go for either very high relief or in-the-round but completely free-standing sculptures, the figure is viewed all around.

Sculptures that are designed and mounted against a wall can be said a relief or in-the-round. It is relief when it is closely placed against the wall that the audience find it difficult to gain access to the back view, on the other hand, it is regarded as in-the-round because it is not attached to its background like a relief, though it does not have the spatial independence of completely freestanding sculpture. When a sculpture is designed to have a frontal composition of wall and niche which does not necessarily imply any lack of three-dimensionality in the forms themselves, it is only the arrangement of the forms that is limited because the forms are conceived with a complete fullness of volume.

Based on the notion of principal view, a work of sculpture is successful when composed of controlled progression of forms, from one aspect to the other. This is important to enable the work stand out as a unit that occupies space.

Relief sculpture

Relief Sculpture is an art form that projects an image from the surface on which the work is done. This form of art is seen as a complex art form because it combines the features of both two dimensional and three dimensional arts. Here is an example.



Fig III: The other Neighbour, Relief Sculpture by Veronica Otigb-Ekpeie

Just like a painting on canvas, a relief sculpture depends on the supporting surface on which it is created. Relief sculpture falls into four categories, which are low, bas, mezzo and high relief. Mills (2005) describes the four types of relief thus:

Low relief is the lowest possible projection from a surface, raised just enough to catch the light...Bas relief is created by projecting up to half the volume of the form...Mezzo is similarly the projection of up to half the volume of the form, but unlike bas relief, it makes use of undercut...High relief is the most extreme form of relief in which the volume is expressed in the round, while remaining attached to the flat surface (p. 189).

Relief sculpture can be argued to be the oldest form of sculpture. The prehistoric man scratched on the surface of caves, mud, sand and stone, which created depth and projection from the surface. The three-dimensional properties in relief are not merely represented pictorially but are in some degree actual, like those of fully developed sculpture. Mills (2005:183) says, "In drawing and making a relief sculpture the artist must accurately represent three dimensions on a two dimensional surface. In addition, relief demands the partial realisation of form by modelling or carving projections from the flat surface". Some relief sculpture appears pictorial like painting and drawing as the artists often make use of perspective which is a two dimensional method of creating depth and distance. A major difficulty faced by a sculptor in creating a relief sculpture is defining the relationship between depths in the available space which is often limited; however the sculptor can achieve this by carefully giving attention to the planes of the relief.

Low relief allows a minimal degree of projection and creates an impression of three dimensional forms; hence it is generally regarded by sculptors as an extremely difficult art form. This is because the sculptor is caught between two dimensional surfaces and three dimensional projections. Sporre (2000:22) asserts. "Relief projects from a background and cannot be seen from all sides, it maintains a two-dimensional quality as compared to full-round sculpture".

However, the projection in some high relief is so much that if the work is detached from the background, it could be regarded as sculpture in the round. The height of the projection also creates undercuts on the work, which is a major feature of sculpture in the round. However, many degrees of projection are

combined to create a relief sculpture, particularly the high relief. As noted above, very high relief can be detached from the background and converted to sculpture in the round, while the low relief is capable of making contact with the background.

Modern Sculpture

Sculptors have searched for new forms of expression, this distinguished sculpture from other forms of art as it always experiments with new materials and approaches provided by technology. From the 20th century, the world of art has recorded new forms of sculpture that are quite different from the traditional modelling and carving. Among the new forms is kinetic, construction, assemblage sculpture, among others. Picasso was one of the 20th century artists that delved into constructivism, using a bicycle seat and galvanised pipe to create a *Bull's Head*.



Fig IV: Bull head, Constructed Sculpture by Pablo Picasso

The traditional forms of sculpture which are modelling, carving, construction, etc. are static without change/movement, as evident in monumental sculpture. What is often referred to as movement in traditional sculpture is the posture or character of the figure as represented in the subject matter; such as a galloping horse or an athlete. Unlike the traditional sculpture which only suggests movement on a static figure, kinetic sculpture aims at creating real movement as an integral part of the sculpture, by means of wind, magnetic fields, jets of water and electric motor.

On the other hand, the adherents of constructivism tried to neglect the traditional forms and introduced new materials like wire, plastics, glass, cardboard, metal sheets and leather, with the intension of creating objects that are lighter than the traditional forms. Feldman (1987:324) asserts, "Constructivist were determined to avoid thick, dense materials... thus two traits of monolith were undermined (1) the solidity of form, and (2) the mass or weight, of form".

Construction deals with assemblage of materials hence it is also referred to as assemblage. Preble and Preble (1994:206) observed that, "After Picasso constructed his cubist guitar in 1912, assembling method became popular, and such works are called construction". Assemblage is seen as a revolution in the history of sculpture, because it deviates from the traditional form of carving, modelling, and casting. There are varieties of sculptural effects that assemblage presents by integrating pre-fabricated materials and found objects that are recognizable in forms. This is evident in Olu Amoda's *Abandoned Horse*.



Fig v: Abandoned Horse: Metal Sculpture by Olu Amoda

This assemblage by Amoda, is welded scraps of metal and machine parts that have been creatively converted into a graceful figure. With this form of art, the artist is able to turn discarded materials into useful art object. Assemblage offers the artist the opportunity to create new art forms that might not be possible by traditional means. On this Fichner-Rathus (1995:132), states, “The work could not have been created by traditional means, nor would it have been conceived by a sculptor who used such means”. Some of the projections and intricacies that assemblage permits are unthinkable in carving and modelling.

Conclusion

Sculpture as identified in this paper is among the oldest forms of art that started by simple scratching on the wall to create depth and projection known as relief. Aside the scratching of the wall which was a method used during the Paleolithic era, projection in sculpture can be created by other methods, which are additive and subtractive using variety of materials such as clay, wood, cement, bronze, metal among others.

Sculpture is created for individual homes or public places, and it could be said that the height sculpture is architectural or public sculpture. Such sculptures occupy a particular space in the environment and are often created as free standing sculpture to serve aesthetic, religious or historical purposes. The methods and techniques involved in creating a sculptural piece is divers, depending on the intension of the artist. Sculpture is a three dimensional art that can be either created as relief or in-the-round, and both methods aims at achieving volume and form. Hence sculpture can be appreciated by mere feeling of the form, which is not possible in other arts such as painting and drawing. The forms of sculpture make it unique and different from other visual arts. This makes sculpture central to other arts, thus, the understanding of sculpture is capable of aiding other visual artist in creating three dimensions on a flat surface while painting or drawing. This study therefore suggests that all visual artists should have a basic understanding of sculpture since their art involve creative three dimensionality either illusionary or in reality.

References

- Fedman, E. B. (1987). *Varieties of visual experience*. (3rd Edition.). New York: Prentice-Hall Inc.
- Fichner-Rathus, L. (1998). *Understanding art* (5th Edition.). New Jersey: Prentice-Hall Inc.
- Mills, J. (2005). *Encyclopedia of sculpture technique*. London: Batsford.
- Preble, D. and Preble, S. (1994). *Art forms: An introduction to the visual arts*. New York: Harper Collins College Publisher.
- Scott, J. (2010). *Textile perspective in mixed-media sculpture*, Singapore: Craft Prints International
- Slobodkin, L. (1973). *Sculpture principles and practice*, New York: Dover publication.
- Sporre, J. D. (2000). *The creative impulse: An introduction to the arts*. London: Prentice Hall Inc.
- Srickland, C. (2007). *The annotated Mona Lisa: A crash course in art history from Prehistoric to post-modern*. Kansas: Andrews McMeel .Publishing, LLC.