

Traditional Ingenuity in Ghanaian Atumpan Drum Construction (From Locally Obtainable ‘*Cordia Millenii*’)

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ABSTRACT

The forest abounds in different species of trees that the African wood carver capitalizes on to make artefacts. Design and construction of drums particularly in the form of wood art has been in existence for so many years. The purpose of this article is to highlight on the design of traditional carving of Atumpan drum as an excellent art work; As an artwork, its nature, design elements and production process have been discussed. The selection of appropriate wood and design motifs for production and their symbolism have also been considered. Descriptive research method based on the qualitative research approach was employed. This study shows an important distinction between the seeing, viewing, and liking of a specific piece of art and lack of understanding. The investigation of creativeness in the art requires some theoretical originality to enable the development of an effective research method capable of subtly reporting upon original artistic activity. The study states that traditional methods and approaches of Atumpan drum carving must be revived in order to give room for creativity which is indispensable for any development to happen.

Key words: *Drum, Atumpan drum, Body measurement, Carving, Art forms, Classical, Creativity.*

INTRODUCTION

A drum is a carved wooden musical instrument, which has been used since time immemorial. It pre-dates the advent of European bands, whose introduction has not diminished the importance of drums all over the world. The main concepts that need identifying are the “Atumpan Drum” and “Traditional Construction”. The clarifications of these concepts will bring forth the understanding of traditional creativity. The basic pattern of much change is trial and error, search and subsequent selection. So creativity is the ability to fashion objects that are valuable for their beauty, truth or usefulness.

The Western world associates drums with the African continent more than any other instrument, and their rich polyrhythmic culture is enjoyed globally. Rhythm, songs and dance are integral to life on much of this continent, but drums have huge significance, well beyond entertainment. Rhythm can be seen in other areas of nature, such as in certain mammals that drum their feet to advertise residence and ward off competitors, “In Tai forest, wild chimpanzees seem to use drumming on buttressed trees to convey information and changes of travel direction.” These African chimpanzees with their drum language may suggest that as humans evolved, they could have communicated through drum languages before spoken language was created. They contain great powers and divinity and are often considered more than just inanimate objects, having names and genders (Hertha and Giorgio, 1977).

These drum languages are alternative sources of value, such as the emotional impact of a beautiful sound. What it does imply is that the performer (artist) must choose between building up tensions and then resolving them, and not building them up in the first place (Salim and Gasket, 1993). This movement of insights is to describe the successful work of art as a local maximum. Any work of art is intended to satisfy the criteria of internal coherence and external adequacy. It must make us perceive or feel in new or more focused ways, and it must do so in a manner that sustains our attention and satisfies our aesthetic emotions by providing deferred gratification. History has it that, art has been a visual representation comprising products to which humankind have applied their skill and knowledge and executed for specific functions in their culture. Ghanaians generally value the use of art to maintain the concept of reality and their culture. Appropriate documentation, preservation and protection of the arts and culture then become important during the present influx of foreign ideas, values and technology (Adu-Agyem, 1998). Art is, in a sense by definition, like philosophy, difficult to pin down, definably and conceptually (Dallow, 1998).

Drums have become commonplace in the modern world as the key rhythmic factor in artistic expression given. Throughout history, drums have given the human race many more functional and practical uses, necessary for survival (Matt, 2012). Throughout Ghana’s socio-cultural settings, drum has been an active element in the arts and cultural life styles of the people. Long before the arrival of the Europeans, the African had its own way of sending messages. This was done through drums (Talking drums) (Nketia, 1974). In the African traditional society the uses of drums are innumerable and manifold. A wide variety of drums exist in Africa, each society usually specializes in a small number of drum types. The distribution of drums of particular design and

construction tends to be restricted to limited geographical areas. The culture of every African ethnic group revolves round drumming.

Drumming exists as a true art form. It is an important part of daily experience revolving around the life's circle of birth, puberty, marriage and death. One of the most famous and historic objects in Ghanaian traditional culture is the talking drum. "Drum in correct terminology, however, means an instrument in which the sound is produced by a membrane stretched over the opening of either a frame or a hollow body of any shape. It was struck upon with the bare hands, until in later times the hands were replaced by sticks. This important change roughly coincides with the change from the skins of water animals, such as snakes, lizards and fish to the skins of hunted game and big cattle (New Encyclopedia Britannica, 1984-85). The best known of talking drums is the Atumpan Drum. It is the master drum in most orchestras.

The Atumpan Drum is an instrument which has endured and survived the test of time up to the present generation. The history of the Atumpan drum is as old as creation itself. In many parts of Africa, the Atumpan is used as means of notification, alertness and entertainment of people in palaces or during ceremonies (Melvin, 1975); serves as potent channel of traditional communication (Ayoo, 1991) and also serves a dual purpose of "talking" and "rendering" music (Carrington, 1949). The Atumpan drum has historically been used for many purposes, such as: communicating messages across distances and villages, bringing people together, helping settling disputes among members of rural communities and to serving as memory documents to help people remember important events that took place (Nketia, 1963). He added that the Atumpan drum is frequently understood by a knowledge audience and they have the abilities to move people to actions in African Society. Today, the Atumpan drum is used to praise or curse other people and to welcome guests, praise the gods and people in the society, invoke the spirits of ancestors and deities, correct the errors of the societies, generate conversational proverbs in order to allow people to communicate with their elders and is still part of royal ceremonies or recitals of ancestry (Ushe, 2007). It has therefore been a classical art form. Historically, Atumpan drums are shaped like beer bottles and are named after the shaped "Tumpan" meaning 'a bottle'. That is when the bottle is turned upside down it gives that shape in such a way that there is a large hole on top and a small hole at the bottom so as to have a very high sound. There is a traditional choice in the kind of wood for carving the Atumpan drum. The carved drum is long lasting and light enough to facilitate being carried about.

MATERIALS AND METHODS

Wood is the most important component of the Atumpan drum. Traditionally the body of the Atumpan drum is carved out of the "dua tweneboa or tweneduro tree" with the botanical name "Cordia Millenii". The grains of the tree are light and tough. Okai et al (2004) conducted studies on the strength properties of the branchwood of "Cordia Millenii" and concluded that the branch wood of these species has considerable potential for use in downstream carving.

However, the most important reason for the choice is religious. Tweneboa tree is regarded as particularly powerful and malignant, its "sunsum" (spirit) being "nye kora" (not at all good). It is understood that its wood consists of a mixture of many kinds of wood found in other trees. Species of wood are believed to be potentially vindictive and therefore the need to pour libation before they are felled. In Ghanaian traditional societies, some economic trees such as Odum (*Chlorophola Excelsa*), Mahogany (*Khaya Ivorensis*) and Sese (*Funtumia*) were believed and regarded as trees with spirits and were not to be felled. In recognition of this belief, Busia (1957) as cited in Safo-Mensah (2007), affirms that "an Ashanti craftsman will endeavour to propitiate certain trees before he cuts them" and says "I am about to cut you down and carve you; do not let me suffer harm." Busia explained that an egg is offered to the tree by a craftsman before he fells a tree for carving. These magical practices and beliefs have brought about propitiatory offerings being made to the tree before it is felled to prevent its causing harm to the carver and drummer. In Ghana, the drum carver has similar beliefs and practices. Hence the spirit of the tree is pacified to ensure peace and safety of the carver before the tree is felled to carver the shell of the drum. According to Segy (1975) "Animism is the belief that all objects both "inanimate" and "animate" possess vitality or are endowed with "in-dwelling souls" (p.48). So there is the need to appease these spirits.

These beliefs and ideas form the most important part of the various carvers' culture. This is because it is used to purify them from guilt. The specimen of the form of prayers the carver says to the Tweneboa Tree before he fells and uses it for carving: - in Twi language and explanation in English language.

"Tweneboa Kodua Tweneduro,
Me Odomankoma Dwumfo,
Na mebetwa wo
Mebetwa wo
Akodi hene

*"Tweneboa Kodua Tweneduro,
I Supreme carver,
I am coming to fell you
to fell you
make you a chief*

Mesre wo	<i>I plead with you</i>
Mma me berma nwu	<i>do not make me sterile</i>
M ^o ani mmfura	<i>do not make me blind</i>
Nana Asiamasi na ose	<i>it is a (name chief) who has requested</i>
Me mmetwa wo nkoye	<i>I am felling you to go and make</i>
N ^o agyapade	<i>his property</i>
Mebetwa wo ama	<i>I am coming to fell you for</i>
Wo akodi hene, noa ^o	<i>make you a chief</i>

(Source: Agya Kwasi Boateng, 2010)

With the traditional belief that powerful spirits dwell in trees, prayers and rituals for protection against harm are performed before felling the trees. The procedures involved in the ritual are given in details after interviewing Agya Kwasi Boateng (2010), a traditional drum carver. The procedures in terms of prayers go along with local and imported drinks. According to him, the tree can ‘move’ from its original place to another. An ordinary person can see the tree standing at the original place but it becomes invisible to the intruder.

The alternatives to the principal tree are “Osese” (*Holarrhena Wulfsbergii*) and “Nyamedua” (*Alstonia Gongenis*). These woods are soft and semi-hard. Sarpong (1971) opines that, softness of wood is of great advantage to the carver and the semi hardness ensures its durability. The drum making operation could be brought to a completion by the use of tools and materials namely machete, knife, axe, adze, chisel, gouge, awl, hand drill and wood, hide, pegs, drums sticks, stands or support.

Processes

Wood log is the most important component of a drum. The Tweneboa tree is approximately 35 metres from the ground to the upper-most leaves. This very important tree was extracted from the Bobiri Forest Reserve and the Afram Headwaters Forest Reserve at Kubease and Abofour respectively, all in Kumasi. The forest reserves lie within the moist semi-deciduous forest zone from latitude 6° 11’-6° 21’ North and longitude 10° 07’-10° 16’ West. The diameter of the sample tree at breast height was about 3.0m. A total of 95 logs were cut from the forest.

Kantola (1996) defined logging as any form of wood, which under the highest stage of technological development could be used in construction. Ford-Robertson (1974) reported that in the process of felling and extraction of timber traditionally, logging operations meant just harvesting the stem and leaving the stumps, branches and crown in the forest.

Methodology

Descriptive research method based on the qualitative research approach was employed. The descriptive method of research is necessary because Atumpan drums existing in the traditional society had to be documented to describe the design and construction processes and the appreciation of the results. The population for the study involved twelve (12) traditional drum carvers at Abofour, Kubease and Ahiwa all in Kumasi. The purposive sampling method was employed to select two carvers from each of the carving towns for interviews and observation. According to Amenuke (1991), observation as a research tool was also necessary because information provided by respondents through interviews could be inadequate, biased or untrue. Observation techniques of data collection made it possible to obtain first-hand information.

Process Flow and Data Collection

The tree is felled down on the ground and cut into logs according to the height of the drum to be constructed (60.5 cm and 58.6 cm for the male and female respectively). The logs are then left to season for some time and the bark of the wood is peeled off with the axe tool. The whole log is made cylindrical by chipping off unwanted parts with the axe. At the workshop, the logs are further examined usually for possible defects such as insects attacks or splits at the ends, which could result from improper handling.

Design and Construction Stages

Design is about solving problems. We can see the results of it all around us, wherever we are in the man-made world. Everything that has ever been made by people has been designed to meet a certain need – to solve a certain problem. People have used their knowledge of materials and technology to design solutions to all kinds of problems. The major tools and materials are grouped under various headings based on their use in the following processes:

Framework or shell construction

Groundwork
Background treatment

Framework or shell construction

Every professional has his or her working tools and equipment with which he or she works, and the artist is not an exception (Bazzi, 1960). The tools for the carving of the framework are grouped based on their use as follows:

- Measuring, setting and marking out tools to record exact sizes and lengths of logs. Examples include ruler, tape measure and try square.
- Cutting tools. Examples, gouges (bomeye, soso), adze, chisels, scissors, saw, drill press, knives, files.
- Holding devices used to hold work pieces. Examples, vice, clamp, pliers, twine, metal-wire.
- Fixing tools. Examples, hammer, awl, wooden mallet, punches.

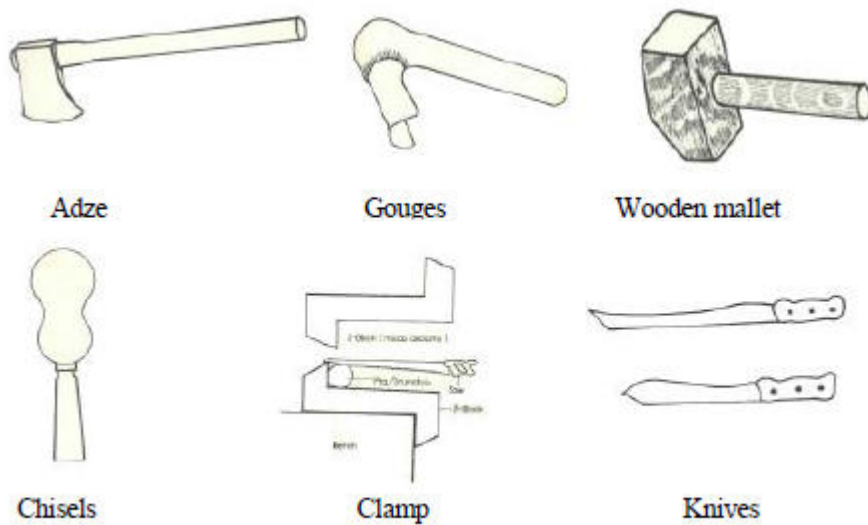


Figure 1: Carving Tools

Groundwork details

Preliminary designs are considered as the starting detail work. Preliminary design in this context refers to the preparatory activities that precede the actual work. Having identified the appropriate tools and materials the following preparatory stages are followed. It is important to note that the measurement used for the Atumpan drum construction of this study is the standard measurement.

- Surface measurement

The bark of the cut measured log is removed. Drums such as Atumpan have two different surface that is, the top surface and the bottom surface (Figure 2).



Figure 2: Surface of the Log

The centre of each of the flat surface of the shaped log is located. Two circles are made on each surface. The circles on the top surface are about 2 centimetres (cm) apart with one inside the other. The smaller circle or the inner circle has a diameter of 22.4 cm; and the outer or larger circle, a diameter of 24.5 cm. This measured end of the log represents the top of the drum.

The process is repeated at the bottom. But here, the inner circle measured a diameter of 8.5 cm and the outer is 16.5 cm; that is 8 cm apart. These measurements are shown in figure 3.

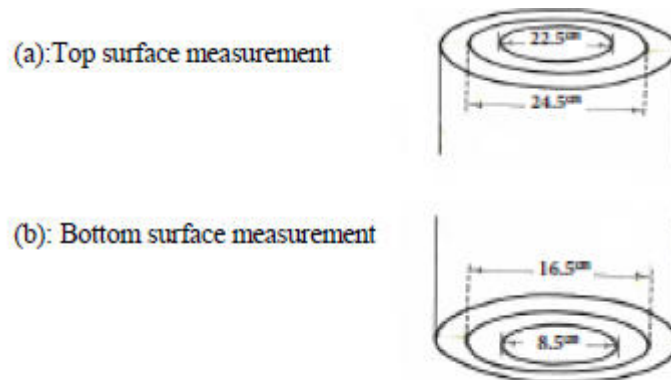


Figure 3: Marking Measurements

These measurements enable the carver to get a circular head and foot of the Atumpan drum shell.

- Parts of the Atumpan drum on the log (Figure 4)

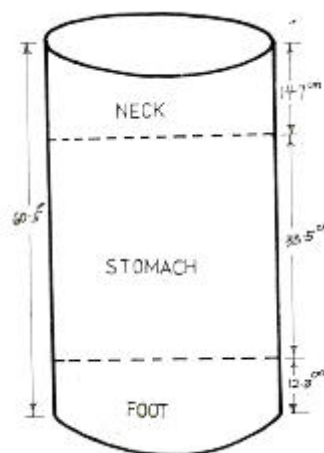


Figure 4: Divisions of the Atumpan Drum on the Log.

The Atumpan drum is divided into three parts namely the neck, stomach and the foot in unequal measurements. These measurements used for standard Atumpan Drum sizes. From the top of the shaped log, the neck is measured 14.7 cm; and the rest of the space between the neck and the base of the foot is measured 33.5 cm to be the stomach of the drum while, the foot measures 12.3 cm (Figure 4). The top exceeds the base in width.

- Carving the drum shape

The cylindrical shape of the log is carved by chipping off unwanted parts by the use of the axe and the adze. The foot is carved using the measurements marked on the surface as guide figure 5(a). The shape of the stomach is carved by chipping away, rounding down and smoothing its lower end to the foot neck. Figure 5(b). The neck is also got into the shape after the lower part of the stomach has been rounded to the top of the foot. The neck is slanted from the top to its base to meet the upper part of the stomach at a diameter of 36.9 cm. Figure 5(c).



(a) Carving the foot (b) Carving the stomach (c) Identifying the neck

Figure 5: Carving the Drum Shape.

- Scooping the shaped log

The rough shape of the Atumpan drum is now assumed (in a drum log). The centre already located was scooped or hollowed. It could be started from any of the surfaces. The soso bomeye was used for this purpose. The pith in the centre made the scooping easier to start with. It is assumed, knowing how pound „fufu“ or palm fruits would be advantageous when it comes to the using of these scooping tools. The scooping was manually done.

In the course of scooping, the scooping area widens gradually by chipping away the wood (unwanted chips). This creates the hollow in the stomach if it is scooped from the top surface. Leaning against a weight object of blocking around with other logs is necessary as the hollow to be created gets wider around the middle portion (stomach) than the top (neck) and bottom (foot) of the drum shell. The shape and smoothing surface of the drum shell are obtained with the machete and sandpaper (Figure 6).



Figure 6: A completed Atumpan Drum Shell

- Decorations

After incising body and foot in identifying the neck, stomach and foot on the Atumpan drum shell, eyebrows are incised and rounded up as saw-edge design. These saw-edge designs are incised at the neck - stomach junction and at the base into the foot body (Figure 7).

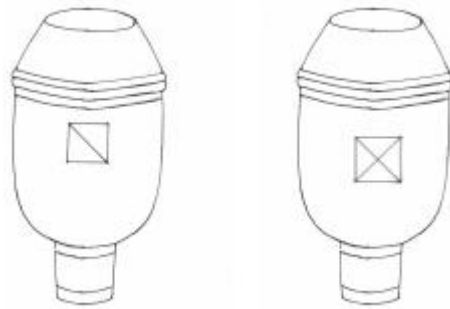


Figure 7: Eyebrow and Decoration Band

- Peg Hole

Holes are drilled on the Atumpan drum shell in such a way that the holes are slanted downwards inside which are large enough for the middle part of the pegs can fit (Figure 8).

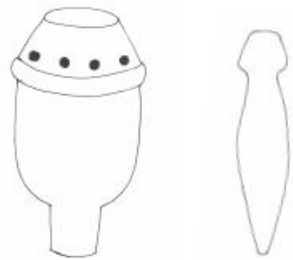


Figure 8: Peg hole and Peg

Incised lines are indicated on a portion of the drum. This sign is known as the “eye” of the drum. (It is not actually known why our ancestors chose such names). The “eye of the drum” is a rectangular patch marked below the sockets rings of vertical or saw-edged design (eyebrow). The “eye” of the drum may be a rectangle with diagonal lines joining the opposite corners (Figure 9).

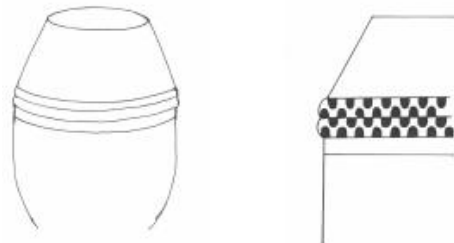


Figure 9: Marking the Position for the Eye of the Drum.

These lines are of two types: one diagonal line and two crossed diagonal lines indicating male and female drums respectively. However, it is noted that the male drum which is always at the left hand side of the drummer is identified by only one diagonal line in the right angle; while the female drum at the right hand side is also identified by two diagonal lines. From this point, vertical line decorations covering the whole or nearly the whole of the remaining length of the drum are grooved, leaving a band of plain surfaces at the stomach-foot junction and at the foot (Figure 10). These body and foot decoration grooves are 0.25 cm apart being the standard measurement.

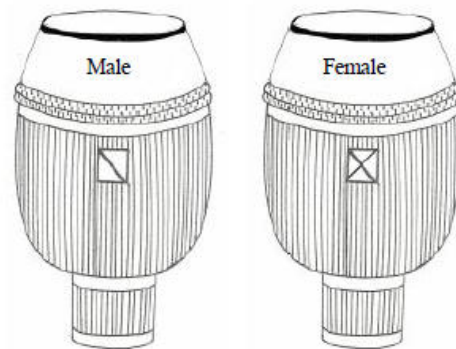


Figure 10: Identification of Atumpan Drums

Other materials needed for the completion of the finished drum are animal skin, carved wooden pegs, metal wire/twine, lacquer and cane. The skins or drum heads for the drums can be obtained from the antelope or cowhides. The skin is stretched on the ground and the drum shell placed upside down on the selected portion of the skin. The skin is then cut slightly larger than the size required covering the mouth of the drum shell; and then bound on like a jam-pot cover as in figure 11. After cutting the skin, the carver would shave off hair from the skin with the head scrapper tool.

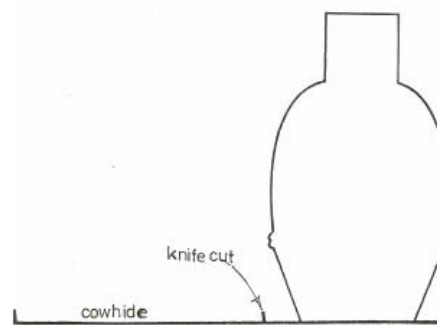


Figure 11. Cutting the skin for the drum.

Two sticks are required for playing the Atumpan drums. One held in each hand. The long shaft of the stick is about 39.5cm, while the short shaft is 9.3cm. At the joint area, the angle varies between 50 and 65 degrees. One particular thing noted is that the sticks used do not have the same angle. No reason was attributed to that, but perhaps it might be assumed the hooked sticks from the “ofemma” branch cannot possibly maintain equal angles. A sample is shown in figure 12.

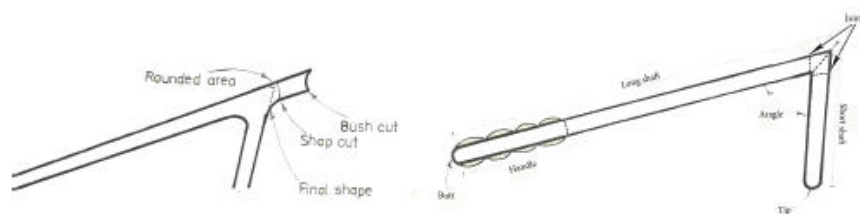


Figure 12: A drum stick

Assemblage of the Drum parts

Assemblage as used here refers to the process of creating three-dimensional work of art by bringing various parts together to form a unit. Thus, the formed components- the designed drum shell, decorations, the hide, pegs, twine, tuning, and polishing are brought together into an integrated whole (Figure. 13)

Finishing

In this wise, the smothering, varnishing and other items add up to make the Atumpan drum durable and more attractive. All the wooden parts of the drum are smoothed by sandpapering. Thereafter, the wooden parts are polished with varnish or lacquer.



Figure 13. Completed set of Atumpan Drums

In the construction of Atumpan drum, the various parts have their individual names (Figure. 14).

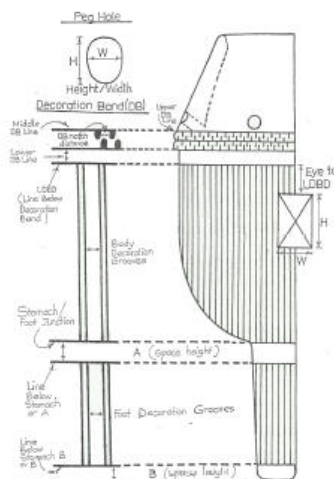


Figure 14: A Detailed profile of the Atumpan Drum

RESULTS AND DISCUSSION

Familiarity with the various art processes, techniques, as well as the limitations of art media and materials lead to a greater understanding and appreciation of art. While one may not necessarily be attributed to a particular work of art, an understanding of the material and technique which are utilized to create the work allow one to increase further mastery of the artist who creates it. Although, a drum should look smart and aesthetically pleasing, it should be remembered that, it is a tool, and needs to be functional, that is to communicate a message. Therefore, pre-testing of the drums is carried out to determine their functionality.

In order to get the right thickness of the drum shell, the various parts of the shell are inspected by using a piece of heavy stick to strike the shell and listen to the sound. If the pitch is too deep or the sound is dull, it means more hollowing out is needed. One that gives high pitch needs not be hollowed out further; otherwise the wall would be too thin and break or crack at the slightest pressure.

The reasons about the use of the eye on the drum are that, they mark the libation spot where any offering such as libation can be performed on the drums in reverence to tradition. It also serves as the eye of the drums (that is to distinguish the male drum from the female drum). But the eyebrows and decoration bands are only for decorative purposes, and to separate the grooves. The decoration grooves do not conform to any traditional stylistic convention.

The wooden pegs are shaped in the form of projecting erected male sexual organ (penis). No reason was given for the use of the phallic shaped pegs on the Atumpan drums. However, the fact that it is forbidden for women to carve such drums is the obvious reason and possibly also for its manly features. In addition, tradition does not allow women to possess such type of drums; although they could dance to its music or understand its communicative message.

Before the skin is stretched over the carved drum shell, the white part of an egg(albumen) is smeared all over the side of the skin which is to face downwards having contact with the top entrance of the drum shell. It serves to make the tension of the skin over the drum even in dry or humid conditions otherwise the tension will vary and the drum will not produce the desired sound. While many drums are played with the hands or straight sticks the Atumpan drums are played with “hooked sticks” (Angled sticks) and these present special problems in manufacturing. The angular stick used for the Atumpan comes from the tree called “ofemma”.

It is observed that majority of carvers had no formal school education in the use of their artistic skills. On the contrary, they have learnt to perceive what feels and looks good through many years of trial and error and practical experience. Through these, they have been able to achieve such aesthetic phenomena and other artistic sensibilities. The technique of carving gives a particular quality and aesthetic appeal to the end product. The carvers’ artistic ingenuity in the combination of skills and motifs gives aesthetic appeal to the carved Atumpan drum.

Future of Atumpan Drum

Years ago it was believed that drums were sacred, that they were to be played only by Divine Drummers (Akyerema) and owned by chiefs and fetish priests, The African scene today violates these rules, but the drums still play an important complex roles in the society (Onwona-Osapo, 1973). The worth of the Atumpan drum lies in its power to show an aspect of carving presently being done but not documented. It exhibits the manner which men have applied their skill and knowledge to execute a drum for specific functions in their culture. Similarly, it is also giving an education about how creative the indigenous carvers are and the type of wood used to produce carved drums in the indigenous settings of the middle parts of Ghana.

Atumpan Drums can be heard not only at traditional festivals or Christian churches but sometimes at political rallies and other functions to integrate a crowd and as an expression of solidarity. Atumpan drums are included in school music syllabus to add the much needed cultural dimension to the curriculum. It is incorporated under the auspices of social studies or African studies programmes. Children in the top class are taught the drum language which they use in the school.

Atumpan drums are now being used by the national radio as signature tunes or signal tunes for broadcasts, and when an illiterate hears them, his mind is focused on the news. The elderly will say that the sound of the drum reminds them of the olden days and they feel compelled to listen to what is being broadcast. Some Ghanaians also use the Atumpan drum tunes in their phone ringing tones (software).

Future generations will therefore embrace construction of these drums with different and varied interests. Students could be introduced to field experience of Atumpan construction and usage. Students will learn about the oral history of the art. They will observe the craft man at work and pose questions. The craftsmen will show the learner how to use tools and media to produce Atumpan drums as artifacts, Having mastered the basic techniques and skills, the students will learn to use the tools and media to produce Atumpan drums (artifacts). The artifacts could be made in schools or in the craftsmen’s workshop.

CONCLUSION

After the completion of the Atumpan drum carving, the carver prays again by pouring libation; this time the prayers are directed towards the drum. He prays that the drum may bring him good luck. The results of this project have shown the possibilities of using the available resources to carve and produce drums. The repertoire of the Atumpan drums consists of expressions of condolence to the sources of the materials used for making the drums; references to creation, recitation of appropriate proverbs, maxims and appellations; and narrations of the history of the drummer’s stool (neighborhood).

The success of this project would give room for all wood design carvers, students, art educators and designers to explore more in the creativity of variety of drums. This could foster the development of the senses, something which is essential for teaching and learning processes which involves critical observation and careful manipulation of design elements, principles, tools, materials and equipment. The works provide knowledge in the carving of drums for dance ensembles, palaces, institutions, churches and many other ceremonies. The

importance of Atumpan drum (talking drum) which was realized even before the arrival of the Europeans, still has more room for improvement and a brighter future.

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