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Aesthetic analysis of Donkor's scrap metal bull sculpture

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Abstract

Trading metal waste, especially discarded metals and electronic waste (e-waste), is an economic quest for some people in Ghana. Metal scavengers, collectors, and processors have used scrap metals for commercial and practical purposes. However, there seem to be very little scholarly writing on the aesthetic values of artworks created out of metal waste. The study sought to analyse the aesthetic values of Evans Donkor's scrap metal bull sculpture composed of automobile parts. The study adopted a descriptive research design under the qualitative research approach. The study was centred on the scrap metal bull sculpture produced by Evans Donkor in 2015. The expert purposive sampling technique was adopted to gather data from art experts on the creation of the scrap metal bull sculpture. Data were analysed with the interpretive method as the discussion revealed that there were subjective values embodied in the composed scrap metal bull sculpture titled 'Struggle for Perfection' exhibited at the Department of Art Education, UEW, Winneba-Ghana. The study concludes that the creativity of Evans Donkor and his culmination of aesthetic understanding of metal waste into artwork strengthen art practice as well as managing the environmental challenges by getting into scrap metals as an alternative material for sculpture.

Keywords

Aesthetic values, metal waste, scrap metal bull sculpture, subjective values, University of Education Winneba (UEW).

1. Introduction

Scrap metal is a discarded material composed of ferrous and non-ferrous metals (Morlock, 2018). Scrap metal trading, especially discarded automobile parts, parts of agricultural machinery, and pieces of electronic hardware as shown in Figures 1 and 2, has been a profitable venture for some people in Ghana. The profitable monetary benefits of the scrap metal business to the dealers involved have resulted in the growth of the scrap trade in Ghana (deGraft-Yankson, Donkor & Amissah, 2017). Other studies show that the scrap metal trade is an important economic activity that provides income for over 15 million people worldwide, most of whom are in cities of developing countries, with a financial impact of several billions of US dollars every year (Gyimah, Amoakohene & Mensah, 2021; Medina, 2010).

The most common form of scrap metal is appliances and other household items made of ferrous metal (New Mexico Recycling Coalition, 2009; Nkansah, Attiogbe, & Engelbert, 2015). Ferrous metals contain iron and can rust, while nonferrous metals do not rust and do not contain iron (Collins, 2014). This statement affirms the view of Buel (2019, p.2) that “ferrous are cast steel, carbon steel, alloy steel, cast iron, wrought iron and nonferrous metals are copper, aluminum, zinc, gold, tin, silver, nickel, lead, magnesium as both metals have specific characteristics that make them different enough to be separated”. In the context of Buel, ferrous metals are valued for their strength and durability, while nonferrous metals are chosen for their malleability, corrosion and rust resistance, and non-magnetic properties. These properties of scrap metals make them the preferred recycle material to provide structure, as girders for buildings, rails for trains, chassis for automobiles, and containers for liquids (Wernick & Themelis, 1998). The detritus of scrap metals has been largely augmented for engineering purposes such as recycling and manufacturing steel products (Donkor, 2015).

Considering the environmental threats involved in scrap metal activities, deGraft-Yankson et al. (2017, p. 3) disclose two critical environmental problems associated with scrap metal. One of them is that it poses a danger to the environment by contaminating water bodies and the atmosphere. Secondly, illegal scrap metal businesses have gained ground and have caused thefts and shortages of raw materials for the local metallurgical industries. To deGraft-Yankson et al., there seems no regulatory system that benefits Ghana in the artistic and environmental contexts. This study reflects on the gap created by some artists in Ghana. Some Ghanaian artists have relied heavily on traditional materials such as clay, wood, and cement. This traditional practice of art tends to influence the progress in contemporary sculpture. Perceiving metal and its scrap fragments from an artistic point of view, it

possesses the potential of providing artists with another dimension of the material base even with the use of unwanted scrap leftovers that seem less important as an art material to scrap dealers ((Windt, 2008; Donkor, 2015). Since metal waste has continued to pose an environmental challenge to Ghana, some contemporary Ghanaian artists seem to pay very little attention to the aesthetic values of metal waste. It is therefore not too late for artists to intensify the production of scrap metal art. This practice serves as a means for artists to contribute their quota to the national efforts toward environmental sanitation and beautification (Donkor, 2015).



Figure 1. Heap of collected scrap metals on the environment
(Source: Fieldwork, 2021).



Figure 2. Local metal junkyard
(Source: Fieldwork, 2021)

Considering the aesthetic and philosophical culture of the metal waste context, scrap metal as a medium for artistic expression cannot be overlooked. Donkor (2015) explains that turning the industrial detritus of metals with discarded automobile parts into one-of-a-kind art is a way to create something of exceptional value from scrap. Most scrap metal artefacts are produced using welding techniques and making them last for a long time (Dekker, 2022). This welding field serves as a tool for creative minds. What makes a fascinating quality to this scrap metal artistry is the scrap from cars and trucks used in such uniformity. The raw materials used to make scrap metal art are sourced from home, landfill sites, mechanical shops, and the local scrapyards (Bassette, 2018; American Welding Society, 2001). In making these art forms, rusted metals are sterilised and manipulated whereby some parts of these scrap metals are burnt to give a clinical finish to such beautiful life-size sculptures (Donkor, 2015). From Donkor's (2015) point of view, the aesthetic conversion of scraps into art is a morphological way of creating meaningful artwork from waste metal. Donkor's aesthetic response to scrap metal bull sculpture as shown in Figure 3 underpin the intrinsic and extrinsic beauty based on the subjective emotions of the artist. In the cloud of Donkor's thoughts, the scrap metal bull sculpture is understood from the context of philosophical experiences in art where the artist relates material exploration to academic structures and environmental issues in Ghana. The study, therefore, explores the creative skills and evocation of waste metal materials into sculpture by a Ghanaian contemporary artist, Evans Donkor. In that regard, the study sought to analyse the aesthetic values of Evans Donkor's scrap metal bull sculpture composed of automobile parts.

2. Review of Related Literature

2.1 Theoretical framework

The aesthetic theory propounded by Theodor W. Adorno (1903-1969) was chosen for the study based on the philosophy of art that keeps pace with evolutions in art practice. In Adorno's Aesthetic Theory, instead of artwork having strong Aesthetics through politicised content, the *truth content* in the artwork is its greatest strength (Health Research Funding, 2022; Fleming, 2019). According to Adorno (1970), beauty is not always in the eye of the beholder. Because each piece of art has its own *truth* content that can be discovered, there are specific messages to be discovered within the artist's creativity". Although there will always be an individualized interpretation of the scrap metal bull artwork, both aesthetical and philosophical interpretations define the artist's work (Health Research Funding, 2022; Fleming, 2019; Adorno & Tiedemann, 1997).

Theodor W. Adorno's Aesthetic theory is used to underpin the philosophical concept of this study that intensifies Donkor's scrap metal art production to lessen environmental challenges concerning metal waste. Eaton (2006) adds that aesthetic theory must be adequate and robust enough to account for the unique value of environmental art in general and eco-activist in art. Adorno's aesthetic theory guided the study in appreciating the scrap metal sculpture sculpted by Evans Kwadwo Donkor. The theory's guide included appreciating the artwork from an aesthetic and functional relevance for environmental beautification. Moreover, Adorno's aesthetic theory on the artwork was imbued with messages that the artist tries to put across (Eaton, 2006). Danto (2005) supports that aesthetic theory is derived from the vision embodied in the work. Adorno's aesthetic theory in relation to this study emphasised the form and content from the medium in which the work was realised. The form and content of Evans Donkor's scrap metal bull sculpture are understood from an aesthetic judgment that the aesthetics of sculpture is an expression of mind as well as an embodiment of sensuous charm (Parker, 2003).

In this regard, aesthetics has always been revered for its sensual appeal, beauty, and skillful compositions of artwork by artists (Zuckert, 2009; Binoya & Baccay, 2017). Explaining sensuous perfection in the form and content, the study, therefore, relates to Bentum's (2013) idea of "sensuous perfection" as his work of art introduces a way of seeing and experiencing art. Therefore, Bentum's concept of the philosophy of truth tells the materials, their sources, and physical appearances. Bentum's concept relates to a nonrepresentational sculpture by Constantin Brancusi's *Bird in Space* (1919). The artwork as a physical object possesses aesthetically relevant features that are the object's sensuous and design qualities (Carlson & Lintott, 2008; Stecker, 1994). The sensuous and design qualities in artwork tell the philosophical concepts that are concerned with the nature of beauty and taste (Tate, 2018). However, Theodor W. Adorno's aesthetic theory is the admiration of beauty, such as valuing the artwork. Recognising what is appreciated aesthetically in the context of the scrap metal bull sculpture could help the understanding of values and decisions incorporated into the artwork. These values and decisions are perceived as aesthetic values that have various meanings to society. These values and decisions are premised on the aesthetic subject, object, value, or beautiful and aesthetic judgment (Süzen, 2013; Anthropology, 2018). DeAngelis (2014) confirms that Theodor W. Adorno's aesthetic theory provides the opportunity to explore one's inner inspirations and depths, and not surprisingly, psychologists seem to have an affinity for artistic expression. Shimamura (2014) supports the argument by DeAngelis

(2014) that for many, art is meant to instill a myriad of emotions in the beholder, such as; beauty, awe, surprise, sadness, anger, and even disgust. Some artworks generate feelings rather quickly, while others depend on elaborate thought and knowledge. The aesthetic theory propounded by Theodor W. Adorno allowed the researchers to perceive and respond to the artwork through factual knowledge about the world, cultural knowledge gained from personal experiences, and even knowledge about the art process itself (Shimamura, 2014).

2. 2 Environmental issues and Scrap metals

In Ghana, metal waste poses critical environmental challenges to human safety and survival. One of the problems of metal waste is that it poses an environmental hazard where metal waste containing toxic chemicals can spill into water bodies (Organisation for Economic Co-operation and Development (OECD), 1996). Metal waste is a non-hazardous and hazardous substance (Clean Water Environment, 2021). Some hazardous substances such as lead wheel weights, chrome-plated engine parts, and silver electrodes are found in junkyards and landfills. Scrap metals are otherwise non-hazardous such as processed vehicle hulks, drained, and crushed used oil filters (Clean up Australia limited of New South Wales, 2009). Properly punctured aerosol containers may be contaminated with residual amounts of hazardous substances (OECD, 1996; Bannah & Abibat, 2001; Donkor, 2015; deGraft-Yankson et al., 2017; Donkor, 2018 a.).

Metallic wastes found in the cities and suburbs of Ghana are contaminated with other hazardous wastes such as unprocessed salvage vehicles or used oil filters possessing hazardous chemical residues (deGraft-Yankson et al., 2017). In the extraction of valuable metals like copper and silver, the fumes of burnt electronics from plastic cause health hazards including lung cancer (Donkor, 2015; Clean up Australia limited of New South Wales, 2009). deGraft-Yankson et al. (2017) conclude that:

Interestingly, the issues concerning scrap metals have been left solely into the hands of scrap metal dealers who have more interest in money-making than solving environmental issues. This situation makes it plausible that leaving the scrap metal situation in these metropolises solely into the hands of scrap metal dealers cannot be a good idea. It is, therefore, commonsensical that the metal artists in these metropolises hold the key to turning hazardous sites into a pleasant aesthetic experience as they embark on the move to create unique and durable

figures crafted exclusively from scrap metals. Besides serving as a means of ridding the environment of hazardous wastes, scrap metals would serve as alternative materials for contemporary artists who wish to depart from the use of conventional materials like clay, wood, and other materials from natural sources (p.9).

2.3 Environmental artists and Scrap metals

Aesthetically, scrap metal artists have explored scrap metals as a form of metal detritus in the environment through methods and techniques like welding, riveting, gluing, and tying (Donkor, 2015; Ng, Lepinski, Wigdor, Sanders & Dietz, 2012). Wang (2015) discusses that environmental/scrap metal artists believe in turning scraps into treasure to reduce waste, promote a low-carbon economy, and create a unique type of industrial art. These works are created from raw scrap material that the metal artists weld together.

In the era of human history (the Bronze Age and Iron Age), scrap metals began seven thousand (7,000) BC in the Middle East (Leblanc, 2021; Smith, 2019). The smelting of copper is thought to have taken elements from the earth and refined them into metals as it is so basic to civilization (Seabrook, 2008). It is also confirmed by AWD Digital (2019) that:

During World War II, Londoners took part in an enormous scrap metal drive where the iron doors and railings surrounded parks, houses, and shops. Public buildings were taken away to be melted down and made into munitions, aircraft, and tanks. Almost everything metal was rationed during this time and there were scrap drives to collect everything from aluminum pots and pans through to copper ornaments (p. 2).

Using scraps to create detailed sculptures, the artist seeks to show the material's plasticity, thus subverting traditional ideas about metal technology. Scrap metal artists create forms of art made of metal pieces from junkyards, landfills, and homes (deGraft-Yankson et al., 2017; Kayode, 2006). Many artworks are created from scrap metal pieces. Sources of ferrous metals include old watches, typewriters, farm equipment, and sewing machine pieces. Nonferrous metals include Aluminum pieces, Gold and Silver ornaments, and much more (Singh, 2006). Many scrap metal artists like El Anatsui (Ghana), Dotun Popoola (Nigeria), Ban Hun Lek group (Thailand), Cem Özkan (Turkey), John Lopez (USA), David Černý (Czech Republic), Edouard Martinet (France) and others have used metals for numerous reasons (Donkor, 2015). These reasons are based on aesthetic

expressions of their ideas and philosophies in their sculptures (Donkor, 2015). The attraction of creating something of unique value from scrap metals is what has motivated many sculptors, and metal artisans like welders to explore a new form of art called scrap metal art. Most of the great scrap metal artists are the ones who have been welders for a long time (Donkor, 2018 b.; Thompson, 2012).

2.4 Scrap metal and its properties for artwork

Working with metal waste depends on the ability to know the mechanical, physical, and chemical properties of these pieces of metals. Leblanc (2021, p. 2) believes that “metals are valuable materials that can be recycled again and again without degrading their properties, for example, is scrap metal that has value”. Mechanical, physical, and chemical properties of metal waste used for the creation of the scrap metal bull sculpture have the ability to resist, being pulled apart by opposing forces acting in a straight line. The metal waste had the ability to be deformed or compressed permanently with the fabrication of rupture or fracture. Specifically, it means the capacity of metal waste to be rolled or hammered into the required shape for the sculpture (Army Institute for Professional Development (AIPD,1985; Kreith & Goswami, 2004; Helmenstine, 2020).

3. Methodology

The study used a descriptive research design under the qualitative research paradigm. Using qualitative research, this study examined people’s experience in art by using a specific set of research methods such as descriptive research to describe the characteristics of the scrap metal sculpture being studied (Hennink, Hutter, & Bailey, 2020). The descriptive research design aided in discussing the environmental challenges of metal waste (scrap metals) as a possibility of using it for aesthetic expression and means of promoting the beautification of the environment. The descriptive research design helped to describe the artistic interpretation of the artist’s work and understand the characteristics of the artwork through words rather than numbers (Pratap, 2018). The study was centred on the scrap metal bull sculpture produced by Evans Kwadwo Donkor in 2015. The study also focused on the University of Education, Winneba as the location of the scrap metal bull sculpture. In this regard, the expert type of purposive sampling technique was adopted for the study to gather data from the expert as valuable insights into the creation of the scrap metal bull. The expert sampling was suitable for the study because the sampling results

depended on the credibility and depth of knowledge of the experts surveyed, interviewed, and observed (Frey, 2018). In data collection, ethical awareness was essential to the professional practice of this research study as there was the need to ensure that individuals and organisational rights and names were protected from any foreseeable way as a result of this investigation (Sandu & Frunza, 2018; Bhandaru, 2021). It was, therefore, important to make the study clear to participants that there were no negative repercussions to their participation in the creation of the scrap metal bull sculpture by Evans Donkor.

The study used the interpretive method as an ensuing research analysis to explore the creative skills and evocation of materials into scrap metal sculpture by the artist Evans Kwadwo Donkor exhibited in the Department of Art Education, University of Education, Winneba - Ghana. The interpretive approach of the study constituted the artist's subjective analysis as an important aspect based on empathy and understanding of the perspective of his artwork (Alvermann & Mallozzi, 2010).

The interpretive analytical tool focused on interpretations and conclusions on the art approach by the artist Evans Kwadwo Donkor and the written and visual representation of his scrap metal sculpture (Allen, 2017). The study described the artist's statement of Donkor's philosophy concerning metal waste and his representation of work through coherent form, emotive expression, and social purpose embodied in his scrap metal bull sculpture. The study used subjective values in interpreting the sculpture. The subject values encompassed the description, philosophy, and interpretation of the work. This distinctive appearance of the work and the message the artist tries to put across in his work are described and supported by photographs. The reason for employing edited photographs without their backgrounds of the scrap metal bull sculpture indicated in Figures 5 (a - d) was to emphasise the arrangement of each scrap metal. These figures bring forth the artist's descriptive accounts of the individually unique character of discarded metal parts employed for the artwork.

4. Results and Discussion

4.1 Scrap Metal Bull Sculpture Produced by Evans Donkor

The scrap metal bull sculpture titled *Struggle for Perfection* is an assembled and welded metal sculpture produced in 2015 by Evans Donkor as shown in Figure 3 (a-c). The artwork shows a skillful manifestation of aesthetic and philosophical

understanding of art. The scrap metal bull sculpture was mounted at the forecourt of the Department of Art Education, University of Education, Winneba. A cursory view of the work shows that the artist created a unique value out of metal scraps to intensify scrap metal art production to lessen environmental challenges concerning metal waste (Eaton, 2006). According to the artist (An alumnus of the UEW), the creation of the freestanding sculpture was inspired by the steady growth of the University of Education, Winneba (UEW) over the years. Subjectively, the artist developed a concept based on the UEW's inception as a university college and its persistent struggle to achieve perfection and excellence through hard work. In addition, the artist's concept of the artwork was based on the interpretation of aesthetics by Immanuel Kant, which seems to connect beauty with learning institutions (Bruyn, 2014; Windt, 2008).



Figure 3(a). Scrap metal bull sculpture at the Department of Art Education, UEW-Ghana. (Source: Fieldwork, 2021).



Figure 3 (b). Scrap metal bull sculpture at the Department of Art Education, UEW-Ghana. (Source: Fieldwork, 2021).



Figure 3(c). Scrap metal bull sculpture at the Department of Art Education, UEW-Ghana. (Source: Fieldwork, 2021).

4.1.1 Equipment, tools and materials

The artist employed equipment, tools, and materials as hand implements and physical substances in making the artwork. These items played a key role in the production of the artist's scrap metal bull sculpture and in the easy production and performance of tasks (Hernandez, 2020; Lawley, 2020). Thompson (2012) discloses that using the right equipment and tools for the appropriate material

gives good results. The artist made use of equipment and tools such as a welding machine, bolt cutter, cold chisels, and sledgehammer. Materials used in the processes of fabricating the metal waste into artwork included discarded wheel/car rims, metal square/round pipes, bolts and nuts, nails, spoon handles, spring fenders, binding wire, and iron rods as illustrated in Figure 4.



Figure 4. Selected Scrap metals for the artwork
(Source: Donkor, 2015)

4.1.2 Welding technique

The artist used arc welding as a welding technique in producing the artefact. The arc welding for the construction of scrap metals requires several amps of electrical energy. It was also required to reach a melting point of the metal by heating. The fusion of the two or more metal waste surfaces together initiated a solid bond. This bond reinforced and linked the smelting and forming of the metal joints. According to the artist, the arc welding technique was suitable for the creation of artwork composed of ferrous metal parts with different melting

points. The advantage of this arc welding technique was that the joints made by welding were very strong and easy to operate. Zahner (2020) discloses that when the artist uses the brazing technique, this technique requires less energy than welding but more than the soldering technique. Considering the arc welding technique, the artist tried to elucidate the concept of aesthetics by focusing on the nature of the scrap metal. The artist carried out the artwork by assembling and constructing processes where the pieces of metals were joined using the arc welding technique. These scraps were put together and heated, allowing the joined parts to function as one (Donkor, 2015).

4.1.3 Balancing the work on the pedestal base

It was revealed from Donkor's artwork that the balancing of the work is felt through the flow of the animal movement. The artwork demonstrates the artist's in-depth knowledge of the assemblage and construction method that was useful in making a composition of such nature. Considering the constructed work, scrap metals of weight were asymmetrically arranged and balanced on the standing legs of the animal (bull) as a common technique used for optimising input, output, reducing latency, and ensuring fault-tolerant alignments (Ng, Lepinski, Wigdor, Sanders & Dietz, 2012). The scrap metals varied in weight and were arranged from car wheel rims, exhaust pipes, bolts, and nuts. The upper part of the bull seemed heavier than the lower part where the sculpted bull seemed to raise its back legs. The arrangement of metals was done to balance heavy objects on the pedestal. The heavy metals were used to create the upper part of the work that is attached to the pedestal base.

According to the artist, in achieving the balance of the pedestal base, heavy metals weighing 300 kilograms were used to form the neck, head, and standing legs constituting the upper part of the bull, whereas less than 300 kilograms of scrap metals were used to create the back of the bull by maintaining the weight of gravity on the pedestal base. According to the artist, the principle of Newton's law of gravity in physics states that the force between two objects is proportional to the product of their masses and inversely as the distance between them squared (MacDougal, 2012) was adopted in the construction of the work. It was related to the mass and separation of particles by making one side heavier on the ground as the force attracts the body of the animal (bull) towards the centre of the ground (Jones, 2019). Newton's law was important because it allowed the artist to calculate and predict the artwork. The weight of the metal pedestal base weighing 350 kilograms also formed part of the balancing where it seemed heavier than the arranged scrap metals.

4.1.4 Choosing the scrap metals

The significance of resorting to the use of scrap metal waste for artistic creation, as indicated in Figure 3, shows the dexterity and creativity of the artist that necessitates a high degree of artful thought. The artist's practical skills and knowledge are manifested in the execution of the scrap metal bull sculpture. The artist employs the elements and principles of art, the conceptualisation of direct observation, research style and subject, scientific and structural approach (Donkor, 2015). The study found out that the artist's choice of scrap metals for the artwork was solely dependent on the theme. This statement underpins the concept of "metal-morphosis" by some authorities in the arts such as David Černý (b. 1967) - Czech Republic, Alex Kveton (b. 1948) – Czech Republic, Edouard Martinet (b. 1963) - France, and John Lopez (b. 1971) - United States of America. The components of scrap metals as found objects were purposely unaltered and remained in the shape and state in which they were found as observed in Figure 4. This idea gave the sculpted work a unique character. According to the artist, the unique character and appearance of scrap metals were valued for their versatility. The material often gave additional function with both practical and aesthetic values. The artist chose disk brakes of different shapes and sizes (round) but invariably, as it was an integral part of the constructed work.

According to the artist, considerations in the choice of scrap metals for the work were done to compliment or contrast in terms of style, texture and form the exact shape of the theme selected. The scrap metals selected, as indicated in Figure 4, were sumps, rotor (disk brakes), cam sprocket, shocks/spindles, lower control arms, camshaft, and exhaust manifold. The artist used the formation of a vehicle engine system or component to compose his artwork. The artist mentioned that the sump pan is the base of the vehicle engine and serves as a reservoir of oil for the engine lubrication system while the exhaust manifold or pipe collects the exhaust fumes/gasses from multiple cylinders into one pipe. Based on this concept, the artist creatively used vehicle sump pans for the bull's head and used the exhaust manifold for the bull's tail as shown in Figure 5 (a - d).

4.2 Description, philosophy and interpretation of the scrap metal art

The description of art is very vital in aesthetic appreciation. Titchener (1912) clarifies that the description of an object is an account so full and so definite that one to whom the object itself is unfamiliar can nevertheless, given the skill and materials, reconstruct it from the verbal formula. There was a one-to-one correlation between symbols and the empirical items, and the logical order of

the specifications is the order of easiest reconstruction. Titchener's submission is based on psychology as it confirms the view shared by Shimamura (2014) that the meaning of Aesthetic is brought out enough by the adjectives- analytical and abstractive - which are applied to the psychological description. The analytical aesthetic of the artwork sculpted by Evans Kwadwo Donkor has inseparable attributes of philosophy with symbolic meaning. In view of the descriptive context, the artist shared that:

The scrap metal sculpture is an action bull composed of different discarded metal parts. It ranges from sump pan, camshaft, cam sprocket, lower control arms, rotors (disk brakes), exhaust manifold, spindles/shocks, car rims, ball joints, iron rods to bits of bolt and nuts twisted, turned, crumpled, and flattened metals. These metal parts are arc welded into a solid piece as erected on a solid metal pedestal (The artist, personal communication, June 11, 2015).

The scrap metal bull is a full-sized in-the-round sculpture poised of three-dimensionality, which measures 87 x 85 x 20 inches (6 feet high). It has two hind legs raised while the other two legs stoutly stand on the ground attesting to the centurion struggling in the Colosseum (Timemaps, 2022). The synergistic expression of the artwork shows how heavy and solid the scrap metals demonstrate. The delight and exquisite beauty of scrap metals from different forms, sizes, and features joined together with the arc welding technique give the artwork a unified interplay of geometric shapes in a rhythmic manner. The work displays an intriguing projection at both ends of the scrap metal pieces. The artwork is irregularly aligned whilst the undulating circular curves of scrap metals are arranged by twists and turns of the metal pieces. This gives the artwork an action and rhythmic feel. Various volumes of scrap metals were stacked and staggered together to create an environment of beautification for outdoor entertaining. The artwork is poised on an action bull. The constructed bull has a block-like head with a curved jaw as it gazes at the ground. The display of mastery with the use of different scrap metals that are coupled with shapes of curvilinear and rectilinear objects in the work allows the inimitable feminine and masculine feeling in the entire piece as the UEW institution is embodied by all the genders.

The artist further revealed that:

The scrap metal bull sculpture has two red wheel rims signifying the toil that the founding members of the University encountered in struggling

to put up the noble UEW. The workpiece has a round-metallic appearance, a determined and straightforward character portraying students of the UEW who have focused their minds and performances on academic excellence and knowledge (The artist, personal communication, June 11, 2015).

The piece accentuates a dialogue between the observer in the feeling of readiness, strength, determination, rage, and struggle for Academic success. The artwork has rational properties such as symmetry, order, and proportion as seen through the accuracy and meticulous rendition of the features of the animal. The action bull echoes through the unique qualities of scrap metal objects used and the impressive arrangement of different and assorted scrap metals created by the reflection of variety while the expression of the metals in the overall composition gives its abstract nature. The juxtaposition and play of positive and negative elements such as regular and irregular shapes give the weighty and substantial pieces an undeniable sense of lightness. The positive and negative spaces, the shadows, the texture, the line, and the moving symphony of rusty nature of finish were aimed at the result of a rich satisfying aesthetic sculptural experience (The artist, personal communication, June 11, 2015).

The philosophy of beauty of the artwork is based on McMahon's statement (2005) that, the philosophical interest in beauty is the subject of a judgment that allows one to exercise the social, comparative, and subjective elements of reasoning. The philosophy that characterizes this art of scrap metal is the bright formal clarity of constructed metals and its extraordinary elegance of articulation. Its level of virtuosity is the uniqueness that brings all parts of found metal objects together using the arc welding technique. This technique gives the artwork an additional form of visual richness. The beauty of this scrap metal art is how the found metal parts have been welded together.

According to the artist, the discarded metals used in the artwork were important to him by bringing life to the scrap metals. Reshaping and attaching the various components, giving old discarded metal objects a new purpose, as well as a bit of *soul*, was, therefore, Donkor's philosophical expediency, fitting the entire concept into what the artist described as *metal-morphosis*. This philosophical expediency as shown in Figure 5 (a-c) with metal waste demonstrates the potential of scrap metal as a material for sculpture. The artist expressed that:

The action bull interprets the struggle for perfection where humanity is regarded as a process of successive achievements. The effort of every

human being is understood by actions. These actions focus on human and spiritual realisations. In the struggle to accomplish higher exploits, one realises difficult moments (The artist, personal communication, June 11, 2015).

Based on the artist's thought, it is stated that man never is; he is always to be. Men do not entirely live in the present (Hebert, 2017). There is an element of the future in whatever is done, and men never confine themselves to the present. This statement means that people identify themselves though in a covert manner, with ideals to be achieved in the future, which are hoping to bring great fulfillment (National Research Council, 1992). With the composition of the action bull, the flat circular base is made of solid metal and portrays the support of the University of Education Winneba (UEW) in Ghana. The circular base of the work seeks to offer well-rounded knowledge and skills to both able and less deprived people who seek to develop their minds and hands toward national development while struggling for perfection. The solid metal base also gives the work firm support that ensures stability.

In an ensuing conversation, the artist shared that:

The metal base depicts UEW's affirmative support to its students while pursuing perfection at a higher height in academics. Retrospectively, the bull also symbolises UEW's struggle to attain perfection through rigorous situations since it started as a University College in 1992 by government's ordinance and was placed in a special relationship with the University of Cape Coast as part of the effort to create a stimulating intellectual environment (The artist, personal communication, June 11, 2015).

One of the participants expressed that:

The University was established as part of the tertiary education component of the Education Reform Programme, which was launched by the Government of Ghana in 1987. The institution has now become self-sufficient and has, through the struggle, attained academic excellence through thick and thin (Respondent 1, personal communication, May 5, 2015).

In relation to the aesthetic conversation, the University's motto, which is Education for Service, is the bedrock of every country's development, and this

institution continues to compete to live up to expectations. In the field of teacher education, UEW is ranked very high in the African sub-region as it continues to offer students teaching and learning skills to excel at higher heights (Brooks, 2009; Wan, 2008). All these endowments of UEW, as revealed by its management are depicted in the strength and variations on the scrap metals with which the bull was constructed. In an actual sense, the living nature of a bull possesses a wild fighting or struggling spirit.



(A)



(B)



(C)



(D)

Figure 5 (a - d). Various views of scrap metal bull sculpture. Artist: Evans Kwadwo Donkor. Measurement: 87 x 85 x 20 inches with width and depth (6 feet high). Medium: Scrap metals. Location: Department of Art Education, UEW, Winneba - Central Region, Ghana. (Source: Donkor, 2015).

5. Conclusions

Trading metal waste, especially discarded metals and electronic waste (e-waste), is an economic quest for some people in Ghana. Metal scavengers, collectors, and processors have used scrap metals for commercial and practical purposes. There seems to be very little attention to the aesthetic values of metal waste by some contemporary Ghanaian artists. The study, therefore, sought to explore the creative skills and evocation of waste metal materials into sculpture by Evans Donkor and analyse his aesthetic collection of metal waste to create an artwork from the discards. Donkor's contribution to art practice and knowledge with his scrap metal art is crucial to managing the environmental challenges when it comes to mitigating the problem of metal waste. The artistry and style of aesthetics in the artwork advocate the importance and strength of tertiary education in Ghana.

It was also revealed that the aesthetics of the scrap metal sculpture (*Struggle for Perfection*) exhibited in the environment of University of Education, Winneba embraced the values of description, philosophy, and interpretation, which were associated with the distinctive appearance of the scrap metal sculpture and the message that the artist had imbued in the artwork. The artwork highlighted the creative redemption of scrap metals into beautiful and powerful artwork as it was inspired by metal waste, leftovers, and throwaways from the environment. It was observed that metal waste provides the creative possibilities for reusing, reworking, and giving redundant materials a new life. It was established that the philosophical meaning of the artwork was based on the artist's concept of bringing life to the scrap metals as he described it as *metal-morphosis*. This concept was seen in the artist's fabrication of reshaping and attaching the various components of metals. This practice gave old discarded metal objects a new purpose and a bit of soul in the creation of the sculpture.

The study, therefore, concludes that the creativity of Evans Donkor and his culmination of aesthetic understanding of metal waste into artwork strengthen art practice as well as managing the environmental challenges by getting into

scrap metals as an alternative material for sculpture. The assembled scrap metal sculpture titled *Struggle for Perfection* gave credence to the assumption that scrap metal art cannot only rid the threat of scrap metals on the environment. However, it can be an important source of alternative materials for an exploration into its interesting components of sculpture making.

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