

Architectural Philosophy and Design Process: A Case Study of Guiding Light Assembly, Lagos Nigeria by Olajumoke Adenowo

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Abstract

Architectural philosophies are guiding principles that govern the way and manner Architectural designs transit from conceptualization to realization. However, lack of publications on the philosophies of Nigerian Architects as pertaining to design process despite attaining huge developmental strides and monumental awards led to taking a scholarly look into the Architectural philosophy and Design process of one out of many brainy Nigerian Architects with the aim of showing the evolutionary trend of a notable project that reveals the underpinning philosophy guiding Architectural practice from conceptualization to actualization. The scope involves its environmental impact while the method of research is qualitatively inclined through literature review and use of case study. This qualitative baseline captured Architect Olajumoke Adenowo an award-winning Architect whose design has always been tailored towards spatial dynamism per time in progressive contextualism, an approach which seeks to express the physical, budgetary, climatic, cultural and technological inclination of the community and zeitgeist in the design process. These invariably enhance the sustainability of Olajumoke Adenowo's design projects, due to the integration of design solutions within the socio-human community context. Her emergent design as a result of all these design considerations are modest; they are not loud, they allow nature in the guise of sunlight and wind, to speak the language of her architectural philosophy.

Keywords: Architectural philosophy, Design process, Evolutionary trend, Environmental impact, and Contextualism

Introduction

Architectural philosophies are guiding principles that govern the way and how architectural designs transit from conceptualization to realization. It dictates the influencing decisions that eventually cumulate into the finished Architectural product. Ahmad A.A & Mohamed R. E. (2015), sees it as a set of ideas, theories and concepts that affects Architectural work, suggesting that the design process leading to the eventual product is guided by these ideas. Common Architectural philosophies by notable Architects include "*Form follow function*" (Louis Sullivan), "*Less is More*" (Mies Van der Rohe), -a leading directive for Minimalist Architecture. Architectural

philosophies cannot be divorced from that of Art as suggested by Harries in "*Simplicity is the ultimate sophistication*" (Leonardo Da Vinci).

The Guiding Light Assembly (GLA) is a State-of-the-Art auditorium conceptualized by Arc. Olajumoke Adenowo a renowned Nigerian Architect, to evolve the concept of Spatial dynamism per time for multi-functional use. The auditorium is one of the iconic buildings designed by her within the 38 years of her Architectural practice. It is located on plot 10A & B Layi Ajayi-Bembe Street, Parkview Estate, Ikoyi, Lagos, Nigeria as shown in Plate 1.



Guiding Light Assembly

Plate 1: Showing the location of Guiding Light Assembly

Source: <https://www.google.com/maps/place/>

The Guiding Light Assembly auditorium is situated in the Northeastern part of Lagos Island in Lagos State, Nigeria. It is styled as a contemporary, ecclesiastical, multi-functional, mix-use building, combining religious, social and commercial functions.

The Architect and Her Philosophy

Olajumoke Adenowo is a Nigerian Architect, Interior Designer, motivational speaker and a philanthropist. Olajumoke Adenowo is an award-winning Architect, who when profiled by CNN was referred to as “Africa’s Starchitect” (Cartier Women’s Initiative, 2018). She had several awards to her credit. To cap these awards was her appointment as a Visiting Professor, an honour as a Laureate and a Guest Scientist at the Chair of Theory, History of Architecture and Art & Design arm of the Department of Architecture, of the prestigious Technische Universität München (TUM) in Germany (TUM Department of Architecture, 2019).

As the founder and principal partner of AD Consulting, she has designed and overseen the construction of over 70 projects including Nigerian government buildings, Coca-Cola, L’oreal and banks (Odinaka and Fancy, 2019). Some of her notable works includes:

1. Guiding Light Assembly

2. Kinshasa (DRC) City Centre redevelopment
3. GT Bank High Networth Individual Centre
4. Access Bank Youth Banking Brand environment redevelopment
5. OAU Senate Building - Ori-olokun
6. Calabar Church

Her work stands at par with some fascinating building in Nigeria, such as the international conference Centre and NNPC towers. These designs don’t just deliver on the expected purpose of functionality but also as a landmark of iconic significance. It conveys the attribute of the fourth dimension which takes a leap into the concept of time and consequently the dynamic perception of space as revealed in Light. This she affirmed in one of her interviews with CNN in reference to spatial coherence experience stating that “*Each space I design changes in time. I design lighting schemes in such a way that by night the building is a totally different entity from what it was in the morning. I design buildings in such a way that as you move through the space, you experience something new at every space*” -(The Guardian, March 2021).

Our existence occurs in a spatial world dotted with varying experience as perceived in color and light which mediates our experiential construct. The influx of light into interior building spaces through fenestrations influences a dynamic experience on the user depending on the width of fenestration and level of entry coupled with our movement through the length and breadth of the Space (Ulf. *et. al* 2011). This guiding principle became a philosophy of worth to Adenowo, no wonder she ardently committed herself to designing each interior space of her building design. Sukhtej (2006), opined that spatial envelope, Articulation of spatial envelope, Role of structural systems and Movement through space all influences the quality of perception and experience in any given space. Millet (1996), stated that architectural spaces are defined by how much of an enclosure is revealed in light, while Garling (1970), shows that the depth of a space is also revealed in light. This points to the fact that the fourth-dimension experience of any space is dependent on Light.

Guiding Light Assembly Project (GLA)

Guiding Light Assembly project, a 2,250-seater; multi-use auditorium, meeting rooms and office complex was conceptualized in line with Olajumoke Adenowo's three design themes: functionality, lighting and context. Her dream is to design a building that will define Nigeria's identity, the way Tour d'Eiffel defines Paris (Enwonwu and Braithwaite, 2016). This she achieved with a design in sympathy with its context. The primary aim of the design is to make the centre a hub of the community life and activities all week long. As a result of this aim the effort of the architect was geared towards welcoming all inhabitants of the community to the assembly. From the aesthetic façade; with well finished composite metal plates/tiles, adorning columns and glass claddings; which draws the attention of passerby to the building (Plate 2), to the warm reception of the entrance foyer; which housed a well-positioned vertical connecting stair, leading to the three floors gallery and now to the focal point of the design; the auditorium, with theatrical seating arrangement with a skylight covered atrium. It is a well rhythmic architectural planning.



Plate 2: Showing the façade of Guiding Light
Source: Morolake Dairo, 2019. <https://goo.gl/maps/DPybdHe3LhPnuhaJ7>

The Guiding Light Assembly design diverges from the conventional traditional church typology which entails a purpose design activity taking place once or twice a week. It attempts to create a hub center for the community life and activities taking place throughout the week as well as serving as a value-adding edifice for the community. As a testimonial of its utility, the neighbouring school and organizations host all their functions in GLA. The building also houses offices for all church staff, designed around a courtyard in which the Baptismal fount is located (AD Consulting, 2012).

The design concept of the church revolves round the use of light to create a fourth dimensional effect in the building (Happenings, 2015). Dramatic lighting effect is achieved through the manipulation of both day lighting and artificial light in harmony with the name of the church; Guiding Light.

Plate 3 shows the dramatic natural lighting effect from the skylight, which projects a powerful image as the church's gateway to spirituality. The Guiding Light Assembly design celebrates form, light and materiality while providing a highly efficient and inspirational Civic Centre. The façade of the building is adorned with glass curtain wall, which gives it a dramatic view of the street; from the inside, at the same time aesthetically attracts the attention of passersby. All these salient features succeeded in justifying the concept of the Architect in attracting the community to all activities; spiritual and social, within the grandiose building all week long.

The Guiding Light Assembly design is the watermark of her career. The design is peculiar with its celebration and manipulation of light, skillful blend of materials; to achieve energy sustainability, and harmony with its residential context.



Plates 3: Showing a large skylight covered central atrium allowing light influx into the Auditorium.

Source: Adegbola (2016).

Light is a strong force in Olajumoke Adenowo's work. Light makes manifest. Light is the revealer. Nothing is seen until there is light. Form and space are perceived as light directs (Enwonwu and Braithwaite, 2016). She allowed natural daylight streams into even the largest buildings she designed. Her belief is that architecture should be the manipulation of light: both artificial light and daylighting. She also believed in the words of Tadao Ando that "architecture shouldn't speak too much. It should remain silent and let nature in the guise of sunlight and wind". Olajumoke Adenowo's designs are essentially contextual. This comes to fore through the recurring themes in her designs: connection to spirituality, her playfulness with light, and her focus on blending her works with the natural surroundings. She believes project possesses a unique soul, which is revealed and expressed through the prism of the client's needs, the context (physical, budgetary, cultural, climactic, and technological) and the zeitgeist. (Enwonwu and Braithwaite, 2016).

Guiding Light Assembly, one of Olajumoke's architectural signatures; a worship centre in a residential neighbourhood, attest to her three themes: functionality, lighting and context. Her designs are mostly simple building that makes the most of what it can, a testament to the phrase "less is more" by Ludwig Mies

Van Der Rohe (1886-1969), one of the founders of modern architecture and a proponent of simplicity of style. She belongs to the school of thought: "Form follows Function" and believes there should be a balance between form and function. The quest of the architect for a multi-purpose worship centre, that will be the hub of the community's activities; both spiritual and social, shaped the emergence of Guiding Light Assembly, which is a unique blend of ecclesiastical and contemporary architecture (AD consulting, 2018).

The seating arrangement allows all audiences to have good exposure angle, good sight lines and good hearing lines of the activities taking place; in the central atrium, at the same time. The central skylight covered atrium admits natural lighting into the auditorium, thereby saving energy. The skillful blend of glass and steel materials in buildings is the language of 21st century architecture. The building is suffused with natural daylight (Sarafadeen, 2018). The seating arrangement depicts togetherness and oneness before the presence of God, while the flood of natural lighting spiritually is reminiscent of the flood of the Holy Spirit, which represents the presence of God. The interface between natural lighting and artificial lighting; as shown in plate 4 below, is a beauty to behold in the evening.



Plates 4: Interface between natural lighting and artificial lighting in Guiding Light Assembly auditorium

Source: <https://goo.gl/maps/3gJCWjEeWupR1XgK8>

Joined to the back of the auditorium is the office complex, and meeting rooms. These are arranged around a courtyard opened to the sky. At the center of the courtyard is the baptismal font; where new converts are baptized, which is the second focal point of activity of the design (Plate 5). In the office complex are meeting rooms, which are made available to the community to take advantage of. All these facilities are sources of internally generated revenue (IGR) for the church, which helps in the day-to-day maintenance of the church physical structures. Parking facilities are provided within and outside the church premises.

The external works around the building is predominantly concrete interlock paving; to enable parking within the church premises, with kerbs defining the areas for green landscape. Flowerpots are also used to compliment the external landscape and internal spaces.

Evolution of Guiding Light Assembly Design

The building possesses such a modest character that speaks of peace and tranquility. The skylight over the atrium at the core of the church ingeniously allow

natural light to flood the auditorium, in a fashion reminiscent of descent of the Holy Spirit, thereby invoking spirituality and heightening the faith of the worshippers. Guiding Light Assembly, evolved from a house fellowship of 5 young believers on the Island of Ikoyi in the early 1990s and never took on a corporate identity until 1993 when it was registered with the Companies & Allied Matters Commission as a church. In 1994, GLA acquired a sizeable plot of land with part submerged in the Ikoyi Lagoon, which meant dredging and sand filling had to be done to reclaim the land for construction. Dredging and sand filling was eventually done; the plots reclaimed, and left for about two year to compact. The entire northeast of Lagos Island was reclaimed and the coastal shoreline protection carried out to eliminate coastal erosion. The auditorium project was commissioned in March 1997, with a N62 million contract sum signed; with a building contractor, to flag off the construction of the church (GLA, 2018). However, the church auditorium was not ready for partial occupation until March 2002 and it took many more years to attain the finesse we see today.



Plate 5: Showing the baptismal fount courtyard

Source: Korede Solomon Feb, 2019. <https://goo.gl/maps/5KtoPkF7Y9ndqRfz5>

Research Method

A qualitative method of research adopted for the study involves review of existing literature from sources such as: published and unpublished reports, textbooks, seminar papers, journal articles, internet materials among others, for in-depth knowledge of the theoretical concepts and philosophy employed by the architect. The findings in these literatures were also confirmed through direct observation of the case study and personal interviews conducted in both structured and unstructured manners. The Guiding Light Assembly was selected as a case study because of it is the watermark of the architect's career. The findings and discussions are presented in subheadings, while pictures were used to support some of the findings and further explain the issues and design concept, the construction method and the environmental impact of the church to its context.

Theoretical framework

The concept of fourth dimension is an advancement in the already known dimensions moving away from a single dimension of straight line to formation of Area in 2 dimensions and additional third dimension of vector Space to the inclusion of "Time" as the fourth (Vector Space-time).

Yagya Dev Bhardwaj (2016) opined Einstein's theory of relativity as not giving a clear, unique distinction between space and time but only dependent on the time frame of the observer having the perception of space. Thus, time is crucial to the perception of any Architectural Space. It could either add or reduce its value. The subject of time dictates the positioning of the past, present and eventual future, which seems to materialize the activity of man which is never faster than the speed of light according to Minkowski diagram which depicts the trajectory of a particle as a world line.

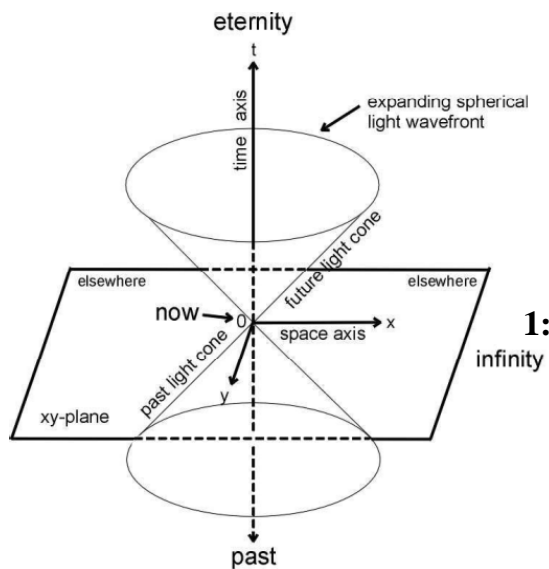


Figure A. A Spacetime frame in multiple dimensions

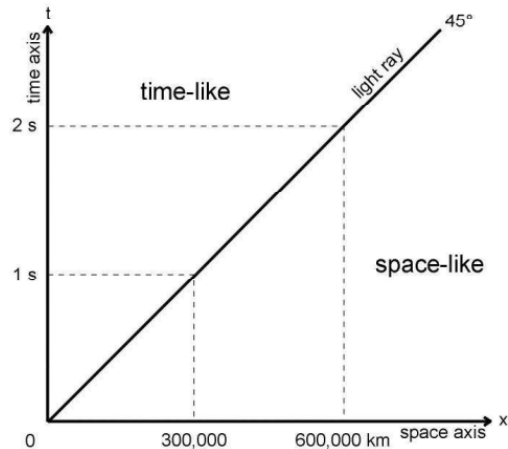


Figure B. A Spacetime frame

One second of time along the time axis equals 300,000 km along the space axis.

Figure 33.3 Basic Spacetime Diagrams

Source: Yagya Dev Bhardwaj, 2016

Minkowski visualised space and time as a light cone defining a boundary between past and future accessible locations

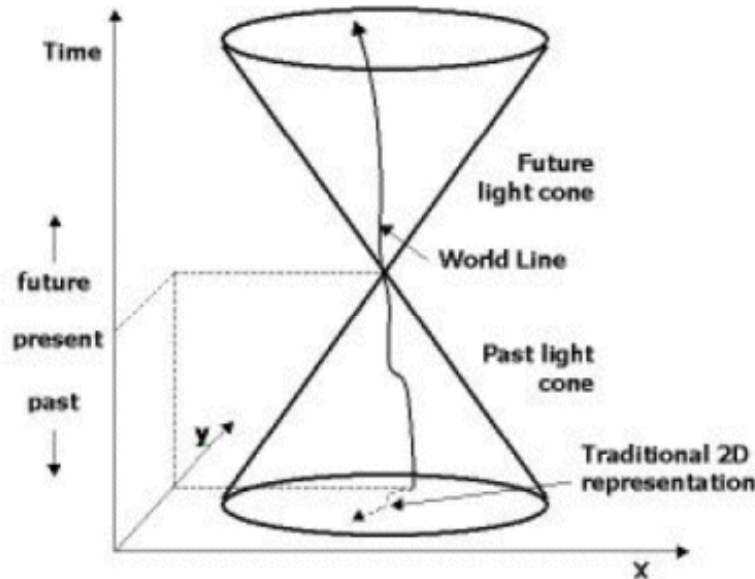


Figure 2: Minkowski Space-time diagram
Source: Yagya Dev Bhardwaj, 2016

Findings and Discussion

The primary aim of the design of Guiding Light Assembly as established in the literature section is the design of a worship centre that will be a hub of community life and activities all week long. The main focus of this study is the architectural philosophy and design process employed by the architect to achieve her set goal and the environmental impact of the building to its context. These design considerations are highlighted as follows:

Design Concept and Analysis

Olajumoke Adenowo's design of the Guiding Light Assembly celebrates form, light and materiality, while providing a highly efficient, inspirational and spiritual worship cum civic centre, which is open to activities all week long. Her concept is such that all are welcome to the activities centre. The tiered seating, all arranged around the skylight covered atrium; the focal point of the design, to foster oneness, warmth, and togetherness.

The form of the building is contemporary in design, but it pays homage to its:

ecclesiastical function and natural environment. The skilful blend of glass and composite metal plates/panels on its exterior walls, gives the building a unique aesthetic appeal to passerby, visitors and worshippers.

Light is a strong element of the design concept which is well celebrated in the church design. Light is key to achieving passive design and sustainable building, which are the objectives of the architect. The fenestrations of the building are arranged in a way to make natural lighting predominant. This drastically reduced the consumption of energy. Though both natural lighting and artificial lighting systems complement each other perfectly well; in the auditorium building, giving their dramatic effect in the evening.

Sustainable materials are put into good use in the building. The exterior walls are faced with aluminum composite panels (ACP); used on the façades of the building, which is extremely resistant to weather conditions and keep maintenance to the barest minimum. They are aesthetic, elegant

looking, smooth, modern building material used in the design of architectural structures. Another advantage of this type of facing is that it doesn't wrap. It can withstand fire better than most building materials. Glass claddings are also used in the façade of the building, while skylight and courtyard are used in some spaces to admit light into the building. The galleries saw the use of tiered concrete for good: sight lines, exposure angle and hearing lines. All these materials are used in harmony to each other and they collectively add to the general aesthetics of the building.

Environmental Impact

On purchase, the report shows more than 40% of the land where Guiding Light Assembly is presently located was submerged in the Ikoyi lagoon. This necessitated dredging and sand filling to reclaim. During the reclamation process, lots of flora and fauna were displaced. These flora and fauna are very important to the environment.

The construction of the church saw materials hauled from quarries to the site on a daily basis in trucks that use fossil fuel as a source of energy. In addition, concrete mixer and crane machines that also use fossil fuel as a source of energy were also used at the site. The effect of this fossil fuel is the emission of greenhouse gases that could contribute to climate change. Welding of iron by welders; through gas and electrodes, heating; by gas burners, to bend plastic pipes by plumbers, all generates greenhouse gases; though it may be minimal in respect of the site in question, but the aggregates of such sites in the neighbourhood, contributes to global warming.

Wastes were also generated during constructions; its disposal has huge environmental impact and can cause problems. Although the waste generated on GLA site was carted away and dumped somewhere else, if on dumpsite, some waste would eventually rot; but not all, in the process it produces smell or generates methane gas, which is explosive and contributes to greenhouse effect. Leachate

produced as waste decomposes, may cause pollution. Badly-managed dumpsites may attract vermin or cause litter. Incinerating waste also causes problems, because plastics tend to produce toxic substances, such as dioxins, when they are burnt, causing air pollution and possibly contributing to acid rain, while the ash residue may contain heavy metals and other toxins (Green Choices, 2000). To ameliorate the adverse effects of dumpsite in Lagos state, the government has designated locations for this purpose outside the metropolis. All waste generated at construction sites are eventually parked and dumped at the designated dumpsites for subsequent sorting and processing. This takes care of leachate, vermin and toxic substances which are injurious to the environment.

In public buildings, diesel generators are used as a backup source of electrical power. The major environmental impact caused by this is constant CO₂ emissions and noise pollution. Adverse human health effects result from environmental exposure to diesel exhaust. These exposures have the potential to induce lung cancer in humans and animals and may cause acute and chronic non-cancer adverse respiratory health effects (Lloyd, Thomas and Cackette, 2011). In the case of the GLA, CO₂ emission is minimal, because of the passive design principle adopted by the architect, which makes the usage of generators not fashionable. Natural lighting is used by the day with the exception of powering the sound and musical equipment, which are done through alternative energy. Noise pollution is curbed through the use of silence proofed generators and aluminum composite panels (ACP) exterior wall facing; with reflective surface, that reflects off incident noise on the building envelope; disallowing transmission into the interior, which is in line with sustainability philosophy of the architect.

Conclusion

The Guiding Light Assembly is indeed a good blend of ecclesiastical and contemporary architecture. A break from

the conventional traditional church typology design that utilizes few days of the week for its usage, to a community hub of activities both spiritual and social all weeklong. The inclusion of the design into its context is highly welcome; in that, it's in harmony with its residential community, which invariably benefits immensely from the facilities provided, for their spiritual life and social engagements.

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