

The Architects' Practice Knowledge, Expressions and Communications of Architectural Design Intentions in Southwest Nigeria

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Abstract

This study investigates the knowledge of Architects in the practice of design intentions, communications, principles, and expressions of architectural design in selected Architectural practices to improve architectural design delivery in Southwest Nigeria. Data collection was enhanced with a structured questionnaire from 250 participants comprising practicing Architects at various levels. The survey data were analyzed by descriptive statistics and the key finding is that Architects' practice knowledge of intentions, communications, principles, and expressions of architectural design in the study area is very high. Appreciably, 66.6% of the respondents use pure lines to communicate design intentions, 25% of the respondents communicate through forms and shapes while 4.2% of the respondents each use geometry and materials as elements of communication of architectural intentions. The Pearson Correlation analysis to establish relationships between the tested variables reveals significant relationships between the meaning of architecture and visual communication of architectural intentions ($p < 0.05$; $r = 0.359$). This study recommends that Architecture as a utilitarian art requires the effective and clear conveyance of thought through pure visuals, clear lines, forms, and materials to communicate clear intentions, culture, personality, and status as well as create an important human-environmental link.

Keywords: Architecture, Communication, Expression, Philosophy

INTRODUCTION

Architecture is a creative and utilitarian art that offers enduring and sustaining solutions to multifaceted human and environmental concerns. It is a dynamic, functional, and practical art that is deeply enshrined in man's development according to Belyaeva, (2017). As a result, the profession employs the available materials in its most authentic and harmonious form for man's territoriality through the incorporation of natural components with logic, structure, and composition (McLeish, 2019). The inventive processes and language of design help in creating an impact on architectural processes and outputs. Therefore, the architectural design process creates functional spaces that meet human needs, create beautiful environments, and define the city's image by providing harmonious views and effective landmarks. It also aims at improving the overall urban fabrics and skyline as well as presenting views in pure, simple, and

natural ways for easy understanding (Samuel, 2018; Salama, 2019). It further opens up doors to multi-dimensional breakthroughs and developments (Corbusier, 1923; Wright, 1943; Durmus & Kuloglu, 2013).

Architects conceptualize design ideas from unseen imaginations and impulses (Purdy, 2021); they visualize buildings before they are being built (Maher et al., 2018); and in the process, they are responsible to themselves, the client, the natural environment, the society and man's existence (Zychowska, 2019). The characteristics image of architectural works, urban values, and urban forms becomes significant through expressions of design objectives, architectural philosophies, and decisive clear representation of design intentions. Appreciating the significant influence and impact of architecture requires Architects to produce designs with minimum ambiguity but send design intentions and developmental information to urban dwellers and the entire urban environment. This necessitates the understanding of the fundamental principles guiding architectural expressions and ways to communicate design intentions. This study aims to offer practical advice on how expressions of architectural design objectives can be improved, upheld, domesticated, and used as a tool for urban development in Nigeria.

LITERATURE REVIEW

Expression of Architectural Design Philosophies

Architecture is developed around the common philosophies of expressionism, cubism, modernism, and biomimetics. This design philosophy according to Salama (2019) makes building conception, design, and delivery easier. Wrenn (2019) posits that these philosophies allow buildings to relate with the "metaphorical, metaphysical, and epistemological" issues in the best ways. Expressionism according to Better (1981) depicts free but frenzied design forms that defy any constraining principles and any typical western architectural orthogonal system. More so, expressionism is a non-objective architectural style, through which buildings are expressed in delicate, flowing forms on the one hand and sharp, faceted excrescences on the other hand. The expressionist design does not appear to have a coherent vocabulary of forms; it appears to be the first style without at least a few constraints. Expressionist Architects express distinct self-expression in urban environments, most often through the use of materials such as glass. Finally, Blatter (1981) was of the view that on closer investigation, expressionist designs communicate revolutionary, transparency, instability, and flexibility.

Modernism is another philosophical movement in architecture that contributes to the spread of social thought (Beyaz & Karaman, 2021). The authors applauded modernism as it is responsible for discoveries and new processes in social life ushered by the industrial revolution in new approaches to design forms. The twentieth century saw major changes in social, economic, architectural, and artistic fields; affectionately known as the modern period, the twentieth century was marked by new ideas of architectural expansions (Beyaz & Karaman, 2021). Furthermore, modernism redefined the concept, context, and meaning of architectural spaces by establishing new relationships between indoor and outdoor areas, as well as meeting human requirements in terms of art appreciation and construction. It expresses the purity of forms, the utility of places, and the breaking of rules through simple geometric shapes, transparency, occupancy-void ratio, and the visual link of inner and outdoor spaces (Corbusier, 1923; Trans Merzi, 2015; Beyaz & Karaman, 2021). Cubism on the other hand is based exclusively on the notion of splitting objects into pieces and reassembling them with new

interpretations. The object loses its essential form and transforms into a completely new asymmetrical, transparent, interwoven, and geometric shape (Giedion, 1941; Beyaz & Karaman, 2021).

Above all, the actual philosophy of architectural design is based on aesthetical and ethical concerns. This forms the basis on which all other philosophies operate. It is believed that a good balance of ethical and aesthetic considerations produces exceptional architecture that is easily related to social, theoretical, and political philosophy. According to Lagueux (2004), architecture and ethics are inextricably linked, and architectural problems frequently become ethical issues that can be solved simultaneously and with the same method. This assumed link between architecture and ethics could be viewed as a "reformulation or evolution" of expressionist theory, which considers function or utility to be an inextricably vital part of the design that must not be overlooked.

Communication of Architectural Design Goals

Vitruvius described architectural design goals as "firmitas, utilitas, and venustas" (Durmus & Kuloglu, 2013). These are frequently interpreted as architectural space usefulness, architectural form build ability, and architectural design aesthetic respectively. Over time, this notion has become the language and approach to architecture that is most commonly used to achieve in-depth examination and comprehension of architectural design. The "venustas" or delight attribute of an architectural piece is the creative or communicative design process concept that offers valid and realistic design solutions which are achieved through the use of lines, forms, and geometry (Durmus & Kuloglu, 2013). The creative design and drafting process often determines the expression and communicative forms of an architectural piece. This aids in the transmission of information as well as the presentation of intellectual content to users and the entire cityscape.

Design objectives are also achieved through the use of architectural components. For instance, the use of a dome, tower, or spire in religious buildings symbolizes vertical communication between man and the superior God. Furthermore, the intimidating tall solid walls of prisons typify them as places of confinement and torture whereas the array of brightness and display of many colours in playgrounds communicate joy and ecstasy. Thus, human engagement with architecture allows for a better comprehension of the overall purpose of such design and the entire human environment thereby allowing for the exchange of ideas, information, and knowledge (Mathew, 2008). Michell (1990); Mathew (2008) relates architectural communication via shapes and forms to linguistic communication via logic, semblance, and similarity. The authors outline the importance of architectural communication skills for understanding, interpreting, and communicating effectively with the built world.

Furthermore, McQuaid, (1993) posits that credible and majestic architecture can be influenced by music, painting, and natural sciences, in addition to structural theory and geometry. According to Ibrahim (2007), buildings are expected to freely express status, authority, prestige, privacy, and security on one hand as well as displaying aesthetical rhythm, imaginative creativity, and scientific research through visual enjoyment, economy, building efficiency, and beauty on the other hand. Another school of thought held that man's created form is a representation of his ideas, beliefs, and relationship with the natural world (Aik 2008). For instance, trees and sculptures were used as a structural metaphor in Saint John the Divine

Cathedral (Plate 1) to "convey nature, mobility and penetrability" (McQuaid, 1993). More so, the iconic nature of some high-rise structures, particularly those used for financial and economic activity, expresses capitalism and material luxury, which has an impact on the feelings of urban residents' (Ibrahim, 2007). Architectural styles and shapes are frequently used to communicate metropolitan cityscape developments, growths, changes, and transitions since architecture consciously and unconsciously adds life to urban cities through its designs (Auburn & Barnes, 2006).

In sum, Architecture can be synonymous with a written text sent to an unknown reader; it does draw in the crowd and provides meaning, context, and significance through its expressions. Architecture is a form of art in which users express themselves through many avenues for the explicit conveyance of information and values. It is represented through its forms, structures, and spatial arrangements, which sometimes symbolize an individual's or a community's beliefs, values, culture, and social standing. Furthermore, architecture conveys personality, status, and how they are expected to act in the constructed world. Therefore, architecture as a utilitarian art produces buildings that can be perceived in a variety of ways depending on the needs and perspectives of the observers.



Plate 2: Tree a structural metaphor in Saint John the Divine Cathedral, New York
Source: Masonry Magazine, (2018)

Architecture and the Natural Environment

According to Katiyar, Goel & Goel (2021), the natural environment has provided man with tremendous inspiration over time. The variety of shapes, colours and textures of natural vegetation, the ever-changing hues of clouds in the sky, and the anthropologically balanced natural objects contribute to an artistically pleasing and praiseworthy natural environment. The natural geometry and features in their rhythm of lines, colours, and forms are extremely beautiful and inspire Architects with significant impacts on architecture (Hula & Flegr, 2016). Architects thus articulate the functional and creative natural principles to reach the ultimate aim of expressing design intentions and communicating freely with the environment, while also seeking to improve aesthetics and provide a wide range of solutions to human, socio-spatial, and environmental challenges (Ghom & George, 2021). It thus creates a built environment for current and future generations that meet developmental needs and essential

requirements for which it was designed (Castello, 2016). Corroborating Wright (1943), Zhang and Mueller, (2017) posit that architecture requires a deep relationship with both living and inert aspects of the environment (Huskinson, 2018).

Furthermore, design elements, components, and materials are not meant to only protect against the weather but they are also expected to communicate meaning and transmit design principles (Stergiani, 2017). For instance, openings in buildings should not only serve as a means of ventilation but also as fundamental elements of the overall composition that is responsive to its surroundings (Zhao et al., 2021). Materials, texture, colour, and character should be approached appropriately as veritable tools to assist the designer in delivering a poetic composition that sits well in the environment (Aelenei et al. 2016). Therefore, local materials offer eco-friendly and "organic" feelings when intelligently and appropriately incorporated with modernism (Plate 2); as such, an environmentally beneficial, elegant, and timeless architecture that relentlessly relate well with its surroundings is achieved (Allen & Iano, 2019).

In sum, architectural designs are "not only the process of making shapes or forms," but also a "discursive and metaphoric" process that occurs after profound, continuous, progressive thought and activities that involve all-natural components of human senses and experiences (Lakoff & Johnson, 2005). Vitruvius offered nature and the human world as metaphors and sources of inspiration that architecture should observe, copy, and imitate to improve architectural creativity, meaning, and message delivery (Özdemir & Selçuk, 2016).



Plate 2: Biomimetic Architecture inspired by nature; MMA Office Building and Wuhan Energy Flower Building, Source: Beyaz and Karaman, (2021)

RESEARCH METHODS

The analytical framework of this study is explicitly focused on the production of informed architectural designs as a philosophical explanation of the clients, urban, societal, and environmental needs. Hence, this motive necessitates the central research question on the meaning of architecture and how best architectural intentions can be communicated; its philosophies expressed and linked with the environments. The study adopted a quantitative research methodology through collection of data using carefully structured questionnaires. The sample frame comprises Architects across all levels and fields of Architecture especially those that participate in architectural design activities.

The questionnaire probes into the general characteristics of the respondents, the meaning and communication of architectural design intentions, and as well investigate the expression of architectural philosophies. In total, 250 copies of the questionnaire were administered while 216 were retrieved and used for analysis. Data obtained from the survey were subjected to descriptive statistics and content analysis which involved the calculation of percentages, frequency distribution, and Pearson Moment correlation analysis to establish relationships.

RESULTS AND DISCUSSION

The Meaning of Architecture

Table 1 investigates the meaning of architecture amongst practicing Architects at various levels, the descriptive statistics show that from the sample, the highest proportion 110 (50.9%) of the respondents believe that architecture simply means creating functional spaces for basic activities, 67 (31%) of the respondents agree that architecture is purely a creative art aimed at producing buildings that showcase the social status and achievements of their clients; 21 (9.7%) of the respondents further see works of architecture as symbols of hope, while 9 (4.2%) of the respondents agree that architecture means the provision of extravagant spaces to display superiority and classes in society. This reveals that architecture is a profession that accommodates the expression of diverse views and opinions which also corroborates Corbusier, (1923); Wright, (1943); Durmus & Kuloglu, (2013); Belyaeva, (2017) that Architecture is a dynamic and meta-language with different meanings depending on the divergent views of the individual.

Table 1: Descriptive Statistics on the Meaning of Architecture

	Frequency	Percent
Symbol of hope	21	9.7
Expression of achievements	67	31.0
Basic functional spaces for activities	110	50.9
Extravagant spaces to show superiority	9	4.2
All of the above	9	4.2
Total	216	100.0

Source: Authors Fieldwork (2022)

The Sources of Design Inspiration.

This section is a presentation of the results on the various factors that inspire works of architecture. The results in Table 2 reveal that the highest number of the respondents 126(58.4%) get motivated by the client's need and the required functions of the building; 54(25.0%) of the respondents pick inspiration from the site's natural environments; while 18(8.3%) of the respondents each gets inspiration from building materials and other factors. This result corroborates why architecture simply means the provision of basic functional spaces for activities since Architects draw inspiration and mostly seek to achieve clients' immediate needs. More so, this study stands in firm support of Castello (2016) that architecture is first the manifestation of functional spaces that meets the essential requirements for which it was designed thus emphasizing architecture as a creative, unique, and dynamic but functional utilitarian art.

Table 2: Descriptive Statistics on the Sources of Design Inspirations

	Frequency	Percent
Clients' needs/function	126	58.4
Site natural environments	54	25.0
Materials	18	8.3
Others	18	8.3
Total	216	100.0

Source: Author's Field Work (2022)

Prioritising Architectural Intentions

This section is a presentation of the results on the levels to which the Architects at various levels prioritize architectural design. The results in Table 3 indicate that the majority of the respondents 108(50%) prioritize functions and aesthetics in their designs; 63(23.8%) of the respondents prioritize value, culture, and identity of the clients; 27(12.3%) of the respondents prioritize clients spatial and financial need while the least proportion of the respondents 18(8.3%) prioritize site natural environment.

Table 3: Prioritising Architectural intentions

	Frequency	Percent
Value, culture, and identity	63	29.2
Physical environment	18	8.3
Financial and spatial needs	27	12.5
Function and aesthetics	108	50.0
Total	216	100.0

Source: Author's Field Work (2022)

Physical Attributes of Architecture

This section is a presentation of the results on the perception of the physical attributes of architecture by Architects at various levels. Table 4 shows that the majority of the respondents 99(45.8%) produce an architectural design that visually communicates aesthetics as the core architectural value; 45(20.8%) of the respondents communicate pleasure and materials each in their architectural productions while 27(12.5%) of the respondents visually communicate others values. This puts functions and aesthetics as the most sorts out objectives of architectural design which according to Lagueux (2004) are the vital part of the design that when effectively linked produces architecture that is easily related to social, theoretical, and political philosophies. This thus affirms that Architecture remains a manifestation of functional spaces that meets the essential requirements for which it was designed (Castello, 2016).

Table 4: Physical attributes of architectural design

	Frequency	Percent
Pleasure	45	20.8
Efficiency of materials	45	20.8
Aesthetics	99	45.8
Others	27	12.5
Total	216	100.0

Source: Author's Field Work (2022)

Communication of Architectural Intentions

This section is a presentation of the results of the communication of architectural intentions by Architects. Table 5 shows that the majority 144(66.6%) of the respondents use lines to communicate design intentions; 54(25.0%) of the respondents indicate communicating architectural intentions through forms and shapes; 9(4.2%) of the respondents each indicate the use of geometry and materials as elements of communication of architectural intentions. This discovery is in support of Durmus and Kuloglu (2013) that architectural attributes are mostly expressed through the use of lines, forms, and geometry among which lines remains the most important element of design through which communication of design idea and production of realistic design solutions is possible.

Table 5: Communication of Architectural intentions

Elements	Frequency	Percent
Lines	144	66.6
Forms	54	25.0
Geometry	9	4.2
Materials	9	4.2
Total	216	100.0

Source: Author's Field Work (2022)

Communication: The Creative Drafting Process

This section is a presentation of the results of the creative drafting process adopted by Architects. Table 6 shows that the majority of the respondents 108(50.0%) and 90(41.7%) agree and strongly agree respectively to the need for a creative drafting process through the effective and appropriate use of lines while fewer percentage of the respondent 18(8.3%) disagree with this position. Truly, design ideas are shaped by more than just what can be seen, felt, or heard but also by unseen imagination and impulses (Purdy, 2021). In fulfilling the onerous task, Architects cannot afford to be vague but simplify all design intentions and communicate the same through graphics, lines, and geometry

Table 6: Creative drafting process

Drafting process	Frequency	Percent
Strongly Agree	90	41.7
Agree	108	50.0
Disagree	18	8.3
Total	216	100.0

Source: Author's Field Work (2022)

Relationship between Building and its Environment

This section is a presentation of the results on the relationship between a building and its environment. Table 7 establishes a symbiotic relationship between buildings and the natural environment as indicated by the majority of the respondents 126(58.3%). Again, 73(33.8%) of the respondents agree that a mutual relationship exists while 17(7.9%) of the respondents believe that a cordial relationship exists between the buildings and the natural environment. Irrespective of the type of relationship, the tremendous inspiration that architecture derived over time from the natural environment cannot be over-emphasized. Therefore, architecture is expected to blend well and symbiotically fit into its natural environment to improve creativity, communicate meaning, and achieve message delivery (Özdemir & Selçuk, 2016).

Table 7: Relationship between the building and its environment

	Frequency	Percent
Symbolic	126	58.3
Mutual	73	33.8
Cordial	17	7.9
Total	216	100.0

Source: Author's Field Work (2022)

Pearson Moment Correlation to Establish Relationships

The Pearson Correlation analysis to establish relationships between the tested variables reveal that significant, moderate but negative relationships exist between the meaning of architecture and the visual communication of architectural intention ($p < 0.05$; $r = -0.359$). This implies that buildings in Southwest Nigeria scarcely depict meanings other than functions and aesthetics. Communication of architectural intention using lines, forms/shapes, geometry, and materials exhibits a significant, positive but weak relationship ($p = 0.033$; $r = 0.154$) with communication of design goals. This affirms that an effective drafting process and the efficient use of lines are the backbones of architectural communications. More so, a significant, moderate, and positive relationship exists between human interaction with architecture and communication of architectural intentions ($p = 0.007$; $r = 0.206$). The same relationship thus exists between design intentions, the works of architecture, and the meaning of architecture ($p = 0.043$; $r = 0.143$); indicating that the more people interact and relate with the works of architecture, the more they understand its meaning, principles, intentions, and goals.

CONCLUSION

This study unbundles architectural design as the expression of functional spaces that meets the essential aesthetical requirements for which it was designed. Architecture is a profession that provides a wide array of solutions to human, socio-spatial, and environmental challenges. The

varying languages of architecture can be misunderstood, and its meaning becomes chaotic when design goals are not clearly and graphically communicated. Efforts are required from Architects in making sure that elements are being used accurately and correctly to express and communicate appropriate design intentions. More so, architecture needs to maintain the existing symbiotic relationship with the natural environment; aside the regular landscaping, more organic and sustainable architecture is needed in the Southwestern region of Nigeria to help expose people to the potential of nature in defining and defending architecture; also to ensure that architecture would not become a significant threat to nature's survival in the nearest future. Lastly, the intricate linkage between aesthetics and ethics needs to be maintained and possibly improved upon. Architecture in the 21st century is expected to freely communicate beauty and functions, as well as natural, cultural, social, theoretical, and political values. This paper contributes to the growing body of knowledge on ontology and sustainable architectural delivery in Nigeria.

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