An Overview of Architecture as the Confluence of Arts, Science, Technology, Environment and Politics

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ABSTRACT
In the current trend where the integrity and primary role of Architecture is seriously challenged by a specialized research and partial interpretations, there is a growing need to articulate a body of knowledge and understanding capable of reconciling the fragmented areas of knowledge within the given reality of our history and culture of Architecture as Arts, science, technology, environment and politics. However, to some extent, with certain tendencies in development of Architectural theory and philosophy which take into account not only in the physical expression of shelter or building but also its concepts, as well as psychological aspect of human, cultural, politic and environmental nature at a specific conditions. The aim of this paper is to overview through a comprehensive understanding of architecture as a discipline rooted in Arts, science technology, environment and politics and visualize their point of confluence, as the most fundamental access to the given reality of Architecture of modern times, and in philosophy the most essential aspect of reasoning capable of interacting the knowledge and all attributes of Architecture before any decision or concept in design is finalized. The paper also attempts to relate the attributes of architecture and the tributaries to the confluence point in specialized disciplines into a unified and a meaningful whole so as to come to terms with structure of Architecture in consonance with societal and environmental needs.

Keywords: Architecture, Architectural Arts, Architectural Science, Architectural Politics

1. INTRODUCTION
According to Ejium and Olinayi (2003) the connection between architecture, Art, politics and environment, are exploded through a succinct analysis of how cities were planned and zoned for profit and function and this can be expressed in terms of a monumental Architecture. Curix (1990), asserted that when modern Architecture was founded, it precepts were not rigidly spelt out of by its proponents, but its principles were derived from the works of contemporary or independent architects, who realizes the similarity of their works, became committed to a common objective. Hence modern architecture has been called to question as to the validity of its principles with respect to changing need of humanity, economy Arts, Science and Technology, Survey of the possibility of uniting its principles and objective became in a common language which architecture can be interpreted by both proponents and users for the benefit of society and environments. Architecture is the discipline of human values and these values are made from concrete by building the structures that produces an efficient arrangement of space and express the best of human life.

Accordingly, it’s created by transforming problems of shelter and arrangement in the expression of explicit style aesthetically practicing specific value and utilitarian concern. As the medium of Architectural art, it put person’s life in a sound track by expressing, leading, teaching, and sometimes highlighting focus to life and its meaning in this regard. Architecture has three attributes that is essential to a system without the system it either ceases or becomes something else. The three attributes comprises of Shelter, Arrangement and Expressions that must be in harmony and exist in natural hierarchy (Taylor
2002). These attributes develop a functional Architecture that creates an environment for human beings according to their nature or race, and as individuals. Similarly to function well, Architecture must be an expression of life, as well as shelter as a master piece of work, one can find no element that does not reflect at three attributes of Architecture. The lifestyle and use of building is the basis of all architectural theory, practice and philosophy Taylor (2002).

2. ARCHITECTURAL ART
In Art, the Artist eliminates the insignificant by focusing on what is important, the art of Architecture allow nothing to become unimportant by making every action within the environment an art of living arts, this is done by expressing the essence and values through creative rituals and ceremonies which may enhance the values of a culture, by creating the physical environment that alters; reinforce and expand such values. Architectural Art in many architectural styles defines the character of mass and space. Such as the handling temple, of byzantine church, and the stucco of Moorish Places, are not ornamental applications only but also they determine the form of building itself. The artistic, sculptural architectural decoration are easily recognized medium of content that, communicate meaning, either through the figural Arts, or the architectural elements, they include, the classical architectural orders used decoratively with techniques, but with time they lost their structural significance to become only symbolic.

In Great Britain, Sir, ‘Edwin’ ‘Charles’, Rennie, and Mackintosh, in Netherlands, Hendricks, and ‘Peter Behrens’, in United States ‘Louis Sullivan’ were among many architects who contributed in the new ornamental expression under the influence of international styles, in which the German Architect ‘Walter Gropius’ and ‘French Architect’ Le-Corbusier, were the chief figures who dominated the advanced designs during the late 1920s to 1930s. Similarly, the American architect Frank Loyd wright in his 20th century work, emphasized on more on interesting materials, intrinsic textural patterns, natural patterns, as proper basis of Architectural ornaments, this trend continued into the 1970s. The new ‘Brutalism’ was related to its similar the virtual absence of traditional ornaments or symbols in modern Architecture is as his evident in the symbols that express the cultural patterns of the 20 century. In that period architecture, like painting, sculpture and other Arts has tended to be abstract to emphasize qualities of form rather than communication of familiar ideas through symbols. The theory covering both the doctrine and principle of arts and crafts movement led by ‘William Morris’. They advocated for neat hand, works simplicity, architecture, they were concerned that, their products should reflect true use of natural materials and be free from sham, organization, although the theories influenced many other architects of their days, notably Norman Shaw 1831-1912. At the same period, there was another movement whose, style has been described as Art. Noveau, what very stylistic curves readily identifiable. This movement was much popular in France then it was in Britain. However, theory of fine Art might not have been so widely accepted, but for the development of Aesthetics elaboration after 17th century, when academics of fine arts were being established successfully in Denmark, Russia and England under the model of the French Academy in Rome.

German philosophers gradually asserted that:
1. It was possible to elaborate a theory of beauty without reference to function.
2. That, any theory of beauty should be applicable to all sensory perceptions whether visual or auditory.
3. That the Notion of beauty was only one aspect of large aspect, or concepts.

The alternative theory as a philosophy of Architecture is unique and can therefore be evolved only by specific reference to the art of building, that the first theory with regards to it application general philosophy of art to a particular specific philosophy of art. The, second on the contrary regards the philosophy of Architecture as a separate study, but it may have many characteristic in common with other arts that are generally distinct. ‘Giorgio Vasari’ in his book (the lives of the most eminent Italian Painters, Sculpture and Architects) asserted that there is a general theory of Art of in which, the theory of Architecture becomes a specific extension this assertion, that painting, sculpture and Architecture are all
of common ancestry, it all depend, on ability to draw, the word design or drawing is used to translate both an conceit, mental plan or output similarly a French man after ‘Louis established a French academy income modeled on Italian Art, architecture and Academics. As a result of widespread influence of philosophers of different schools of thought in the first half of 19th century, philosophers grew less dogmatic about, aesthetics, but its influence on theory of Architecture become stronger of a popular view, that sculpture was essentially non representational. Although the assertion that, aesthetically Architecture is the creation of sculpture, it is meaningful, but nonsensical to all architectural theorist in the 19th century, in which the view sculpture as invariably representational or a carved refinement of Wood or stone, with architectural thought.

3. ARCHITECTURAL SCIENCE
Redefinition, of ‘theory’ in terms of liberation is not obvious, at first sight theories seems to be abstract schemes of the thought that constrain rather than, liberate, they appear as opening of new possibilities; however, for a scientist theories it means an abstract model in which the phenomena available to experience, can be related to each other, in such a way that their nature and behavior is phenomena seen to have been accounted for, but the scientific theories only accounts for two kinds of clarities. The internal structure of theory and the reference to phenomena revealed that these conditions create the possibility of refutation; and refutability is a morally of science, if a theory does not predict, what can be seen to be a case, or fails to predict. Then one has to try another: that is clear simple, and explains the same phenomena, certainly there is Aesthetics, as well as morality in science (Hiller 1989). Relevant Architectural, theories appear, rather different, usually present theories as a set of precepts that, if followed may lead to Architectural success. However, the prime aim of architectural theory is to explain an architectural phenomena that will guide design, that we might be tempted to conclude that, architectural theories are nominative, rather than analytic and are therefore not subject to the strict rules that govern scientific theories. Although Architectural theories are normative this by no means implies that they are not analytic on the contrary, it implies that they are the only possible justification for a normative architectural scientific theory such is the nature of architectural phenomena. Similar theories from ‘Albert’, and “Le-corbusier”, in fact make, a profound reaching assumptions about human nature, perception behavior, as well as about the nature of architectural order; however, architectural theories are also perhaps analytical theories, in fact the difference between scientific theories and architectural theories, may be referred to as an difference in clarity. Rarely, architectural theories maintained the two kinds of clarity: the internal clarity and the phenomenal clarity that are pre-condition for refutability. That is why Architectural theories can be reflected by life, but not by analysis, but its possible that, with theories that have two kinds of clarity; to bear theorization at the design stage. Another, architectural theory and an attribute of Architecture is expressionism. Expression in architecture is the communication of quality and meaning, of building in which function and techniques of building are also interpreted and transformed by expression, into Arts sound into music word into literature and the nature of expression varies with the character of culture in different places and times forming distinct mode or languages that are called styles. Styles, communicate the outlook of culture bounded by natural or geographical factors and tradition, as being normative are the principal force, in the creation of style, outside immediate cultural environment. The syntax between Architecture as science and Architecture as Art needs to be redrawn closer to science, according to (Cassier) Anon, that the relationship between Arts and Science, language and science consist, of two main components or processes by which we ascertain and determine our concepts of the external world. But in the two cases there is a difference in the Language and Science are abbreviations of reality and art as an intensification of reality however language and science depends on the same process of abstraction, whereas Arts is a continuous process of concretion and does not admit conceptual simplification, and educative generalization, therefore the Artist is just a discoverer of the form of nature an the scientist is the discover of facts or natural laws. Hence, science is about the dimension of structure and order that underline complexity, some believes and accept that, in one sense it is an impoverishment though to
other, is an enhancement of our experience of the world, but this does not mean that some of its constituents dimensions related to theory of architecture are not analyzable and that deeper insight may not be gained from such analysis interestingly scientific theories are. Currently undergoing experiments and projected into future form of new concepts, of designs as “scientific fiction”.

4. THEORY OF ARCHITECTURE
The ‘term’ theory of Architecture was organically, simply the accepted translation of the Latin word “ratiocination” used by Victorious Roman Architect/Engineer of building projects, such reasoned judgments are essential part of the architectural creative process, that building can be designed only by a continuous creative, intellectual dialect between imagination and reason in a mind of each creator (Vitruvius).

The historical evolution of architectural theory is assessable mainly from manuscripts and published treatises from critical essay and commentaries and from surviving buildings of every expect. A variety of interpretations has been given to the term before 17th century, but after the changes associated with industrial revolution, the quantum of Architectural knowledge acquired by academic study and practical experience increased to point where a complete synthesis became virtually impossible in a single volume.

In 1925 – Gropious published above ‘(International Architecture)’. Which represented ‘Gropious’ assignment to, further new objectivity in architecture and what it is all about. Other, theories being put forward at that time were ‘plasticism’ and functionalism in Holland, this was a leading force in Architecture between 1971 and 1925. Its influenced greatly by “Frank Lyod wrights” that emphasize that; the ideal, of academic architecture should to include captivity for space, environmental harmony unit of all parts of design. Interior should be like Exterior and a truthful expression of materials workmanship and structure. His early works: such as the prairie, house (the falling water house) in Chicago Robbie House, Guggenheim Museum in New York, are superb examples of architecture that, reflect Wright, principles. In every respect the building should express their function with a true reflection of Louis Sullivan form fallows function”.

One of the most influential theory of Architecture to be produced in the 20th century was ‘Le-corbusler’ (Vers-Uni-Architecture) towards a new Architecture, published in (1923 – 1927) Le-corbusler was impressed by the work of the engineer, being the result of the law of economy and governed by Mathematical calculation. He found satisfaction in the design strictly, utilitarian structure, Le-corbusler sought simplicity and order in design, totally reflected, the concept of style, and order in design totally reflected, hence produced the concept of Pilotus’ principles of Roof Terrance, long window etc. This Famous Phrase, a house is a machine for living, example of this works include ‘Villa Sovie’ France 1928, in which the Pilot’s and Roof Garden concept work concurrently. The international styles and the ideas of ‘Le-Corbusier’ dominated the architecture practice and teaching with few exception until the late 1960s. The theories summaries the experience into abstract principle and thus transform the meaning, in which architects use theory in design of forms to reflect how the designer understand the world, but explores the unknown forms whose nature by definition cannot be predicted by experience. In which architects and builder already use the theory like, construct in creating built space.

The argument assert that, Architectural theories represents intellectual styles of individuals like semiotics or deconstruction brought and interpreted within Architecture, now whatever Architecture is; it is clearly not just, the transmission and reproduction of social knowledge through building, surely its is not building by reference to culturally bound competences, but rather a building by reference to a universalistic competence based on general comparative knowledge rather than cultural reduplication. In this sense, we can generalize that architecture transcends building, in the same sense, science transcends the practical arts of making and doing, likewise, architecture introduces theoretical concern into the making of building. In this paradigm Architecture is a theory applied to building (Bill Hiller)

5. DISTINCTION BETWEEN HISTORY AND THEORY OF ARCHITECTURE
The distinction between the history and theory of Architecture did not emerge until the mid 18th century. Indeed with establishment of two separate academic disciplines in “Ecole Des Beaux Arts” in Paris, with
a concept to discuss meaningfully the buildings of immediate past, without discussing the ideals of those
who built them. Just as it is possible to discuss the ideas of bye gone Architects without reference to the
structure they designed. Nevertheless, since the two, disciplines are inseparable and complimentary, they
can at the same time be logically distinguishable.
It may be asserted that, particular distinction first became manifest in (Ruines, Beaux Monuments Dela
Greece) Written in 1758 by French Architect (J.D. Leroy) faced with the problem of discussing ancient
buildings constructed in the time of Vitruvius, he decided to discuss them twice by treating them
separately under two different headings of History of Architectural importance, as a means of justifying
them by reference to classical methodology. ‘Jacques Fracios’ was among the first Architectural teachers
to develop a separate course to history subject, mainly as an account of the literary reference to
Architecture, an attitude already developed in 15th century by renaissance Architect “Leon Battista Albert.

6. ARCHITECTURE AS TECHNOLOGY
Until, the industrial revolution architectural technology changed only slowly, the structural design
reached it apogee in the 14th century and the Renaissance Architect show discerning concern with
technical atrocity, in favour of deliberately simple structural form and the development of applied
decoration, including the orders of Architecture which often master the structural forms.
Additionally, the Renaissance period enormous structural and technological problems were appreciated,
during this period the final perfection of putting a dome over a ‘square’ or a polygonal edifice by the use
of spherical triangle called PENDENTIVE and expressing these in it form, shape, and ornaments of
building, smaller high tech arch has its roots in the industrial, revolution period with the and exhibition
building of the 19th century and early 20th century (i.e center Beauboury in Paris 1977 by R. Rogers,
Sainbury Centre in Norwich 1978 by N, Foster) the high tech arch has been more successful in public
buildings, the attempt to use the theory for housing has been more successfully in post modern arch that
encompasses both neo vernacular and historicism, used in 1948, has been asserted that ‘Antonio Gaudi
(1852 - 1926) could be considered as one of the first post modernist in principle and practice despite the
fact that he was strictly chronological in terms of a pre-modernist.
Modern technology, furthered by modern techniques has presented an enormous array of new
construction methods and material which significantly changed the concept of design of many buildings
and the architects are recovers susceptible quite naturally to the source of fashion for new materials,
rather than preference to old materials of brick and block many of these preference been justified many
structural failure, with unsatisfactory appearance and high maintenance cost. Furthermore, the excitement
of novelty has distract the mind of designers or Architects from quality and durability, of structures,
Allsop (1979) cited that; In Architecture as in Mathematics, there is much to be said for clarity and
implication, Technology is a servant not a master, and not a playing things for Architects.

7. SCIENTIFIC ENGINEERING
The development of Scientific Engineering during the 18th century had a profound effect on Architecture,
the discovery of Iron & Steel, and reinforced concrete, set an architectural complex geometrical forms in
prices (the use of concrete was practicalised by Le-corbosier), solving the hampering limitation of
traditional masonry and wood construction. Noteworthy steel and metal construction enhances the
technological advancement in architecture and construction, achieving tremendous span in roof with
trusses of such to Paxton crystal palace in 1851 progressively, the use of elevator joined the industry
making multi storey building possible and the. Discovery of rolled iron make reinforced concrete floors,
large beams and columns to carry heavier load practicable, and wall height could achieved by concrete
wall and the introduction of skeleton construction, in multi storey building.
On the negative side in 1968 high rise block of flats in East London partially collapsed following a gas
explosion, in U.S.A Pruhighoe building was also blown up, an event which has been described as the end
of modernism out of this disenchantment new ideas started to emerge, with building described in the new
styles of high tech architecture, that. Really describes an architecture based on the exploitation of the
element of high technology.
8. ARCHITECTURAL POLITICS

An, acquaintance with politics in Architectural history has been in the Architects training, since, formal programmes were developed in the 18th century The ‘Bahaus’ (school) in Germany, ‘Walter Gropious’ who was its pioneer, was concerned with, impacting the so called ‘Bahaus’ principles to his students that was the beginning of politics in Architectural practice, every contemporary architect wishes to sell his ideas to students and probably his client, it is noted that politics and history in Architecture are analytical in character, and similar in conditions and reasons which have brought the visual expressions of the different periods (i.e change in philosophy in politics, and in economics were as a result of new inventions and changes in political climate).

However, politics in architecture become so crucial in societies experiencing change, where dissatisfaction with the past, concept of design and policy decision either occurs naturally or is promulgated in the social system notably. Political criticism becomes relevant and crucial to government projects because societies and publishers in charge force even individuals to make unwarranted decisions in design and construction project. The idiosyncrasies of individual Architects and the dynamism of life, led to class of ‘Isms’ in architectural theorization such as classicism, functionalism, regionalism, constructivism, modernism etc, led by father of Architecture.

Marx & Hegel (1946) assembled that: the first premise of human history is of course the existence of living of human individual, which was established in the physical organization of their activities and consequent relation to the rest of nature or environment. The writing of history must always set out natural bases and their modification in the course of history through the action of men, by producing their means of subsistence, indirectly producing their actual material life.

Moreover material conditions, – that is socio-economic system, political institutions and culture in general including Art and Architecture depend ultimately on the way a society earns its living, in the context that, modern Architecture and its design must be seen in the context of modern economic system, which began in effect when the great revolution of 18th & 19th century, brought the bourgeoisie to power creating a new world society of socialism, capitalism and communism. Europe and Colonial America were dominated by traditional land owning class and their politics by king and aristocracies, regime, the attitude of the and aristocracies rate lead to the industrial revolution.

However, according to Mbina (1986) in Nigeria the experience politics in education, between certificates awarded by various institutions. The politics, practice, and standard of practicing firm and their success; depend upon political alienation to the clients; it is also noted that; politics in construction industry, with regard to choice of materials between client and architect, and politics in the management of building industry itself are conflicting. Similarly political and legal constraints have so much impact in (architecture) and building design, and construction since, man started to build permanent structure of any consequence, in Roman period (ad 1189) this began with land tenure and Administration or Land Acquisition Land uses, planning regulation, and building regulation or local bye-laws.

These legal constraints includes, planning regulation, and building regulation, the planning regulation deals with sub-division and zoning of urban land uses, whereas; building regulation are primarily concerned with protecting the health and safety of users functionality structural stability, safety of occupants, lighting and ventilation easement right sanitation use of material external elements. The external appearance of building is often affected by building regulation of 18th century, by an Act of 1907 that requires party walls to extend above the roof terraced houses. In Nigeria today building regulation affects Architecture or building design in so many ways (Plots size or Limitation, zoning of land uses setbacks building heights, and accessibility. Building requirement, landscapes etc.

In additional to building and planning control, there are many other legal constrains applicable to buildings of particular types and uses. For example legislation affecting industries, (location) shops, and other commercial building, institutional, and recreational building etc, which among other things set out minimum or average requirements of spaces, zoning ordinance bulk or height of building, fire regulation, health standard, etc which the design and building must satisfy and comply. This can be asserted that, the Architect must be aware of all the legislation that applies to a particular building, the constrains and challenges that faces from source requires comprise in his design to achieve a proper balance between the
conflicting requirement of client design, and law that will be essential for a good building and architecture.

9. CONCLUSION

It’s interesting to note some different views, ideas and concepts, principles, and philosophies, etc, or whatever of Architects on Architecture, first, the French Architect, Le Corbusier says an Architect is a poet who see things and speaks in terms of construction. The Architecture is Art and technology point of confluence

According to American Architect ‘Louis Sullivan’, the true work of the Architect is to organize, integrate, nature and glorify utility, and then he is truly ‘a master worker.”

The Roman Architect; Vitruvius stated that the, first principles and requirement of design are utility; firmness; venustas; are the attributes of good Architecture. To this trinity the idea of space as a positive Architectural quantity was added then (Architecture becomes Science and theory) in this regard. Le, Corbusier’ in France, Behrens, and Gropius in Germany, Mackintosh in Scotland and Wright in the USA, were responsible for organizing the concepts of Art, Science Theory, Technology, Politics and Nature to form a constituent of modern day Architecture, additionally Le Corbusier defined Architecture not in Vitruvian term but in term of sculptured effects of light and shape and that Architecture, it does not ‘exist’ only but ‘function and exist’ that is Architecture consist of functionalism and simplicity using new ideas in building is only beautiful when it satisfies a need, whether we consult our reason or examine ancient monuments.

According, to advanced learners dictionary, history is defined as records of past event in either written or oral form, related to a specific event place, time, people and activities. And Architecture on the other hand, may be defined as designing man made environment, going by these definitions with its two components we can assert that man is related to his culture, society, religion history and tradition, etc whereas environmental, climate, science and technology etc, whilst assessing and analyzing the elements of each components or definitions and their congruence. Therefore we can theorize that Architecture is a confluence of politics, nature, economics, its people and environment, similarly the CIAM (1950) conference defined Architecture in Analogies such as Mathematical Analogy, Biological Analogy, Mechanical Analogy Dramatic Analogy etc. In this regard we can hypothesized that Architecture is Art (Dramatic) Architecture is Biological nature and (Science), Architecture is mathematical (Technological) Architecture is nature and political (symbolic and political).

Finally, we can conclude it with reference to Taylor (2002) that the greatest challenge to Architect is to able to identify the confluence point of these factors and try to control and apply each within its limit. For a sustainable Architecture, its practice and it contribution to the development of society and environment, according.

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