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The Contemporary Roles of Architect And Other Building Professionals "Panacea To The Menace of Quacks And Quackery In Building Construction Industry"

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Abstract
Quacks and quackery from the time immemorial has continued to constitute a serious menace that is so worrisome in construction industries especially the building construction industry. These problems variantly occur but not completely dissociated from failures of different kinds. More so, several efforts in the past and even at present put in place to checkmate or curb these menaces associated with quackery in this industry has yielded little or no result and many a times proved abortive. However, this paper aimed at looking into the quacks and quackery activities and the menaces associated with it, enumerating the contemporary role of Architect and other related professionals in the building industry with a view to finding a lasting solution to the problem bedeviling the industry.
Key words: - Quacks and Quackery, Building Construction Industry, Menace, Architect and Other Building Professionals.

1. Introduction

The building construction industry is as old as human civilization itself. The history of the industry evolved with evolution of human settlements and culture. The evolutionary trends are characterized by different features along the ages of human existence, namely; agrarian, industrial and information ages. However, the industry has over the time, in an attempt to overcome the evolving challenges as a result of increasing complexity that arose from human settlement (i.e. Hamlet, village, town, country, city, and megacity). This culminated into specialization that seeks to enhance efficiency, effectiveness and economical service delivery. This attempt, therefore allowed room for some negative activities that has metamorphosized into a lot of confusion and problems within the industry and the society at large.

Therefore, mediocre parades themselves as professionals, causing serious troubles in the process. Some professional also pretend to be what they do not represent causing problems as well. This however caused or catalyzed several havoc witnessed in the industry. Quite a lot of incidents and accidents traceable to this ugly menace of quackery have been recorded. The problem associated with this act is basically failures of different kinds and magnitude. These have resulted into loss of lives and properties that is worth trillions in naira. The most painful aspect is the one that involves human carnage whenever the incident occurred. So, this paper has gone deep into explaining the contemporary roles of architects and other building professionals as a way of preventing this menace.

2. Definitions:

Building, in this paper is used as a noun as "…that which is built; a structure, edifice…" The distinction between a building and a non-building structure is not always clear but is sometimes determined if the structure has walls or by its size or use. The Oxford English Dictionary includes that structure may be used for a large or imposing building.

Construction is a very general term meaning the art and science to form material or immaterial objects, systems or organizations, and comes from Latin word constructionem (from come "together" and struere "to pile up"). Construction used as a verb is: the act of building, and as a noun: how a building was built, the nature of its structure. Construction is often used as a synonym with building in its verb tense. As a noun, Russell Sturgis distinguished between architecture as being artistic structure, where a building is unadorned and can be"…poor… common place, ugly, insufficient, or otherwise of small importance," and the use of the word construction as meaning built, using scientific principles in a highly skillful way.

The building construction industry is as old as human civilization itself. The history of the industry evolves with evolution of human settlement and culture. It has its different feature in each age of human existence namely agrarian, industrial and information ages. As such the building construction industry has over time, in an attempt to overcome evolving challenges as a result of increasing complexity of human settlement (town, country, city, megacity), culminated into specialization that seek to enhance efficiency and economical service delivery in the industry. This development however, has created confusion and mix-up impression to members of the public who are expected to be serviced by the industry. This report, hereby, supplies hints of both general

and specialized role of different key players in the industry, in addition to identifying them, while also their relevance.

Architecture – Generally, architecture refers to the art and science of building design and construction. However, Architects Registration Council of Nigeria (ARCON) Act 43, 1990 defines architecture as the art and science in theory and practice of design, erection, coordination of allied professional inputs thereto of buildings, or part thereof and the layout and master plan of such building or groups of building forming a comprehensive institution, establishment or neighborhood as well as any other organized space, enclosed or opened, required for human and other activities.

Clients – refers to as a person, group of persons and or institutions (public or private) who, desires, engages or employs the services of professional for the process that may or may not lead to the alteration/erection of a building structure. Client as the name implies appear in many guises, this is, as 'clients' to professionals and as 'Employer' under the standard building contracts. They are the ultimate owner of the building until such time as they dispose of it. Therefore, client is the one that is responsible for the commissioning of the design and ultimately for the construction as well.

Contemporary means having or occurring at the same time. It as well refers to an event belonging to or occurring in the present i.e. modern or extant.

Role - according to Chambers Dictionary, it is defined as a part played by an actor; a function, part played in life or in any event

Professionals – the word professional refers to a person who has been trained and is an expert in that field.

Menace is something that is a source of danger; a nuisance; a threat or the act of threatening.

3. An Overview of Quacks and Quackery and Its Activities in Building Construction Industry

Quackery is the promotion of false and unproven health schemes for a profit. Random House Dictionary describes a "quack" as a "Fraudulent or Ignorant pretender to Medical skill" or "a person who pretends, professionally or publicly, to have skill, knowledge, or qualifications he or she does not possess; a charlatan". The word "quack" derives from the archaic word "quacksalver", of Dutch origin (spelled Kwazalver in contemporary Dutch), literally meaning "hawker of salve". In the middle Ages the word quack meant "Shouting". The quacksalvers sold their wares on the market shouting in a loud voice. "Quackery is rooted in the traditions of the market place", with "commercialism overwhelming professionalism in the marketing of alternative Medicine". Considered by many an archaic term, quackery is most often used to denote the peddling of the "cure-alls. Quackery continues even today; it can be found in any culture and every medical tradition. Unlike other advertising mediums, rapid advancements in communication through the internet have opened doors for an unregulated market of quack cures and marketing campaigns rivaling the early 20th century. Most people with an e-mail account have experienced the marketing tactics of spamming – in which modern forms of quackery are touted as miraculous remedies for "weight loss" and "sexual enhancement", as well as outlets for prescribed medicine of unknown quality.

However, just as it has been elaborated in the field of medicine where the term quackery was firstly used or introduced. It is also being widely experienced in the building industry. A situation where road side draftsmen or charlatans undertakes the jobs of architects, involves himself in undertaking a design of different kinds, and magnitude; involves himself in undertaking a design and construction of high structural details; involves or project himself in undertaking a project of cost sensitive related; involves himself in undertaking highly sensitive services related project and so on. Artisans and persons in other field areas also pretend to have the skills they do not possess. A mason sometimes due to his years of experience in the industry parades himself as a builder, which always result to failures in some difficult situation that requires technical competence. The worst of its kind are persons from other field areas not related to building industry like economist, lawyer, Accountant and so on, undertaking building works, what they do not have the simplest of clues about; causing immediate and distance future problems. More so, in recent times, the availability of softwares that can enhance the graphics of drafting in the area of architecture and engineering, such as the AutoCAD, ArchiCAD, 3D Home Architects Delux, The Revit and so on, has now become an easy way and short cuts for other professionals like the Civil Engineers, Mechanical Engineers, Electrical Engineers, the Builder etc and even professionals in other fields as English, Geography, Mathematics etc to become full time Architects, carrying Laptops around, and marketing their easy found way of enriching themselves to unsuspecting clients (public) who are defrauded of their money in the notion that they are being given professional services, and these are often times substandard designs that had never taking into consideration most of the least minimum design requirement factors like Cross ventilation, Lighting, Functionality, etc.

4. Problems Associated with Menace of Quackery and its Effects

The problem associated with quackery cannot be overemphasized in Nigeria and the world at large. Basically, the associated problem of quackery has been failures of different kinds and magnitude in the field of engineering and Architecture. This failure and its effect will be highlighted in the following excerpts.

Failure – the word failure according to English dictionary is defined as a lack of success at doing or achieving something, while Penguin dictionary of Building describes failure as a defect or breakdown of a product in service. Therefore, the term 'failure' describes a breakdown, disappointment, closure/stoppage, malfunction, crash or collapse. It could be used to describe a non-occurrence, non-performance, insolvency, unsuccessful thing or attempt, negative consequences due to obstruction of desired goals/objectives and loss of benefits derivable from the project. Common example and usage of the word throw more light on the meaning and implication when we talk about failures. We are commonly familiar with power failure, heart failure, break failure, bank failures and so on.

4.1 Types and Causes of Failures

In Architecture and Engineering projects, failure abounds whether or not they are recognized or appreciated as such. All the descriptions or definitions above can relate directly to a building project and actually suggest the types of failure that they are. A few types, example and causes of these failures are described below:

Building Collapse: This is the example that easily comes to mind as failure considering that a building or project is designed to outlive generations. A collapse therefore suggests that something has gone wrong and or the structure of the building is not structurally sound. This type of failure, which has become a grave cause for concern in recent times, can be caused by a number of factors including inadequate soil investigation leading to an unsuitable foundation design and construction. Next is an improper structural design especially by a quack or inexperienced or unqualified professional, lack of or inadequate supervision of construction to check non-adherence to specifications and use of poor or substandard building materials. All these causes however, apart from the one that occur naturally ("Force Majeaur") have been substantively due to the action of quacks and quackery in the building industry. Nigeria has lost a lot from this dastardly act of quacks and quackery in terms of lives and economic degradation.

Precisely 140 building collapse incidences reported in seven years in Nigeria i.e. average of 20 collapses per years ('BCPG' Building Collapse Prevention Guild). However, the panel of inquiry instituted by Lagos State Government on building collapse disclosed in their report that in over 130 building collapse cases investigated, no professional was indicted in any of the collapse incidences. This means that quacks or use of wrong professionals has been responsible for these collapses. (Akinwuimi King, Daily Independent Newspaper July 17, 2014).

Malfunction (Non-functional Designs): This category of failure ranks next to building collapse as a failure in building industry and is more of failure in architecture. A building is designed to fulfill a particular purpose and to specific standard of performance and it fails when it falls short of the purpose or performance standard. A public service building meant to be reached with ease will be a failure if wrongly sited on the outskirts of town where it takes extra effort to reach. Similarly, a crowd-pulling project (e.g, shopping complex or cinema) with inadequate parking could be a failure. Many homes designed by quacks or even professionals have become failures due to lack of needed privacy, inadequate room sizes or space allocation.

Many women could be heard complaining about the small size of their kitchen or wardrobe. Multipurpose halls of some notable event centres and hotels have experienced low patronage due to one form of failure or the other (it may be as a result of inadequate lighting and ventilation system or inadequate circulation system. The National Theater in Lagos is a good example which has been thrown out of use due to a breakdown of the power and air-conditioning system in a building designed totally reliant on artificial lighting and ventilation.

Stoppage or Abandonment: An architectural project that stops running or is abandoned cannot be anything but a failure. This may not be the professionals fault but so called quacks. Experience has shown that a lot of projects stop because of bad project management. Many projects have stopped because they were unviable, so-called white elephant projects that probably needed to be phased were forced to start completely. A large project meant to meet a target date may be abandoned if that target is not actualized. Imagine if the National Stadium was not completed ready for the 8th All Africa Games because of improper work and time scheduling: the national embarrassment and annoyance might have killed the zeal and priority to complete it, and inflation might have made it impossible to realize for ages to come.

Other failures that could make a project to stop include:

Cost Overrun: A cost overrun could mean that the project is no longer realizable within the original budget and has to stop until more funds are available. This could happen in case of inflation or other factors causing material process to escalate. Lack of proper brief, bad planning/management and cost control could lead to this. Non-availability of funds in a bad economy would stop a Government project that is financed from the Federation Accounts that obtains money from sources that fail to yield. Example is the global crude oil price that has crashed drastically affecting income generation against the budget forecast.

Litigation: Disputes in a project could mean that the project cannot continue until issues at stake are resolved. This calls for a proper understanding of the contract terms and procedure, and statutory requirements which only a relevant professional can handle. Disregarding statutory requirements of development control can lead to a stop-work order or demolition. Litigation in a project is a sign of management-gone-out-of-hand and must be avoided.

Disappointment: This is the failure that arises out of the fact that the client is not pleased with the outcome of the project in terms of aesthetics, quality of construction, functionality, cost, completion time, etc. Involving unqualified persons on a project is sure to lead to such disappointment and must be avoided. Disappointment arises due to a misunderstanding of the client's requirements and instructions. Ability to communicate effectively is a tool to be deployed to avoid disappointment on a project. Such communication must be expressed verbally, graphically and in writing in brief taking, presentation and management/supervision.

5. The Contemporary Roles of Architect and other Building Professionals

The Architect:

Architects are the designers of the building project and have the difficult task of translating their client's ideas into an acceptable design and then into working drawings. It should be noted that the profession of architect is, subject to an Act of Parliament', a registered profession. For business purposes no one can call him or herself an architect in Nigeria unless they are on the register maintained by the Architects Registration Council of Nigeria (ARCON). Only those qualified in accordance with these regulations can be admitted to the register. However it is only the name 'architect' that is protected; anyone can carry out the role as long as the name is not used. As the name implies, the architect should be the master builder-the leader of the building industry team referred to above, the word 'architect' is derived from the Greek root arch meaning 'chief' and the word teckton meaning 'carpenter or builder'). Architects are qualified to design and administer the erection of buildings, and must possess both theoretical and produce a structure as well as create form and must combine aesthetic effect with practical consideration. They must visualize the interior as well as the exterior of the building and must ensure that the accommodation properly related to the requirements of owners and occupiers, that the form and construction are appropriate to the function of the building and its setting and that the design is developed within the budget set by the client.

Like playwrights, architects are dependent on other people to interpret with designs, and their involvement during the erection of a building is as important to its ultimate success as are the directions given to the producer and stage manager for a play. The followings enumerate the role of architects as it evolves in present times.

(i) To advise and consult with the employer (not as a lawyer) as to any limitation which may exist to the use of land to be built on, either (inter alia) by restrictive covenants or by the rights of adjourning owners or the public over the land, or by statutes and by-laws affecting the works to be executed.

(ii) To examine the site, sub-soil and surroundings.

(iii) To consult with and advise the employer on the proposed work.

(iv) To prepare sketch plans and a specification to the proposed work conditions which exist and to submit them for the employer approval, with an estimation of the probable cost, if requested.

(v) To prepare a detailed working drawings and a specification or specifications.

(vi) To consult with and advise the employer on a probable tendering procedures.

(vii) To supply the builder with copies of the contract drawings and specification, supply such further drawing and give such instructions as may be necessary, supervise the work and set that the contractor performs the contract, and advise the employer if he commits any serious breach thereof.

(viii) To perform his duties to his employer as defined by any contract with his employer or by the contract with the builder, and generally to act as the employer's agent in all matters connected with the work and the contract, except where otherwise prescribed by the contract with the builder, as, for instance, in cases where he has under the contract to act as arbitrator or quasi-arbitrator.

Architects must have a good, practical knowledge of building and allied trades and must have at least a working knowledge of the more specialized aspects of building, such as mechanical and electrical engineering services. Above all they must be creative and dedicated to solving the client's problems as expressed in the brief.

The Quantity Surveyor/Cost Manager

Traditionally during the early part of the twentieth century, quantity surveyors were employed solely for the preparation of bills of quantities for building projects. Their role was constrained to a limited but important part of the development process. This role was quickly extended to include the preparations of valuations for interim certificates and the agreement of final accounts with the contractor.

The work of the quantity surveyor today can be summarized briefly as follows:

- Preliminary cost advice.
- Cost planning including investment appraisal and whole life costing
- Value management
- Risk analysis
- Procurement and tendering procedures
- Contract documentation
- Tender evaluation
- Cash flow forecasting, financial reporting and interim payments
- Final accounting and the settlement of contractual disputes
- Cost advice during use by the client
- Insolvency services
- Technical auditing.

It is advantageous for the quantity surveyor to become fully involved at the outset of a project's development. Although lip service has been paid to this in the past, the designer has often completed this stage of the development process relying only on a very limited input from the quantity surveyor. It is during this stage that the type and size of the project are largely determined and these two factors alone commit a considerable proportion of the total cost. Quantity surveyors can therefore provide a proper and sizable contribution during the process of strategic planning and by becoming familiar with the special needs of the client; they can properly evaluate the options that are under consideration.

Structural Engineers

Structural engineers function is too active on structural design from foundations to roof including advice on ground conditions on projects where such services are required. The structural stability of the building will be their responsibility, which will include advice, specification, design and supervision of the works in progress. They should be an early appointment as their advice will greatly influence the outcome of the ultimate design, which in many cases cannot be furthered without the basic structural information being available. Some structural engineers will offer drainage and other infrastructure advice; alternatively, design input on these issues may be provided by an engineer specializing solely in this type of work.

Building Services Engineers

Services in both mechanical and electrical today form a major part of most building projects. Building services engineers provides advice, specification and schematic or detailed drawings and are sometimes responsible for obtaining tenders from specialist firms. Again they should be an early appointment and should be closely involved in ensuring the proper integration of service into the design. Failure to achieve such integration is a frequent cause of delay and disruption on construction sites, leading to acrimony, costs and at worst litigation.

Landscape Consultants

With the current emphasis on environmental aspects of construction projects it is not unusual for architects specialization in landscape work or specialist consultants to be involved in the design and supervision of what are traditionally known as the external works. Ground formation, planting and arboreal work are the finishing touches which can make or break the external aesthetic of a new or refurbished building.

Specialist Consultants

On certain projects there is a need for other specialist consultants. These can include:

- Acoustic engineers where concert halls, theatres and the like are involved.
- Theater consultants for all types of theater work.
- Curtain walling engineers for special cladding work
- Information technology consultants for complex data and communications installations.
- Interior furniture designers where the client wishes to use a special interior designer.

The list of such specialist consultants is not endless but as the years go by more and more such specialist tends to appear as buildings become ever more complex. They all need to be paid and this is something that must always be borne in mind when preparing fee budget for a client who will need to be convinced of the necessity for their employment.

Land Surveyor

A land surveyor is the government authorized specialist who is licensed to determine boundaries; they determine the relative positions of places on or beneath the surface of the earth by measuring distances, directions and elevations. They are the first professionals to carry out physical work on the construction site. Building construction is one of the fields of surveying, the preconstruction responsibilities involved determines the location (latitude and longitude), property boundary (shape), the area of the landed property (size), they established the beacon on site to define boundaries. All these are represented in a plan called Cadastral survey which is duly stamped by registered surveyor and registered at Surveyor General's office. Only the surveys made by licensed and registered Land Surveyors are legal and acceptable in courts.

In the construction phase surveying commences with correct placement of footings, foundations, piers and other items of building construction are essential for a sound structure. The second essential role is establishing a level for the proposed construction and establishing a benchmark that would be used as reference point throughout the construction phase. This is mostly neglected in Nigeria and the cause of flooding in most buildings.

Geotechnic Engineer

Geotechnical engineering is a discipline within civil engineering related to the performance of soil and rock mechanics, including their subsurface conditions, determination of the physical, mechanical, and chemical properties that will influence the project under consideration, Site investigations are needed to gain an understanding of the area in or on which the engineering will take place. Investigations can include the assessment of the risk to human, property and the environment from natural hazards such as earthquake, landslide and sinkhole. After necessary evaluation, design of the earthworks is carried out, and subsequently supervision of the site, foundation, and construction is carried out. Based on findings the GE might recommend Ground Improvement which is a technique that improves the engineering properties of the soil mass such as the bearing capacity of the soil and capability of the soil in bearing more loads. Usually, the properties that are modified are shear, strength, stiffness and permeability. Ground improvement has developed into a sophisticated tool to support foundations for a wide variety of structures.

The Builder

In Nigeria today Builders are the most monopolized professionals in the construction industry with the way things are structured, others have taken up most of their responsibilities. They are unique in that they are the only professionals' that work on building and non-building structures. A Builder (or Professional Builder) is an academically trained specialist and statutorily registered professional responsible for Building Production Management, Construction and Maintenance of Buildings for the use and protection of mankind and his assets. The Builder studies the production information; that is the drawings, schedules and specifications; they analyze the build ability and maintainability of buildings. He writes on the construction method and program, assess the workmanship skills or artisan and suggest solution to technical problems.

Artisans

These are the real workmen on site. They are mostly technicians that have acquired various skills either on the job or in various skill acquisition institutes. They have improved skill on-the-job. They work with the various professionals carrying out their duties based on instructions though imputing their skills.

There are various artisans in the building construction industry for example masons, carpenters, electricians, iron fixers, tillers, and plumbers to mention a few. There are other workers that are non-artisans. They are referred to as unskilled labours but they are actually skilled. The nature of their job requires little skill and they are usually non persistence on the job. Their range of jobs includes site clearance, minor excavation and other petty site jobs.

The Building Contractor (BC)

Looking at the volume of professionals and Artisans involved in building construction working with a building owner who is a non-professional, it will be a HELL talking to each of them.

There is need for a firm to harness all this together and do all the jobs required. The contractor brings a team of all the required professionals together, oversees the construction and ensures that all necessary measures are taken to execute a project. A building contractor is an organization that engages in the Planning, Developing and Coordinating activities in the building of structures.

The building contractor draws up a plan to carry out the construction project. This extends anywhere from hiring workers to developing a step-by-step timeline that the project will follow from start to finish. The BC is responsible for hiring, supervising, firing and payment of workers alongside obtaining materials for the project to precise specifications, mostly using the services of suppliers.

The BC must also do his/her research regarding relevant regulations and laws guiding the construction process, he has the responsibility of completing the project in a law abiding manner. He acquires all necessary licenses

and permits from relevant authorities so that the building project can begin. In Nigeria for example you need a building approval; you pay development levies to mention a few.
He/she works based on agreed contract sum with building owners so; he controls Budget issues, follow that budgets as closely as possible though there might be slight variation at the end of the project. He/she ensures that the project is completed within the specified time frame as well as reviewing the progress and implementing any changes along the course of completion. The BC deals with all emergencies and surprises which relate to the project that occurs on-site and sometimes off-site as well that affects the projects.

6. Statutory/Regulation Body and Professional Association

Members of the building team all have their professional organizations that act as the regulatory agencies for any aspiring professional that wish to practice in Nigeria. They are responsible for overseeing the conduct of members and practice generally. They also provide a central source for social activities and general dissemination of information by way of journal, lectures etc. They also guide against quackery by way of innovative programmes and solutions, an example is the current **ARCON Project Registration Number (APRN)** .It is a mandatory project registration number issued to all architects practicing in Nigeria, to certify that these projects are being executed by Nigerian citizens, who are fully registered and financially current architects and firms and are eligible to prepare, produce and submit architectural building plan for approval sand or implementation. So therefore, no project design would be allowed for execution unless with the **APRN.**

7. Conclusion

It is no longer a gain saying that menace of quacks and quackery has contributed negatively to the development of building industry in Nigeria. The consequences associated with quack menace in terms of failures are enormous and cannot be easily quantified. Nor can the environmental impact and the discredit it brings to the professionals, involved, in the industry be hardly overlooked either. The consequent loss of lives and investments associated with building collapse in the face of the current unfavorable climate leaves everyone with justifiable concern (Dare 2002).
Indeed, casualties are not restricted to occupants of collapse building alone-even passer-by or neighbors and their properties that are unfortunate to be in the way are quite often sucked up into the vortex of the phenomenon. Apparently, this call for serious concern, while many other third world countries like Malaysia, Singapore, Arab countries, build Skyscrapers(even areas that are prone to natural disasters such as earthquake), we still have cases of building collapse involving building structures of two or three floors in Nigeria. It is however acknowledged that more than 50% of building collapse and other related failures are functions of quacks and quackery. So if professionals and all stakeholders are allowed or made to perform their full responsibilities to the society, relating to the current trend of development in the industry, the menace will be put to a halt.

8. Recommendations

With all that has been highlighted from the beginning of this paper the following recommendations will suffice if followed and practiced and there would be no room for the quacks and quackery not to even talk of the menace associated with it.

- Governments and Agencies should ensure that all steps and construction proceedings are followed so that stage management and certification can be ascertained for proper adherence to development rules and regulations.

- All professional bodies or institutes and their regulatory bodies should ensure that members adhere to the process involved in the service provision and delivery with stringent consequence on any defaulters of law.

- Public should always play a role of patronizing the professionals for development of any kind in the building construction industry to help also in fight against quackery and uphold standards.

- Government, Agencies and professional organizations should ensure constant sensitization of the public of their activities against quackery and associated menace.

- All project designs and drawings should have on it **ARCON Project Registration Number (APRN)** before approval and implementation.

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