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Gallivanting with Architecture

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Abstract. Lately, it has been observed that buildings are becoming daring in their design, with forms and structures that appears to defy the law of gravity. The architecture discipline has been deployed to create eye-catching, even startling forms isolated in space that serves multiple purposes from authoritarian state-building to symbols of development, to “must-see” objects driving tourist to a particular place. These dramatic, monumental assemblies are not always well-received, however, with public outrage frequently directed toward their undesirable impacts on or lack of consideration toward the built context of a place. The building is not only a functional structure in any urban area but rather an intervention in the public space that remain there for many years or became an iconic landmark for someone to remember. The design of these buildings is not entirely based on the skill of the architect. Possibly influenced by the desires and tastes of the clients somewhat influenced by the practical constraints of the budget. Likewise, within those parameters, the creativity and even personality of the architect often shines through. The paper employed an exploratory techniques coupled with a descriptive analysis from printed materials as the framework to gather the written criticism of the projects that has been built. Through the pictorial and repertory grid applied in the investigation, this examines the essence of architecture design from the modern era until the present day. The findings from pictorial analysis showed that resemblance of the façade of the building symbolize the common objects and simple form found in daily life.

Keywords. *architectural design principles, iconic building, gallivanting.*

1. Introduction

Architecture is based on the creation of individual skill, and there is no definite rule to say it is wrong or right. After the subject of architecture became a discipline in the higher institution, it is guided by the principles of design and theory [1]. Subsequently, those who follow the course of architecture are trying to show that they are different and proving to the world that their creations are unique, pleasant and admired by the participants. Alongside that pre-conceived ideas, the so-called architect is working very hard to find a way to produce what is said to be a good design. The principles of design in architecture are to achieve aesthetic through compositional unity. The definition of compositional unity itself cannot be expressed in a single word. It is a composition of form, shape, texture, scale, rhythm, sequence, colour, balance, proportion, and craftsmanship. These characteristics employed in the design is theoretically accomplished comprehensively in order to produce a good architecture.



How does the architect derive to the conclusion that this is the final product of design? The definition of concept and approach in design sometimes misleading when presented by the architect. Architects preferred to relate these buzzy words to describe their work and possibly they derived it from nature or from observing a certain image in the environment. Sometimes, they are observing at the animals, plants, and even going back to basics principle of how objects are formed. However, they are those who copy at an everyday object as if to amuse the people. Wong [2] claims that design is a visual development process. Forms is a visual language as the basis of design. The conceptual, visual, emotional and functional aspects are the common design considerations perceived by designers. It is from here that the design factors are developed into a conceptual and afterward a visual component in architectural design.

The category of relational elements determines how the forms are placed and interrelated. Others are to be perceived, such as direction and position; while space and gravity are to be deliberated to accelerate with the design principles. The quality and extension of a concept are based on the functional elements. They are representation of realistic, stylized, or near-abstract objects that enhanced the meaning and function [2]. In architecture, the function of the building is the ultimate objective of the design and no other design exist or built just for the fun or sculptural purposes without functional usage.

Since the dawn of the century, our forefathers built the shelter to fulfil the physiological needs of the occupants and protect them from natural occurrences. This is the beginning of architecture. Curtis [3], allowed us to look back at Laugier's print to realize the basic requirements of human for shelter. It is for the purpose of shelter that civilization developed and flourished. It has been quite sometimes that we tend to ask the question of "what makes architecture art of freedom until an architect can do whatever he/she wants just to express his/her ideas as well as making the object a functional art form". This research is trying to show the reader the crazy ideas designed by architects to express their work as a sculpture or functional objects. The methodology of this article is based on the exploratory survey of secondary data available from the literature and also longitudinal information from architectural history. In this paper, we attempt to show few examples of the work articulated from the platonic object until the everyday items converted into the structure for a human. It is produced by architects to illustrate the features of what is said to be trending architecture to the masses. The illustration of the façade and built form that comprises the mass, scale, style and location of the building explained the matrix of the distinctions. The matrix represents the criteria use in comparison to show the scale, massing, form and characteristic of the façade. It helps to explain the differences between the design approaches and constraint either the site or the budget. The result from these analyses will help us to understand the creation of an individual with a reference to a theme of gallivanting.

2. Literature: Objects and Form

In architecture, symbols and sign that are strictly related to human are the immediate objects that we see every day. The difference between an object and a form in the built environment covers a wide array of things. An object can be paraphernalia created for the daily purpose that we took for granted and a form is an object that believed to have a value of compositional unity out of intentional arts [9]. Education has a tremendous impact on future followers who inherit architecture discipline. While pursuing the course of architecture, the definition of form is not clearly elucidated in relation to the intention of the design subject. Instead, it is becoming a culture of architecture student to study the work of their masters and trying to discover their philosophy and translate according to their understanding.

Parker [5] stated that form is not only physical or aesthetic, but it composed of all elements that constitute any aspect of the character of a product, including a society to which the product belongs, and therefore its shape is a representation of the usability and desirability of a creation. Music without rhythm is noise, letters will remain invocative words without composition of good sentences and painting on canvas will just be a brushstroke [5]. Generally, all art is created through the art of

processes and actions. Similarly, to the design of buildings, the end-product would not be relevant without achieving its intention. Thus, form in the area of design is an integral component that became an analytical tool for architecture.

The point, line, plane and volume are the primary elements of architectural design [6]. Conceptual components are not apparent, non-measurable, perhaps they are no longer conceptual if they do exist instantaneously. Thus, the visibility of conceptual elements implies shape, scale, colour, light and texture in the composition. Yilmaz [7] argued that they are all combined to add a spatial consistency for the purpose of good design. Architectural elements are seen differently from different angles and distances as a three-dimensional shapes or objects. Visual elements that make the form look different in different situations in various conditions especially when lighting were added, thus creating a visible colour or texture of the building. This will create a timeless architecture.

Adjacent to this idea few authors are trying to establish different forms of classification schemes. Ching [6], is a remarkable example. He makes a distinction between standard and unusual shapes and subsequently classifies architecture into three significant categories: platonic solids, additives and substrates (Figure 1.0).

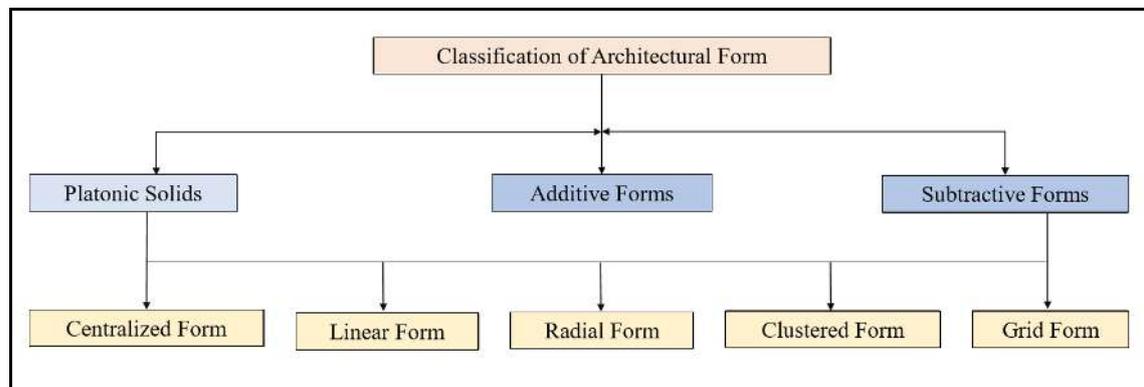


Figure 1.0: Showing classification of form by Ching [7].

The courses of self-formation of objects in the physical world, the fabrication of forms by a living organism expresses the human existence or the attitude of a human being towards the environment. The action and involvement of human in creating a place to get shelter are subject of the theory of form formation. On the other hand, the Bauhaus movement led by Walter Gropius, unite the arts and reimagining the material as a core objective in the expression of the building [3]. This movement has a massive impact on the progress of architecture education, especially in America. Even the students from the developing world are influenced by the changes and the progress. The movement continues until architecture spread to every corner of the world with the same processes and procedures.

While at school, we were taught of the design process before we could attempt to transfer the floor plan into a three-dimensional building form with a façade and massing. However, with the advent of the latest computer software and printing mechanism, the mass model-study technique became an array of several trial and error experiment in determining the structure and form. Apparently, the new digital technology for architecture student changes the way of design and revolutionized the styles of presentation in their works. This approach had a tremendous impact on the design process, and it gives the freedom of expression without limitation in design. The epitome of architecture also changed from the allude of Mies Van Der Rohe “Less is More” to a more challenging word of promises to the client [3]. Thus, architecture as visual arts are becoming the symbol of economics progress with modern technology refashioning from that philosophy into endeavouring to design harmonising the trend of innovative research for the university in a market-oriented culture. It shows how impactful these trends were and how they work in the real world, giving so many variations and

approaches in designs. The western architects are taking these opportunities to experiment with their creative mind to design and build buildings in the developing world. The high economic progress through the value of petro-dollars in the Middle East and the new Pacific Rim Region became the new ground for these architectural styles to flourish. The building shows different approaches and amplifies the trends with the characteristics of the façade, form and massing. This is the ground that the architects are gallivanting with architecture.

3. Methodology

Klassen [9] identified the correlation of sign and symbols of architecture with ideology and design according to trends. However, the trends and the philosophy of the design is much stronger while he or she is capable of strategizing his or her works. In order to investigate the parameter of architectural process and procedures in producing a building design, this paper applied the exploratory methods together with the qualitative technique by extracting and analysing the existence of the design work published in the journals or any printed materials to evaluate the theme of gallivanting approach of the design concerning the scale, form, design elements and materials application of the building. Pictorial techniques of repertory grid will be combined in representing the analysis of the architecture [14] The work of early architects such as Etienne-Louis Boullée until Rem Koolhaas will be analysed according to the criteria as mentioned earlier (Table 2.0). The basic design principles will be used to utilize matrixes in evaluating the existence of all these elements. In architectural practice these are the variable of design elements and principles commonly used to articulate and defence the architecture works.

4. The Basic Form

Square or rectangle, round or circle and triangle are the three main basic shapes used in all design of built form. Out of this form, the architect turned it into platonic form and attempt to play around with the design by manipulating the perimeter of the boundary to create the space. Architecture as a functional art is the creation of space for human and not a mere functionless object in the environment. From a two-dimensional perimeter together with a height of the user conforming with the anthropometric and ergonomic, the liveable space is created. A central, linear, radial, clustered, or grid organization of form may lead to spatial organization. Forms can be regular or irregular. In general, regular forms are stable and symmetrical on one or more axes. According to Ching [6], even when transformed dimensionally or by deducting or adding components, forms will retain their regularity. A form can be changed, and its identity still retained by changing one or more of its dimensions. By removing part of their size, a shape can be changed. The type may maintain or be transformed into another type, depending on the degree of the subtractive process. By adding elements to its volume, a form may be transformed or altered. Whether an identity of an original form is changed or preserved, is resolute by the character of the additive or subtractive process occurred in the form itself. Irregular forms are typically asymmetric and more complex than regular forms. As the focus is both solid masses and spatial voids in architecture, regular forms can be part within irregular forms. Likewise, regular forms of irregular form can be integrated depending on the function of the design [5]. This process is known as transformation and it is regulated by the principles of architectural design.

4.1 The Plane

Le Corbusier, Mies Van Der Rohe and Frank Lloyd Wright were the father of modern architects experimented with a different plane in design to achieve an aesthetic art in their projects. The recorded work of these architects became a breakthrough in our modern time. Their significant contributions readdress the pragmatic of the elements of design in their own manner. They were pursuing methods of expressing poetic reaction to the social and technological realities of their era. Departing from the formal horizontal and vertical lines of the modern masters, Rietveld explored the different sizes of planes from cubist perspectives by introducing abstract plane to his building façade to express the lightness of the mass of the building [3]. On the other hand, Peter Eisenman together with his New York Five colleagues subtracted the 'box' by defining a clear definition of planes from

cubist approach to show the drama of solid and void which make the building embody a piece of art. Conversely, these were the beginning of architectural transformation, which classified as form extraction [11].

4.2 The Platonic Form

Architecture develops through the evolving of ideas. The pure platonic form has been used in expressing architecture since the early 19th century. The closest to our discussion is the Einstein Tower by Erich Mendelsohn (Figure 2 in Table 1.0) and Cenotaph for Newton Monument by Etienne-Louis Boullée (Figure 3 Table 1.0). This building is expressively saluted delicately in a nice phrase as “... *the emblematic of the particular historical precipice and an artistic feat that foreshadowed the modern conception of architectural design*”. On the other hand, CCTV Headquarters (Figure 4 Table 1.0) does not carry the continuity of architecture for the culture, especially for the city of Beijing, as commented by the President of China. The direct translation of platonic form in the designing of building signify lacks of ideas among architects. Nonetheless, such accidental design is becoming an iconic building. The Clam Building has an excessive unused space just for the sake of maintaining the circular form. On the other hand, the CCTV was criticized by the Beijing residents as “, ... *as sexual undertones of the structures*” - and Koolhaas apologized and disputed with such claim [11].

The surface of urbanism in developing world is decorated with high-rise building to illustrate its skyline. The scale of the buildings is noticeable as each trend had a specific approach towards an exact gauge in judging the height of a building. The modernism and post-modernism era with epitome of ‘less is more’ and such, did not portray a wide difference in the building shape or height of similar scale towards the high rise. On contrary, a building in United Arab Emirates (UAE) that is Cayan Tower in Dubai Marina (Figure 5), considered as a destructive design conforming to Rem Koolhaas philosophy and language of architecture related buildings and technology. As compared to Emirates Towers (Figure 6) which is also an example of modernism of similar scale - the massing of buildings is similar to the latter but differs in elements. Cayan Tower is one large tower with no variation in levels or masses. However, the Emirates Towers consists of two towers of different size integrated with landscape and blending with the human scale on the ground and its surroundings [11]. This approach attempts to contain a sustainable city as a theme of UAE development. It has a diverse massing of form stretching from medium to low with a range of housing typology blending with the traditional and contemporary middle-eastern style showing different scale and height. Dubai attempts to suit the sustainable city with a futuristic type of architectural feats where the transition of the standard housing has changed to a more sustainable way of living. The sustainable city adapts to the most recent types architectural technology comprising the façade treatments using the latest technology with the most durable materials. The façade combines an expression of minimalism with its futuristic stance to retain the sustainable factors. The latest technology for the shading device from recycled materials and the application of the solar panel elevate the iconic status of this building. The innovative and responsive intervention of the architects to the environment will accentuate the quality of our living space.

Table 1.0 Table of Figures

Figure	Building	Name of Building/ Architect	Purpose
Figure 2		Einstein Tower by <i>Erich Mendelsohn</i> (Source: https://www.archdaily.com)	Observatory

Figure 3		Cenotaph for Newton by Etienne-Louis Boullée (Source: https://www.archdaily.com)	Monument
Figure 4		CCTV Beijing Headquarters by Rem Koolhaas (Source: https://www.dezeen.com/tag/cctv/)	Office
Figure 5		The Cayan Tower by Skidmore, Owing and Merrill Architect (Source: https://www.wowabouts.com/explore/post-cayan-tower)	Residential
Figure 6		The Emirates Towers by Hazel Wong (Source: http://www.skyscrapercenter.com/building/emirates-tower)	Hotel

Table 2.0 Analysis of form

Images of building typology and its resemblance (F: Form, R: Resemblance, P: Purposes)

 F: Curvilinear R: Animal P: Kindergarten	 F: Elongated R: Serpent P: Residence	 F: Criss-cross R: Auxiliary geometry P: Office	 F: Simple form R: Coin/Shell P: Office
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 <p>F: Sphere R: Ball/Marble P: Observatory</p>	 <p>F: Ordinary Object R: Picnic Basket P: Office</p>	 <p>F: Freedom R: Spiral pinnacle P: Church</p>	 <p>F: Triangular R: Origami P: Academy</p>
 <p>F: Elliptical R: Ball P: Office</p>	 <p>F: Hemisphere R: Skeleton P: Theme park</p>	 <p>F: Free form R: Blob P: Museum</p>	 <p>F: Cube R: Hexagon shape P: Housing</p>
 <p>F: Cylinder R: Pipe P: Office and Laboratory</p>	 <p>F: Curves R: Floral P: Museum</p>	 <p>F: Free form R: Music instrument P: Concert hall & exhibition</p>	

3. Discussion

For centuries architecture is a symbol of progress and civilization. On the other hand, the above examples summarize the built-form produced by architects to create the diversity of building types in the environment. It is a recollected statement that, the very idea of architecture is for human. Creation of the design is not for fun or introducing something against the norm of human habitation. Instead, the setting and stability of the building designed by architect to be different from ordinary form such as CCTV and Serpent Building seems against the will of the people due to its height and awkward shape. Typically, cylindrical and curvilinear form is conspicuous once it is built as compared to a straight linear form, unless the later resembles an object that is accustomed to our eyes. For example, the Kindergarten Cat Building (animal) and a Picnic Basket (everyday object) Building, attract the attention of the participants. The space that is created for our daily activities shaped the culture originate from our lifestyle [12]. Churchill [13] profound that “we shape the building and the building will shape us”. Such a statement comprehended the creation by the architects manifestly to be different from the mainstream. As a result, all sorts of design started to flourish especially in the new economic progressive world of developing countries. This is the playground for ambitious architects to set his mark on new design ideas. He added that “... *the battles fought over class, ideology and language are represented most clearly in the explosion of new building types during the Century of Revolutions*”. The pure platonic of building may be gone, but not forever, the shape of the sphere, square or pyramid may be transformed into something else to suit the taste of the client. The platonic form takes into different volume, taking the unusual shape of the form either elongated or otherwise. With the aid of complex computer software, more and more sophisticated design will appear. The fun in designing a building to muse the participants may not be extensive, similarly the application of colourful design in architectural presentation sometimes temporary and deceitful. The beautiful “pictures” together with the powerful words of an architect to lock the design is dissimilar with the

building when built. The ensemble of the building from the lines of form either horizontal, vertical, curvilinear or freeform carries different impression and interpretation to the viewers and participants: on the other hand, each lines produce by architect on his design will leave a foot prints and the building will be there for a long period of time. Time and again, discontinuity of communication and literary paradigm weaken the truth of architecture intentions. Thus, once built, we have to endure with it, either good or bad, positive or negative of the design to the environment and the passes-by.

4. Conclusion

The world is changing, economy is progressing and technology are also revolutionizing. The evolution of technology in other fields are remarkable but the progress of building technology is at snail pace. The production of architecture did not progress exponentially instead it revolutionized in its design focussing on form. The architect is still seeking for unique form to illustrate their design as discussed earlier in the analysis. The integration of form, spatial distribution of the interior, services and the economic aspects of the construction has to comply on the reality of the architectural discipline as taught during the school days. The image of building represented in Table 1.0 and 2.0 reflects a mere embellish façade, in fact, the interior of the building is still composed of linear straight line due to the construction technique as well as the nature of the materials used, for example the Cat Kindergarten Building and Coin/Shell building. The curvilinear space is difficult to match the furniture which are basically straight edges. The splendour of the building is appreciated from outside but the design elements comprising the ventilation, structure, services and technique of construction are far behind from other fields. Even the latest building design by prominent architects was customarily done and not by machine. The arrangement of bricks and the casting of concrete structure is similar to the one that has been practiced since the early stage of modern era. Apparently, the twisted Cayan Tower of Dubai takes eight years to complete. The assemblage of the building envelope and the integration of services to serve the occupants sometimes more complicated to install in a building – some examples are buildings designed by Moshe Safdie at Montreal Expo, Frank Gehry at Bilbao and Zaha Hadid at Cultural Centre at Baku. Similar experience found in the other building such as the CCTV in China and the Coin/shell in Abu Dhabi. In order to achieve such form, the cost of the building is escalating and the targeted period of completion is often miscalculated. Irrevocably, the essence of design with the idea of gallivanting with architecture remains among the practising architect. The architect knew that conventional design form for a building does not reflect iconic features. Perhaps, the capability of parametric design software will produce another version of architecture in the future.

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