

Research Plan | aE Studio

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Studio

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Argumentations of choice of the studio:

From my personal architectural point of view, there is no building in the world worth demolishing. Architectural buildings have the potential to start a second life, it could be a completely different life or it could be a new life. We as architects must work wisely and consciously to achieve this. Based on this thought and my intense fondness for public buildings as they are the original identity of cities, I chose this architectural studio to work on my graduation project from the Faculty of Architecture. Due to the presence of a full approach within it, which believes in the second life of buildings on the one hand, and on the other hand, the flexibility and freedom to choose the functional architectural orientation of the project.

Title

Interacting with the fifth façade.

The relation of social interaction with the roof structure of public buildings.

Graduation Project

Keywords

Public spaces, social interaction, public buildings, fifth façade, vital places, vitality, daylight, structural design, cultural centre.

Problem Statement

Authors regard public spaces as the coffee houses of ages past, as institutions of society that play an important role in processes of social change. Recent literature by others also underscores the importance of locations where physical meetings occur in the public spaces. There is a convergence in an apparent consensus about the importance of public spaces as a space for encounters and social interaction.

Cultural centres are one type of these public space that has existed since ancient times. Within these buildings and their public areas, the highest meanings of coexistence and social encounters among the public are manifested throughout the social interaction that occurs inside

this kind of space. Despite this, many public buildings nowadays, lack the concept of these liveness/vitality spaces.

The focus during the design process of these kinds of buildings is fully spent on the functional and aesthetic purpose of the building and how it will be perceived by the public. Since public spaces are considered more pleasant the more activities there are in them. Thus, fostering participation rather than only spectatorship. However, these buildings, on one hand, rely on artificial lighting and often mechanical ventilation which means ignoring the roof element which is considered nowadays as the fifth facade of the building, and also, its possibilities to provide new qualities regarding inner and outer spaces. On the other hand, decline the less passive natural spaces such as greenery and water bodies inside the built spaces, since it requires concern and maintenance. By that, it is ignoring the gains behind these kinds of natural energies which has a huge impact on us as humans and which could be used in various fields so that it benefits not only humans, but also, the buildings themselves, and the surrounding environment as a whole.

Objective

The concept of natural lighting is one of the most prominent architectural criteria of modern architecture. I especially mention here the icon of modern architecture, the Van Nelle factory, due to its embodiment of the idea of providing natural lighting for its employees and workers inside, which thus benefits the employer and the worker. Natural lighting enriches the spatial quality of the space, which leads to the public's satisfaction with it due to its vitality character. My example this time is from the second millennium of modern architecture, the Louvre Museum in its Abu Dhabi version, due to its splendour of the architectural engineering in the treatment of the fifth facade, also its embodiment of natural lighting with new structural techniques and technology within its huge architectural void. These examples and many other projects that I would mention later on as study cases for my project did inspire me to work on redesigning a public building that benefits all layers of society and has an impact on their social and daily life.

The main intent of establishing a cultural centre is to create an architectural space capable of providing a healthy and interactive environment for all segments of society, allowing everyone to participate in various social activities such as dialogue, shopping, interacting with others, spending time with family or friends. Through the application of the concept of the fifth facade and its vital impact on the architectural space confined within it, which in turn embraces the public, by applying new technologies in the fields of natural lighting, alternative energy generation and structure design. And then finding and confirming a set of relationships linked between the structure of the roof and the vitality of the architectural space and its impact on man. Since the public realm is the sphere of social relations going beyond our own circle of friendships, family and professional relations. The concept of the public space is bound up with the ideas of expanding one's mental horizons of experiment, adventure, discovery and surprise. I will consider these four aspects as I research through the design process which will be empirical.

Thematic research question

The research paper will focus on the social interaction in public buildings and their spaces, especially on the thresholds, and how we can as architects improve the quality of a built space by developing the roof structure design that creates a vital place for social interaction. The main question for this paper will be as follows:

What is the relation/s between social interaction and the structural design of public building roofs?

First of all, the vitality concept will be defined according to the architectural field. Secondly, the main factors that affect vitality will be determined and some of them will be chosen to discuss deeply, such as context, materials, light, structural design, and functions. Therefore, the sub-questions could be as follow:

How can the structural design of a roof foster the social interaction of the cultural centres? What are the features of natural light required to enhance social interaction within public spaces?

Overall design question

The previous questions would be a tool to achieve the main answer to the overall design question:

How can the concept of vitality be implemented into a cultural centre by the roof structural design?

Methodologies

To answer the previous questions various methodologies will be adopted. Firstly, I will start by studying architectural cases that are relatively related to social interaction and vital places. For some projects, I will make a visit to their locations and carry out a field analysis by interviewing the users of these spaces. These studies will be combined and compared to understand the qualities of natural lighting and structural design and the relation between them and if it existed, in order to make a list of the benefits and drawbacks resulting from these factors. Studying the references can go widely since there are many types of public buildings where social interaction occurs within them. Their courtyard/ thresholds will be mainly focused on, due to its relatively greater embrace of this phenomenon. From each reference, I will illustrate data and factors of being this place attractive to the public and which aspects have an impact on the public and the place itself. From that, the vitality theme of places and her qualities will be clarified.

Secondly, I will make a literature study to recognize the motivation behind making statements about certain architectural approaches in order to establish a list of criteria that can define my position as an architect trying to solve the shortage of social interaction in our society nowadays. In addition, I will do a series of interviews with the experts and architects who have done projects concerned the structural design and natural light, which could lead to matching ideas and concepts and inventing new solutions. Finally, depending on the previous methods, I will build a series of models to test their performance related to daylight and structural design patterns in order to have an adequately architectural model that implicates the desired concepts.

Research methods:

Study architectural references – visiting projects – literature – interviewing experts – testing models.

Planning

Under development

Relevance

The purpose of being an architect is to construct buildings and create spaces that serve humans and express social development and civilizational prosperity. Therefore, public buildings are considered among the buildings that embody human civilization because they are the physical material that defines the identity and traditions of society, public spheres are the place where society is formed.

In spite of that, the aspect concerned with social development was reduced within these buildings, and the focus became only on the performance and movement of the individuals

within it and how to provide facilities within it. Through my graduation project, I would like to present a new approach capable of changing the way public buildings are designed by introducing new principles aimed at reviving social interaction and development by linking them with architectural standards and values that enrich our society and direct it towards a better future and vibrant society.

Literature

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