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Architectural Design with A Phenomenological Approach, A Case of Museum Sensory Experience

¹ B.S. Maryam Al-Madhi, ² Professor Dr. Najla Allani

University of Bahrain, College of Engineering, Department of Architecture & Interior Design, Bahrain. ^{1&2}

E-mail ¹: 20172680@stu.uob.edu.bh, E-mail ²: nallani@uob.edu.bh

Abstract:

The phenomenological approach's role is to implement human perceptions where humans exist by perceiving and observing the surrounding in a body relation with the built environment and world surroundings, as Ponty's philosophy addresses. Furthermore, architecture is the overall image of emerging human life aspects connected with all human sensations that reflect perceptions, experiences, and ideas. Significantly, attributes of daily experiences exist through architecture and social aspects. The purpose of the study stands to understand bodily experience through phenomenological approaches in a museum. For instance, surrounded built environment and designed atmosphere in architectural design and human sensation concerning phenomenological characteristics. In addition, phenomenological methodology through focus groups is properly considered while practising the museum's journey that attracts the user's sensory experience and perceptions. Moreover, the study analysis results concerning human sensations and design aspects in a museum experience are promised with design awareness.

Keywords: Museum; Phenomenology; Experience; Perception and Senses; Phenomenological Characteristics.

1. Introduction

In the light of phenomenological methodologies that are a fundamental field of interest whenever planning a journey that includes human feelings and emotions in the experience process. The architectural ambition is also conscious that it affects social context and people's daily existence, as it stands to design a physical space (Aziz Amen & Nia, 2018, Amen & Kuzovic, 2018, Amen & Nia, 2021, Aziz Amen, 2017). Notably, as an architect, it implicitly provided designing an experience. In other words, events that people face daily include "being in places". Furthermore, to determine cultural context and conditions, for instance, phenomena use individual senses and responses while also being conscious of the surroundings.

To that end, the study obtains human conceptions and impressions as phenomena emphasize personal experience, memory, and how space is interpreted. The purpose of the study is to interpret individuals in global cultural museums case study designed by an architectural student virtually watching walkthrough animation utilizing phenomenological approaches. In addition, a review of the Qal'at (Bahrain Fort Museum) Al-Bahrain Site Museum's background and design concepts as well as a site visit. The study will be analyzed based on Aron Gurwitsch's circle diagram, which symbolizes the total field of consciousness with people's perceptions of phenomena. Nonetheless, the museum studies explore the phenomenological characteristics of spatial context in the designed environment connected with human sensation.

Compelling, this paper will perform a study in two main parts. Firstly, a review of the Global Cultural Museum's case study background and design concepts. Secondly, Qal'at Al-Bahrain Site Museum's (Bahrain Fort Museum) background. While in each will be conducting analysis methods through the museum in terms of phenomenological characteristics and features to the architect implementation in the project. Lastly, the study tackles analysis findings in discussing the contribution of the results through the human dynamic interchangeable structure of participant's observations.

2. Global Cultural Museum Case Study Background

Global Cultural Museum is located in Manama, Seef District, near the City Centre mall in Bahrain. The project has been designed by a college student in 2021. The museum design aims to understand the significance of underlying technology in creating architectural forms and to think creatively about new architectural concepts to develop a socially responsible perspective toward architecture. In addition, to demonstrate the knowledge and architectural design skills gained by working on highly complex design problems in different contexts with equal emphasis on cultural, environmental, social, and technical issues, as represented in figure 1.

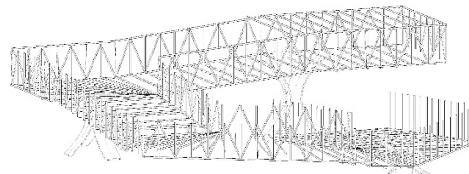


Figure 1. Building structure as warren steel frame

2.1. Global Cultural Museum Case Study Concept

The student concept in designing the Global Cultural Museum was the title “Looking, Seeing & Learning” as the focus of visual interest through the experiment of the museum in looking and seeing the built project and learning from the cultural museum antiques.

Furthermore, the student was inspired by “The Role of Design in Developing Exhibition and Display for Museum Philosophy”, article as it includes several points assets in designing the project whereas a concern has been on the heritage and the cultural experience from the past to the present inspired in the conceptual approach. In addition, the article topic states several theories and concepts that apply to the design.

- Firstly, figure 2 shows circulation patterns consideration as stating the visitor's freedom in his movement within different spaces through the social interrelation.
- Secondly, the social and individual approaches as represented in figure 3, were a point in the designed spaces that encouraged social interrelations and connected with the heritage.
- Thirdly, museum design and circulation in terms of the visitor's changes in their spatial behavior in the use of different materials, levels, and heights in figure 3.

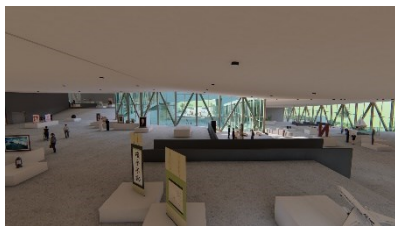


Figure 2. Internal circulation



Figure 3. Interrelation point & level difference

2.2. Global Cultural Museum Case Study Components

To begin with, the entrance lobby space mainly establishes the sense of openness as shown in (figure 4) with exhibition galleries in a harmony, balance theme in (figure 5&6). Other components are performance venues as private theatre and educational administrative private enclosed spaces



Figure 4. Ground Floor Plan



Figure 5. First Floor Plan

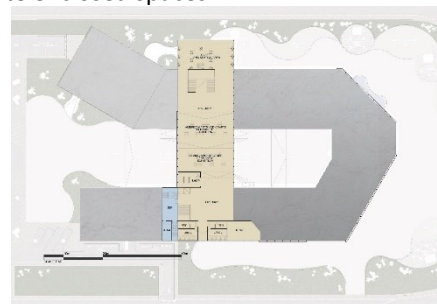


Figure 6. Second Floor Plan

Exhibition Galleries

3. Qal'at Al-Bahrain Site Museum (Bahrain Fort Museum) Background

Qal'at Al-Bahrain Site Museum (Bahrain Fort Museum) is located near Al Qal'a (The Fort), Karbabad. Built in 2008 by the architect Wohlert architecture Danish architects. The design of the museum related to the fort as to

- Approach with the view of both.
- Opportunity to discover the fort and museum.
- Gain experience through the journey in both Fort and museum.
- Figures 1 and 2 represent the approach and view from both sides and present the museum's connection.

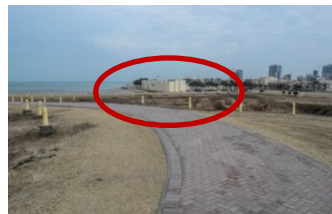


Figure 1. The View to The Museum



Figure 2. The View to The Fort

3.1. Qala't Al-Bahrain Site Museum (Bahrain Fort Museum) Concept

The architect's concept in designing Qala't Al-Bahrain Site Museum (Bahrain Fort Museum) was about

- Free of ornamentation.
- Emphasis on the historical site.
- Simplicity, Introvert as represented in figure 3.
- Traditional Bahraini architecture, as the representation of a courtyard within the entrance as represented in figure 4.



Figure 3. Exterior Facade

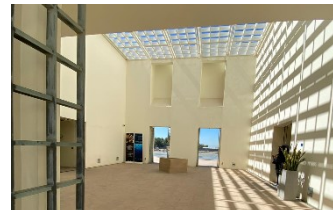


Figure 4. Courtyard Entrance



Figure 5. Museum Internal Material

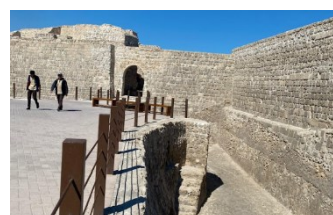


Figure 6. Fort Built Material

Furthermore, the architect's main concept implementation is keeping the exterior façade in traditional, regional form whereas internally the architect employs material with texture as the use of stone as same as the fort stone been built of. the result arises the sense of touch and smells on the internal wall, as represented in figures 5&6, to be adapted to the museum journey so as to have the experience feeling linked to the fort atmosphere in terms of feelings, memories, and emotions. Above all, phenomenological implementations within Qala't Al-Bahrain Site Museum (Bahrain Fort Museum) stand on the margins of awareness toward the historical fort nearby.

3.2. Qala't Al-Bahrain Site Museum (Bahrain Fort Museum) Components

To start with, the entrance mainly establishes the courtyard as a Transition point (figure 7) with a fountain that provides a sense of harmony with the use of a shading device pattern to connect two different parts. On the one hand, is for the museum's exhibition spaces as an open gallery with a receptionist (figure 8). On the other hand, the building services of a restaurant, bookshop, lecture hall, and private office rooms.

4. Material and Methods

A phenomenological study was carried out using qualitative research methods. The study's methodology involved asking focus group questions while viewing the museum and collecting responses to questions about their personal experiences and opinions. Acknowledging that the results were from watching animation a walkthrough Global Cultural Museum with images renders virtually, tackled with their observation as in Figure 9. On the other hand, Qal'at Al-Bahrain Site Museum (Bahrain Fort Museum) physical visit and observation (Figure 10) in addition to multiple questioners on individual ideas and opinions regarding their feelings within the museum. Not to mention, the approach being held is subjective with small number of five participants. Several questions about their thoughts and opinions about their experiences in the museum. Not to mention, the focus group was held with five participants, approaching being implemented by exploring the soft side of participants' observations. Another important thing to keep in mind is that the study emphasizes phenomenological integration as approaches and aspects to probe human perceptions, ideas, and feelings, in the view of using the five human senses of sight, touch, smell, hearing, and taste. On the other hand, consciousness is additionally employed. the phenomenological strategy and character assess the visual aspect, integrate memories with sensations, and improve the museum experience.

Moreover, the aim of the study, as in virtual walkthrough animation and focus group questioning, is to present the participants with a different experience through a virtual museum journey and experience to highlight the individual's consciousness and understanding toward the use of phenomenological characters and the use of human sense that verity within their journey. Furthermore, it investigates and determines the different experience that produces reactions and thoughts. Optimistically, the experience will perform great awareness among people's visions within the designed atmosphere experience that adapts emotions in memory.

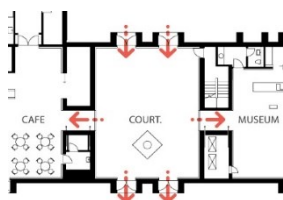


Figure 7. Central Court

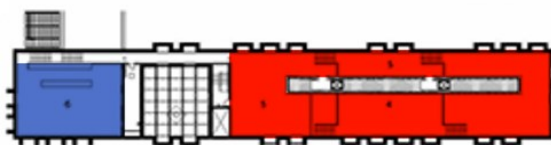


Figure 8. Ground Floor Plan

5. Results

The methodology result has been gathered through observations and focus group questions. The questions were mainly formulated with the awareness and consciousness of phenomenological aspects and characteristics of human sensation use within the museum design outcome.

With this in mind, the structure of the journey has been held through participants watching a walkthrough animation with brief explanations of information about the journey and phenomenological aspects. Not to mention, through the journey within the museum experience, the questions were asked to obtain participants' opinions and observations.

To that end, the data collected is characterized through the table below of the questions being asked with participant answers in words and some others with images of Global Cultural Museum Case Study.

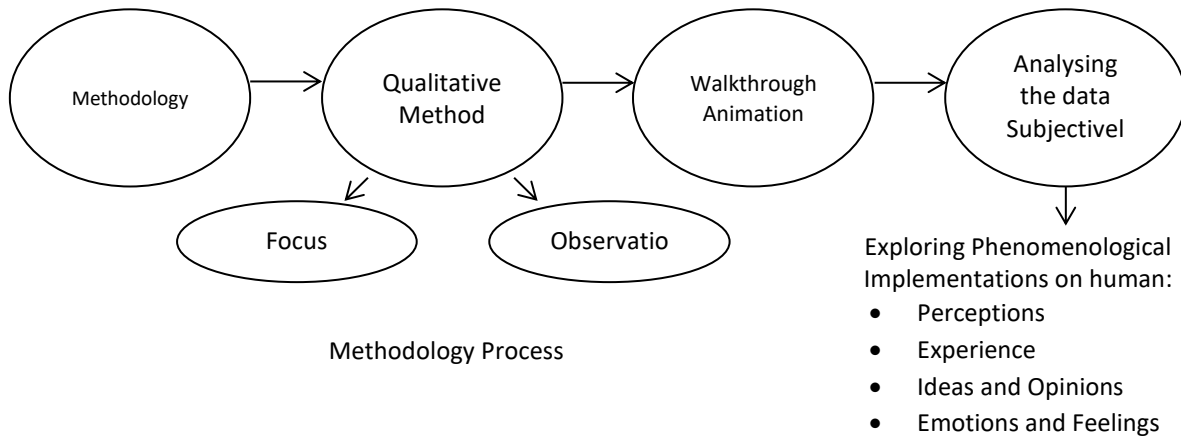


Figure 9. Global Cultural Museum Case Study Methodology

No	Questions	A	B	C	D	E
1	What did you feel within museum experience journey in few words?	Full of experiences	Impressed	Impressed with nature	Wide visual nature	Unique and interesting
2	What did you felt from exterior facade reaching the building about the designed atmosphere?	Wide and welcoming/ beautiful glazing	Nice	New experience	Deep visual interest	Visual interest within façade images
3	What is the different experience internal and external in one word for each?	External: spacious Internal: continuous	External & Internal: harmony	External: openness Internal: Impressed	External: wide and open Internal: sense of enclosure	External: discover by visual Internal: Impressed and interesting
4	What are the primary senses that architect implement and appears in the building?	Sound and smell of water with visuals	Visual and water feature sound	Visual notice	Sense of vision	Visual
5	What is the main interesting/liked thing you had in museum journey/experience	Continuous new experiences from outside to inside	Visually interesting	Visual façade glazing colors are interesting	Glazing system emerges both interior with exterior	Balance

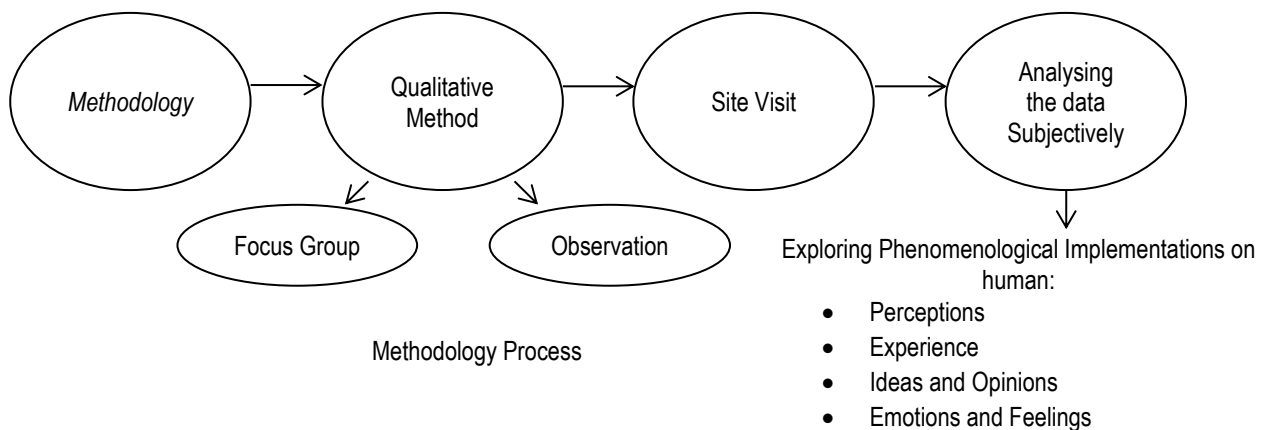


Figure 10. Qala't Al-Bahrain Site Museum (Bahrain Fort Museum) Methodology

On the other hand, the site visit of Qala't Al-Bahrain Site Museum (Bahrain Fort Museum) has different approaches towards their feelings and anticipations within the journey itself. With this in mind, the structure of the journey has been held through a day that enrolled participants with brief explanations of information about the journey and phenomenological aspects. To be ended with the data collected is represented through the table below of the questions being asked with participant answers in words and some others with images.

No	Questions	A	B	C	D	E
1	What did you feel within museum experience journey in few words?	The visit felt like going from a place underground to the surface of the earth	Small	Traditional	Interest	Boring
2	What did you felt from exterior facade reaching the building about the designed atmosphere?	Resembles the fort	Simple	Big	Emptiness	Tradition
3	What is the different experience internal and external in one word for each?	External: mysterious Internal: interesting	External: normal Internal: seems as museum	External: normal Internal: quiet	External: sea sound Internal: quiet	External: similarity of fort Internal: normal
4	What are the primary senses that architect implement and appears in the building?	Seeing (the sea), smelling (the sea out and stones internally), hearing (sea waves and wind).	Smelling the sea externally and stone internally	Mixture of the outside into the inside using the sense of sight in entrance courtyard and the sense of smelling and touching of stone	Sense of vision	Wall texture as sense of toughing
5	What is the main interesting/liked thing you had in museum journey/experience	How the movement was directed towards upper levels and able to see the center wall	Shade and shadow	Lighting	Lighting	The texture of walls and visual lighting

6. Discussion

To begin with, the questions as indicated in the table, the Global Cultural Museum Case Study is designed with the main feature of human sense as primary highlighted that is noticed and pointed out through the questioner is sight. In other words, the student implements the experience through a vision of the exterior and interior in addition to the glazing system that gives the impressions of shade and shadows as shown in (figure 11). On the other hand, the use of the other four senses. Despite this, the museum exterior landscaping design gives the advantage of the sense of smelling nature by adapting plants through the exterior museum experience. In addition, the primary sense is through a vision where touch and sound senses were neglected within the project design, although the addition of the water feature has a slight role of sound and smell (figure 12).

To sum up, a final question has been asked through the museum virtual experience as collecting a photograph affected the experience journey. The answer whereas sense vision by the sight of the colorful façade through the use of images and the welcoming form in approaching the museum as represented in (figure 13) and the landscaping used by natural planting of trees and others that arises the sense of smell as in (figure 14).

In summary of Qala't Al-Bahrain Site Museum (Bahrain Fort Museum) discussion, through the questions as presented in the table, the museum is designed with multiple phenomenological characters that are aware of the experience through history with the sense of touching by the use of stone in internal walls as well as smell. Despite this, the museum location gives the advantage of the sense of smelling the sea through the museum experience. In addition, the primary sense is through vision, whereas the external represents the traditional façade and internal fort material that is noticed with a vision towards touching and smelling sense.

To sum up, a final question has been asked through the museum visit as collecting a photograph affected the experience journey. The answer whereas a vision sense by the sight of the shade and

shadow pattern as represented in (figure 15) and the wall material used in the building gives the views of old Bahraini houses and the fort itself which arises the sense of touch and sense of smell as in (figure 16).

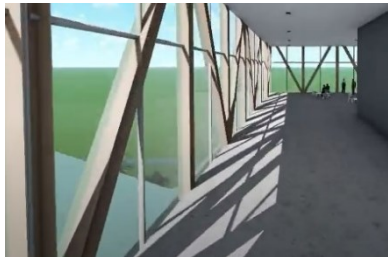


Figure 11. Shade and Shadow



Figure 12. Water Feature

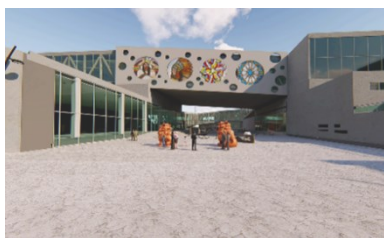


Figure 13. Approaching the Museum



Figure 14. Landscaping

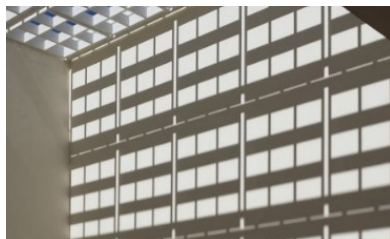


Figure 15. Shade and Shadow Effect

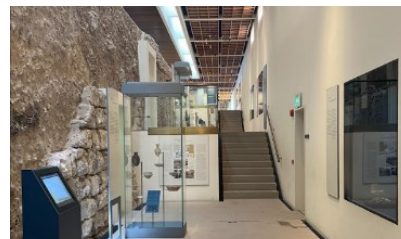


Figure 16. Wall Material

5. Conclusions

In conclusion, phenomenological approaches in design as using human sensations give the place its identity with its surrounding. Moreover, while the museum's primary sense is sight, other senses act as a dynamic structure that tackles sounds and materials within the built environment, where eventually it is represented as one theme with its margins of awareness that influence people's feelings and emotions. Furthermore, phenomenological features give the place more of an aesthetic approach through the place experience.

In addition, a comparison between both studies in consideration of phenomenological aspects. The need for all human senses is important to be implemented in the design where the case of global cultural museum case study did not implement any sense of touch within the design. The main issue is to design a building that is designed with human senses to tackle the memory and feelings of all kinds of human feelings as the representation of Aron Gurwitsch's circle diagram. As a result, the diagram indicates the total field of consciousness with people's perceptions of phenomena within any experience as the importance of including the five senses sight, touch, hearing, smell, and taste.

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Conflict of Interests

The authors declare no conflict of interest.

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