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## Searching in Phenomenology Theory in Practice, Multisensory Approach of Architecture in Historical Places

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### Abstract

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Heritage architecture, Beyond its historical, artistic or cultural value, embodies a profound symbolic significance, one that is intricately linked to the sensory experiences it evokes. Designing heritage areas must follow a unique way of dealing with the value of the heritage areas however, sensing the visitors is the target of designers while preparing their conspectus design. Attracting the senses of users and having appropriate bodily experiences are major points in designing. Unfortunately, in some designs for heritage areas, designers deal with the place physically and neglect the senses of the visitors, which is the research point of this study. Therefore, this paper delves into the realm of heritage architecture through the lens of phenomenology, a theoretical framework that prioritizes the experiential aspect of architecture. Phenomenology in architecture, especially in heritage spaces, emphasizes the importance of a multisensory approach. It posits that each architectural experience is inherently multisensory, profoundly impacting visitors of cultural heritage. In this context, architecture is a physical structure and a medium that conveys and mediates meanings through a rich tapestry of sensory experiences. This exploration will encompass various phenomena such as light, sound, smell, and texture, which are integral to creating atmospheres that define the experience – atmospheres of transcendence, eternity, community belonging, and an extraordinary spatial character. This paper aims to shift the perspective on how architecture should be approached, especially in conserving and protecting cultural heritage.

**Keywords:** Architecture; Heritage; multisensory; Keyword; Phenomenology.

### 1. Introduction

Creating spatial experiences that once encountered, affect people's moods and behavior is the goal of architecture. It is influenced by various factors, such as the users' needs and preferences, the space's context and purpose, and the available resources and technologies (Spence, 2020). However, the sensing of users with the heritage is one of the most significant factors that shape architecture in historical areas. Heritage is the legacy of tangible and intangible elements that reflect a society's values, beliefs, and traditions (Rudolf, 2010).

Designing heritage areas must follow a unique way of dealing with the value of the heritage areas. Sensing the visitors is the target of designers while preparing their conspectus design. Attracting users' senses and having appropriate bodily experiences are significant points in designing. Unfortunately, in some designs for heritage areas, designers deal with the place physically and neglect the senses of the visitors, which is the research point of study. Architectural design beyond its historical, artistic, or cultural value, heritage architecture embodies a profound symbolic significance, one that is intricately linked to the sensory experiences it evokes. This paper delves into the realm of heritage architecture through the lens of phenomenology, a theoretical framework that prioritizes the experiential aspect of architecture. Phenomenology in architecture, especially in heritage spaces, emphasizes the importance of a multisensory approach. It posits that each architectural experience is inherently multisensory, profoundly impacting visitors of cultural heritage. In this context, architecture is a physical structure and a medium that conveys and mediates meanings through a rich tapestry of sensory experiences. This exploration will encompass various phenomena such as light, sound, smell, and touch, which are integral to creating atmospheres that define the experience – atmospheres of transcendence, eternity, community belonging, and an extraordinary spatial character. Hence, this study explores the role of Phenomenology Theory in architecture in mediating intercultural interactions, nurturing local culture, and promoting sustainable social solidarity in the context of historical areas in Muharraq and Manama in Bahrain. This paper aims to shift the perspective on how architecture should be approached, especially in conserving and protecting cultural heritage. Using philosophical thoughts and sensual ideas as a guide and reference, this paper will be conducted through an exploratory analysis in a qualitative method format that aims to explore how cultural heritage influences architecture. The discussing of Phenomenology Theory in practice via the Bodily Experiencing by the researchers had been implemented in two famous

Historical areas as a self-experience in this research. It will use data from various sources, such as results from books, journals, and case studies to examine the design principles and practices that influenced the design of the areas. Finally, the paper will conclude with the importance of respecting phenomenology theory and bodily experiences while dealing with cultural heritage areas while also meeting the contemporary needs and expectations of users.

## **2. Literature Review**

There were major changes in Urban Design and Architecture, From the 1950s to the 1970s, urban and architectural design experienced a significant shift, moving towards a postmodern, phenomenological, and interdisciplinary approach. This shift was influenced by the works of theorists like Sigfried Giedion, Christian Norberg-Schulz, Eiler Rasmussen, Alberto Pérez-Gómez, Juhani Pallasmaa, and Jorge Otero-Pailos. The emphasis on the sensory and inter-corporal aspects of design became more pronounced, focusing on subjective experiences, sensations, and meanings of places. Phenomenology in architecture is a theoretical field that emerged due to the dominance of visual perception, or ocular centrism, in architectural experience. This approach emphasizes designing the experience of space rather than just the space itself, aiming to integrate all sensory perceptions into the architectural form. The modern era's focus on visual cognition, often neglecting other sensory experiences, faith, and sensibility, has been challenged by phenomenology, which advocates for multisensory perception as an integral part of experiencing architectural form. Phenomenological architecture, influenced by thinkers like Husserl, Heidegger, Merleau-Ponty, and Bachelard, emerged in the second half of the 20th century. This approach critiques the Cartesian model of knowledge, which fails to explain shared human feelings and bodily expressions. It emphasizes the role of feelings and emotions, alongside rational faculties, in our understanding of architecture. (Knibbe & van Houtert, 2018). The transition from modernism to postmodernism in architecture, where space began to be defined as dependent on human perception, marked a significant shift. The emphasis on sensory perception and human experience became central to the phenomenological approach in architecture. This approach views architecture as a holistic experience, engaging individuals' personal history, cognitive perception, and interactions within the architectural space. (Knibbe & van Houtert, 2018).

### **2.1. Phenomenology of Historical Architecture**

In phenomenology, historical architecture becomes a domain where the interplay of sensory experiences, emotions, and spiritual meanings converge. Phenomenological architecture in historical spaces involves a deep engagement with these environments' experiential and symbolic aspects, transcending mere visual aesthetics. As the locus of perception and experience, the human body becomes central to understanding historical architecture. This approach encourages a multisensory engagement with historical spaces, enhancing individuals' spiritual and emotional connection with these environments. (Andriotis, 2009). The phenomenology of historical architecture revolves around preserving, presenting, and enhancing the multisensory experiential aspects of historic spaces, including the historical, cultural, and artistic values and the symbolic values inherent in these buildings.

#### **2.1.1. The Multisensory Experience:**

Historical architecture aims to provide a multisensory experience through its design and elements. This involves incorporating aspects that appeal to the sense of sight, sound, smell, touch, and even taste in some cases. Such a design approach helps create a space that is visually appealing and emotionally and spiritually engaging. The integration of various sensory experiences is crucial for conveying the symbolic value of the historical space, highlighting contributions from thinkers like Juhani Pallasmaa, Karsten Harries, Steven Hall, Alberto Pérez-Gómez, and Merleau-Ponty (Andriotis, 2009).

#### **2.1.2. The Role of Light and Sound:**

Light and sound play crucial roles in historic architecture. The daylighting design in historic spaces must consider its symbolic character, which varies among different religions. Light can emphasize theological concepts and create dynamics and rhythm within the space. Similarly, sound in historic architecture creates an atmosphere of being in space, connecting the individual to the historic through music, chants, or the natural acoustics of the architecture itself.

#### **2.1.3. Smell and Haptic Experiences:**

The sense of smell and touch (haptic experiences) are also integral to historic architecture. Smells associated with historic rituals, like incense, contribute to the spiritual atmosphere, linking the tangible space with intangible beliefs and practices (Andriotis, 2009). Similarly, the tactile aspects of the space, which can include the texture of materials used, the temperature, and the solidity or softness of surfaces, play a significant role in the overall experience of the historic space.

#### **2.1.4. Body Engagement and Ritual Practices:**

In different religious traditions, how the body is engaged in rituals varies significantly, impacting how believers interact with the historic space. This interaction can range from dynamic movements to static postures, each contributing to how history is experienced and perceived. This aspect highlights how historic architecture accommodates and enhances ritual practices, making the space a crucial element in the experience of faith. (Sokol Gojnik & Gojnik, 2019)

### **2.1.5. Integrating Phenomenology into Conservation Practices:**

Understanding and integrating these multisensory experiences into the conservation and enhancement of historic architecture is crucial. This approach not only preserves the material aspects of these buildings but also maintains their symbolic and experiential qualities, which are vital for conveying the essence of the historical. (Sokol Gojnik & Gojnik, 2019).

## **2.2. Urban Phenomenology**

Urban phenomenology focuses on the experiential aspects of urban spaces, considering the built environment as a physical structure and a space of human interaction, experiences, and activities. This approach considers the social and symbolic interactions within urban layouts, buildings, and public spaces. It emphasizes the need to understand the meaning of built forms and spaces as socially constructed through actions and interactions. Urban phenomenology advocates for a holistic understanding of the urban environment, integrating social sciences, neurosciences, and cognitive sciences to interpret urban inhabitants' emotional and experiential needs. Urban phenomenology is a multidisciplinary approach that focuses on the experience of urban spaces. It integrates neurological, psychological, and social aspects to understand how individuals perceive and interact with urban environments. The emphasis is on empathy and social cognition, exploring how people relate to others and their surroundings. This perspective considers various qualitative experiences related to shapes, textures, volumes, and historical layers of cities, highlighting the hidden qualities of built and urban space. (Fuentes-Farías, 2022).

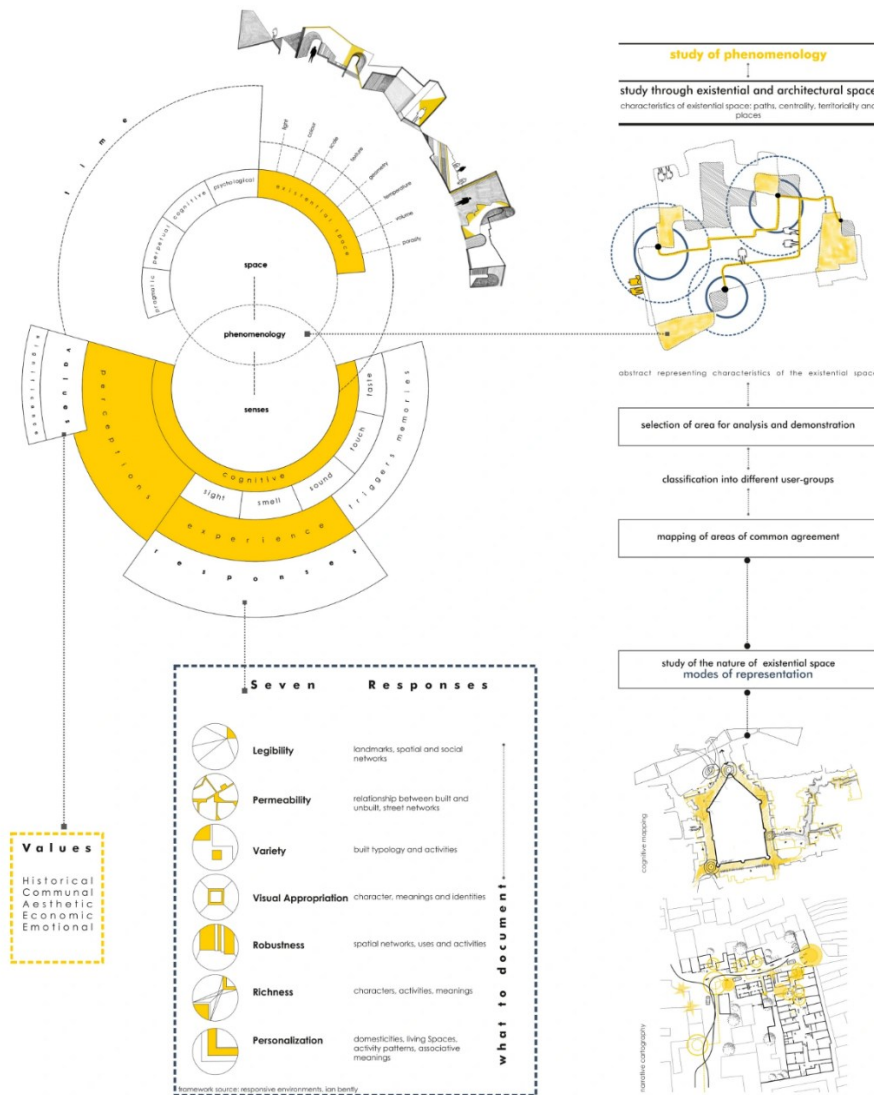
### **2.3. Integration of Disciplines in Urban Phenomenology**

The approach integrates insights from social sciences, neurosciences, and cognitive sciences. It examines the relationship between these disciplines and urban-architectural design theories. The focus is on understanding the emotional life of urban inhabitants and how it influences architectural design and urban planning. This integration has led to a redefinition of space, placing greater importance on human perception, sensory experiences, and emotional responses. (Eldardiry & Konbr, 2022).

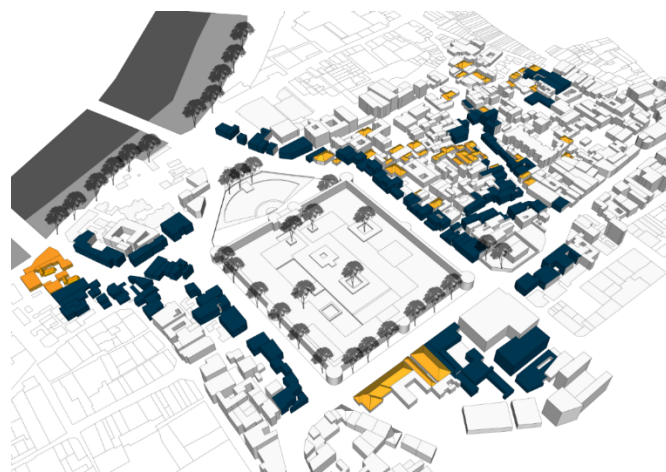
### **2.4. Empathy and Social Cognition in Urban Phenomenology**

Empathy plays a critical role in urban phenomenology, helping understand the emotional and social needs of urban inhabitants. Technological advances in monitoring brain activities have facilitated studying neurological processes related to empathy. This understanding aids in comprehending social interactions and the formation of meanings in urban spaces. The approach emphasizes the importance of "inter-corporeality" and the "world of life," which focus on the direct experience of built environments as a resource for designers. (Fuentes-Farías, 2022)

In dealing with the Phenomenological Methodology in Urban Design, Urban phenomenology advocates for a methodological approach emphasizing interpretative, comprehensive, and phenomenological methodologies. This approach is vital for developing housing projects prioritizing phenomenal experiences and their meanings. It also underlines the importance of social interaction and personal narratives, critical in shaping urban spaces and their meanings.



**Figure 1.** Diagrams of using phenomenology as a framework in a study exploring the dynamic relationship between movement and activity (the kinetic layer) and physical structures (the built environment) in cities' historic centers (by Siddhi Joshi).



**Figure 2.** diagrams for the cities' historic centers (by Siddhi Joshi).

In Indian cities, the historical centers provide a rich and dynamic record of human activity, shaped by the experiences and interactions of people over time. These areas possess multiple layers of meaning, identity, and imagery, which, although not always visible, are embedded in the form of physical structures, memories, and stories. These elements transform simple spaces into places of significance. However, the historical areas, which were once integral to human interaction, now stand isolated from the daily life of the city due to modern urban processes. Current development practices, which are often governed by strict rules and logic, fail to acknowledge the importance of experiential, human connections, and engagements – key components of the phenomenological approach. This oversight leads to a disconnection between people and their surroundings and diminishes the essence of the historical cores of cities.

#### 4. Data Analysis

The proposed schedule for phenomenological criteria in architectural analysis, drawn from the insights of the research papers, emphasizes a holistic sensory experience in architecture and urban design. This approach, rooted in the phenomenology of architecture as expounded by (Sokol Gojnik & Gojnik, 2019), integrates light, sound, smell, haptic aspects, multisensory experience, and symbolic value to create a comprehensive framework for evaluating architectural spaces. Light analysis, as discussed, encompasses not just the physical attributes but also its experiential and symbolic significance. Sound is evaluated for its atmospheric contribution and its integral role in historic architecture. The role of smell, often overlooked, is recognized for its potent impact on spatial experience. Haptic aspects emphasize the tangible interaction between humans and architectural materials, as Pallasmaa highlights the loss of haptic perception in contemporary architecture. The multisensory experience criterion synthesizes these sensory aspects to assess a space's overall atmosphere and emotional impact. Finally, the symbolic value criterion probes deeper into the meanings conveyed by architectural designs, resonating with the space's cultural, historical, or spiritual significances. Thus, this schedule provides a nuanced framework for analyzing architectural spaces, aligning with the phenomenological perspectives of noted authors (Sokol Gojnik & Gojnik, 2019), and Pallasmaa, who advocate for an architecture that engages all senses and encompasses deeper symbolic meanings.

##### 4.1 Phenomenological Criteria for Architectural Analysis

The Phenomenological Criteria for Architectural Analysis are summarized in Table 1 as follows:

**Table 1.** The Phenomenological Criteria for Architectural Analysis.

Criteria	Description
<b>Light</b>	Analyze the daylighting concept, light intensity, contrast, and rhythm. Assess how light designs spaces' experiences.
<b>Sound</b>	Investigate sounds in the space, their impact on the atmosphere, and their significance in the space, especially in historic architecture.
<b>Smell</b>	Explore smells emanating from the space and building materials. Determine the contribution to the overall experience.
<b>Haptic (Touch)</b>	Assess materials and surface finishing for haptic qualities. Examine interaction with tangible objects and material textures.
<b>Multisensory Experience</b>	Analyze the integration of sensory experiences to create specific atmospheres and holistic perception.
<b>Symbolic Value</b>	Investigate symbolic aspects conveyed through design and sensory experiences beyond historical or cultural values.

##### 4.2 Applied Bahraini Cases: Phenomenological in Pearling Path

Many tourists from nearby GCC and across the region visit Bahrain, which combines modern Arab culture with the archaeological legacy of five thousand years of civilization. Bahrain has artifacts from the country's history dating back to the island's first human inhabitants some 9000 years ago, which proves a significant historical dimension there. Most of Bahrain's population is concentrated in cities, most of them in Manama and Muharraq. The rest of the population lives in old parts of the country, where one can see the architecture and traditional identity of the Bahraini people, where the long doors and windows are closed and designed around a garden or a closed courtyard and wind towers, an old form of air conditioning. (countires and thier cultures, 2000,).

Muharraq Island has been taken as this paper's case study. Muharraq was selected due to its significant past and present impact on identity, comprising numerous elements in the Kingdom. The Kingdom's historical capital city comprises historical fortresses and magnificent traditional buildings, and it is endowed with cultural importance. In the past ten years, the city has witnessed a very active process of reviving its heritage, regenerating economic areas, implementing comprehensive infrastructure, and safeguarding communities. The birth of Muharraq was initiated by Al Khalifa in 1810, with Abdullah Al Fateh establishing himself as the ruler. Initially organized around a tribal, feudal system, the Muharraq economy.

Many projects are targeting maximizing Bahrain's heritage tourism activity. Conservation and preservation projects are significant in achieving this target. In this context, such projects are used as attraction magnets in heritage tourism and tourist activities. The Bahrain Culture and Antiquities Authority (BACA) implemented many conservation and restoration projects in Muharraq's heritage area, including the Pearling Path project, the pilot study in this research. Users of these revitalization areas (tourism, residents, and visitors) expressed their pleasure and enjoyment by visiting their heritage treasures [26]. Accordingly, BACA initiated the Pearling Path Tour as one of the momentous projects in this field.

This tour aims to elucidate fundamental information about Bahrain's heritage while visitors are on their trips. This enables visitors to acquire a sense of the environment of the heritage that is urgently improving the image of the heritage part of the city. (Tawfeeq et al., n.d.). Visitors of the Pearling Path through their touristic trip in the Pearling path will:

- a. Recognize the building period's political, social, and economic factors in time and place.
- b. The history and occasions led to the realization of the heritage area.
- c. Having information about the occasions that took place chronologically, fleeing their impressions on the visitors (K. A. C. Greswell, 1966).

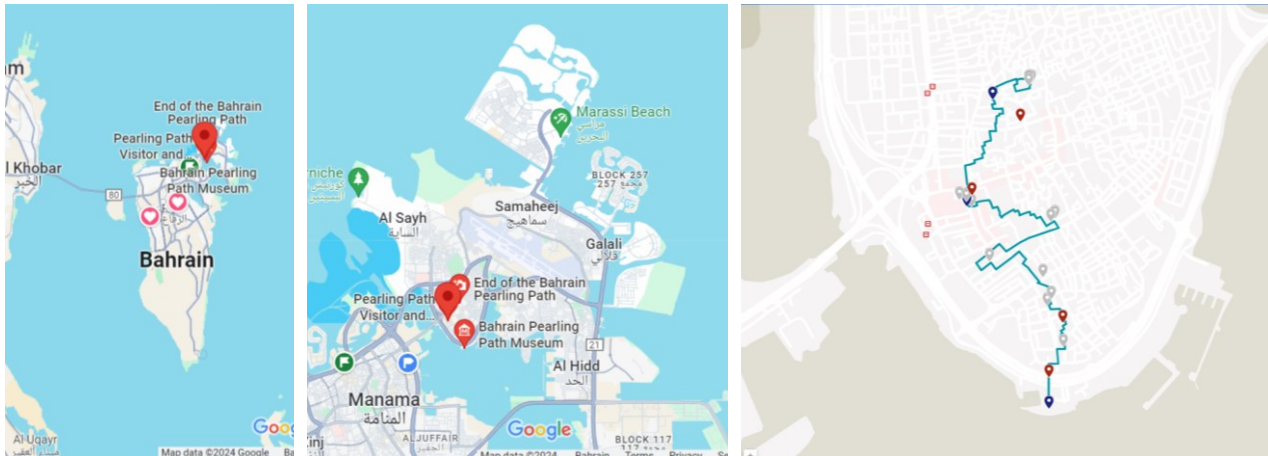


Figure 3. BACA's Pearling Path Map (google, 2023).

The Pearling Path restoration project, as detailed by (Naseeb et al., 2021) is a significant urban regeneration initiative that intertwines cultural preservation with socioeconomic development. The project was a nine-year effort to revive the socioeconomically neglected island of Muharraq, historically important for being the center of the Middle East's pearl trade since the Mesopotamian period. This Pearling Path project's focus on cultural preservation, urban revitalization, and community involvement aligns with the phenomenological approach to architecture and urban design, emphasizing sensory experiences and deeper symbolic meanings.

Focused on eco-museum development, it transformed a 3.5 km area into a thriving business and cultural hub. The project's success factors included expanding beyond UNESCO preservation requirements, focusing on sustainability and continuous use, improved access to culture, and cultural opportunities. This revitalization has turned the Pearling Trail into a trendy local attraction, playing a vital role in the cultural rebirth of the area, hosting festivals and events, and effectively contributing to urban regeneration and revitalization.



Figure 4. Photos for the alleys to show the physical environment within the study area (by researchers).



Figure 5. Streetscape design in the historical part of Muharraq (by Ibrahim, A).



Figure 6. The national festival presents sensual aspects of residents (Tangible and Intangible).

The results of the Phenomenological Analysis are as follows:

- a. **Light:** The restoration and design of the Pearling Trail likely involved careful consideration of light, both natural and artificial, to highlight architectural features and create inviting spaces.
- b. **Sound:** The project, revitalizing a bustling urban area, would have considered the acoustic environment, balancing the sounds of urban life with the tranquility needed in cultural and residential areas.
- c. **Smell:** While not explicitly mentioned, urban regeneration projects often consider environmental factors that could impact the olfactory experience, such as vegetation, water features, or pollution control.
- d. **Haptic (Touch):** Restoration of buildings and creating public spaces in the Pearling Trail project would have involved tactile elements—from building materials to street furniture—contributing to the haptic experience.
- e. **Multisensory Experience:** The Pearling Trail project aimed to create a cohesive and immersive experience, likely considering how different sensory aspects work together to shape visitors' experiences. Calligraphy was used to make the tour more visually appealing.
- f. **Symbolic Value:** A significant aspect of the project was preserving and celebrating Bahrain's cultural and historical heritage, particularly its pearling history, which is rich in symbolic value.
- g.



Figure 7. Photo for a pedestrian bridge leading to the Pearling Path (by Pearlingpath.com).



**Figure 8.** Using elements from culture (Calligraphy) to reflect the identity of the place.



**Figure 9.** Using landscape architecture elements to create a bodily experience is stronger. The water body. The native palm trees, the woodwork, and the art of designing the floors made valuable, comprehensive bodily experiences for the visitors.

According to the research methodology, the findings of the SWOT Analysis for the pearling path are as follows:

**a. Strengths:**

- Rich cultural and historical heritage.
- Integration of cultural preservation with urban regeneration.
- Engagement with the local community and stakeholders.
- Revitalization of the area, boosting tourism and local economy.

**b. Weaknesses:**

- Risk of commercialization that could undermine cultural significance.
- Challenges in maintaining the balance between modernization and preservation.

**c. Opportunities:**

- Potential to become a model for similar projects globally.
- Opportunity to enhance the cultural tourism market.
- Further development of public spaces and facilities could increase community engagement and tourism.

**d. Threats:**

- Economic pressures that might prioritize development over preservation.
- Environmental threats that could damage the site and its surroundings.
- Potential for the area to become too tourist-centric, losing its local character and appeal.

Consequently, the output from the SWOT analysis of the pearling path was summarized. The area's problem is that rapid urbanization has eroded the distinct identity of the Pearling Path, resulting in a need for more cohesion and visual appeal via having tangible and intangible design elements that led to a lack of architectural coherence characterize the Path. The area needs to implement the phenomenology theory in the design by using sensory design elements to create successful bodily experiences that cover the sense of place and reflect the cultural heritage of Muharraq to the visitors. The main issues that should be considered to achieve this sense are as follows:

- a. The harsh environment outdoors (high temperature and humidity).
- b. Integrating the streets' historical significance with modern design.
- c. Balancing modern development with preserving cultural heritage.
- d. Balancing the needs of different stakeholders (residents, businesses, commuters).
- e. considering the streetscape and improving walkability.
- f. Create a distinct pearling path surrounding Avenues identity that celebrates its cultural and historical significance.
- g. Improve the aesthetics and functionality of the road to enhance the experience for pedestrians.
- h. Find an appropriate place to accommodate traditional handicrafts that attract visitors to the music.
- i. Integrate culture and social activities within the street.

The Environmental challenges for using streetscape for the Pearling Path as an open museum in Bahrain are Due to the harsh environment in Bahrain (high temperature and humidity), and commercial activities are found in closed environments in shopping malls. Nowadays, designing an appropriate streetscape within the commercial areas in the

heritage area of Muharraq requires lots of effort to have the desired relaxed and comfortable environment. In that spot, Bahrain's weather.

### 4.3 Experiencing Place: Qalat al Bahrain

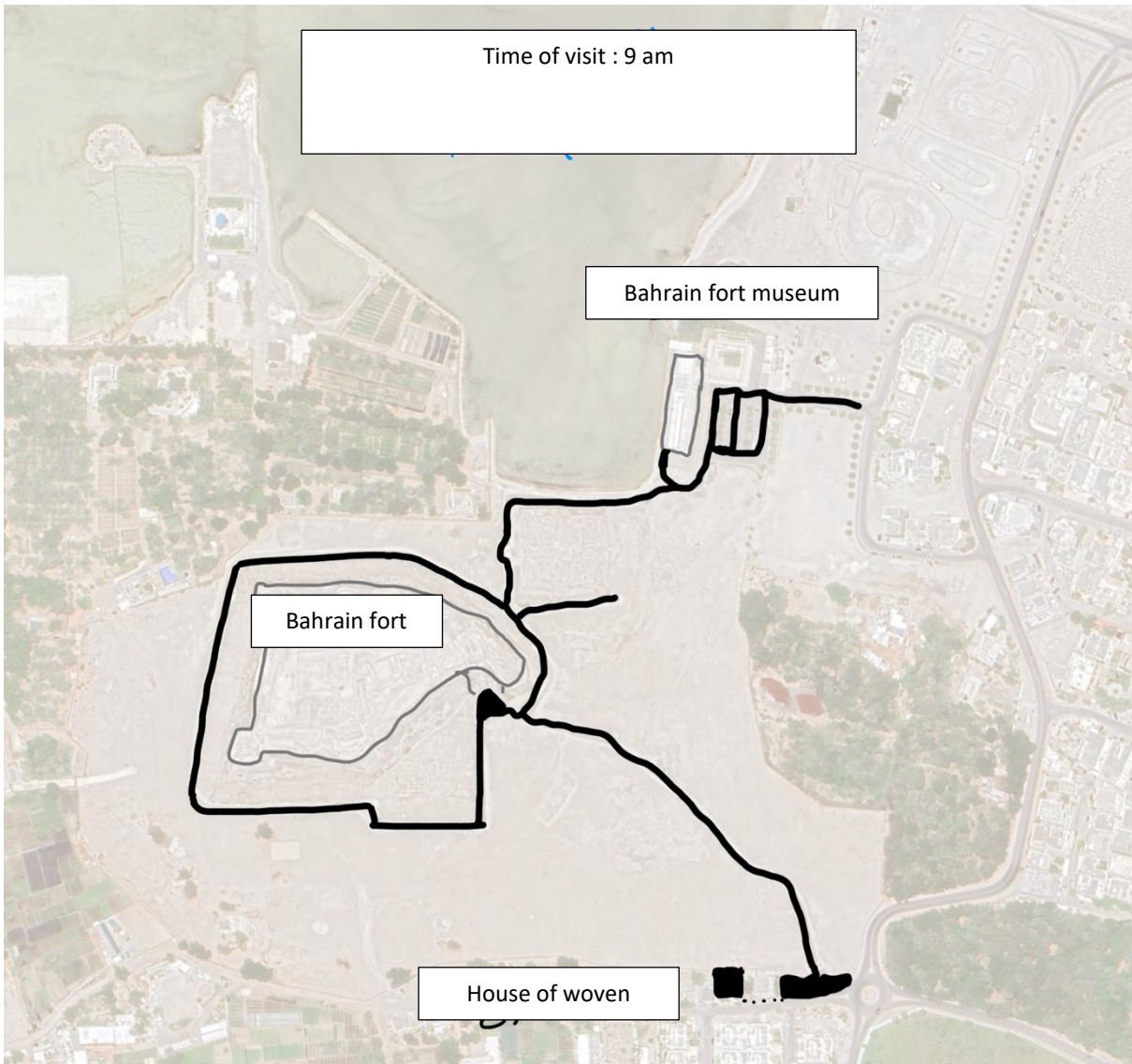
Bodley's experience is an essential part of experiencing architecture, evaluating sensory experiences such as touch, smell, and hearing while also experiencing the cultural impact on the human. Qalat al Bahrain is a historical site located on the shoreline of Karbabad, Bahrain. It contains a castle built in the 18th century and a museum showcasing historical artifacts from the site.



Figure 10. Location of Qalat al Bahrain site and museum (aerial view by google earth).

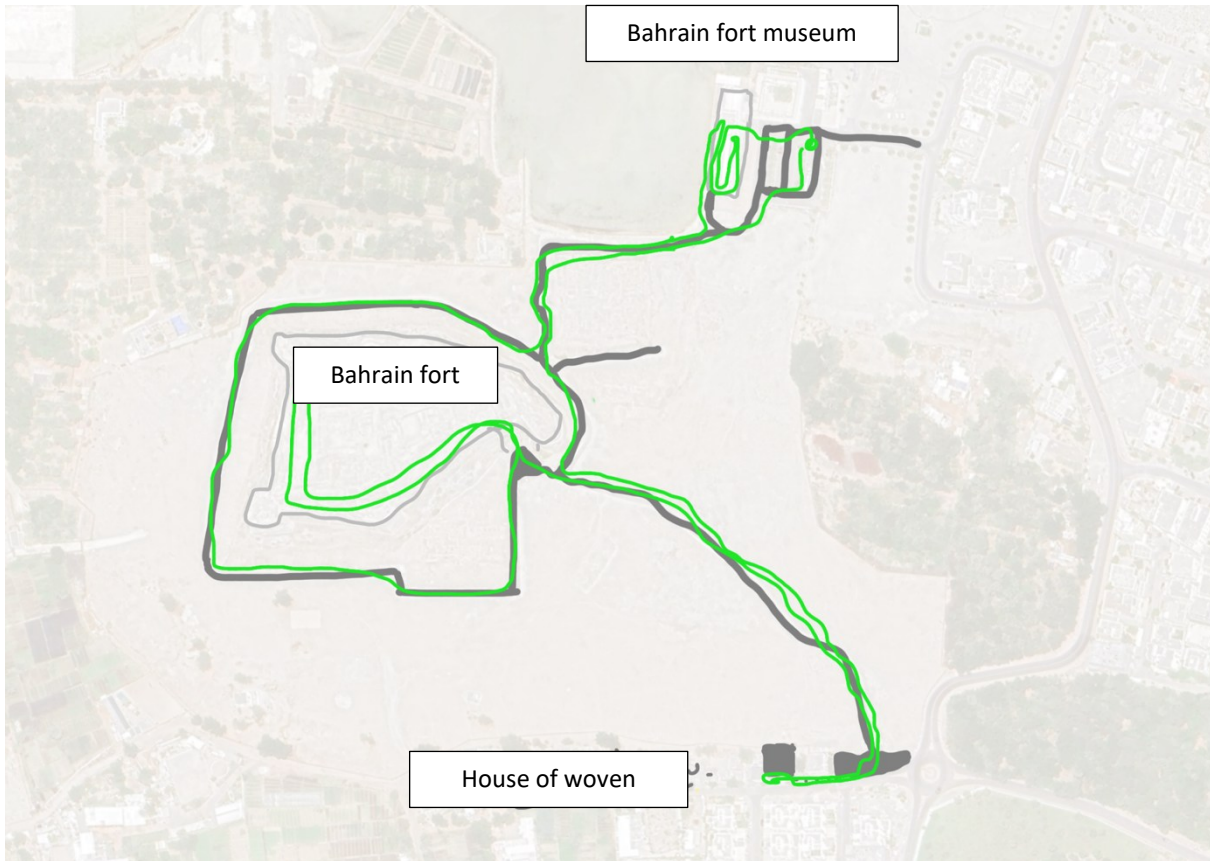
Experiencing the place was implemented following these main considerations:

- a. **Day:** Upon experiencing the place, the journey started at the museum where the first experience begins, and then continued the path to the Qalat al Bahrain to observe the old castle and experience it from the inside to see how people used the place in the older times, and finally concluding the journey to House of basket weaving (bait al selal) which is a place that showcases how people used to make straw baskets from palm trees and other local materials. See figure (2).



**Figure 11** - a diagram shows the time for site vast path to experience the place (developed authors).

b. **The Journey:** Figure (12) showcases the typical path to take from the parking space near the museum. One enters the central courtyard, where the museum entrance is located. On the right side is the entrance of the coffee shop. One then exits to a view of the Karbabad beach and, following the path, leads to the Fort and then to the House of Basket weaving.



**Figure 12** - a diagram showcases the typical path to experience the place (developed authors).



**Figure 13.** View of the sea from the museum.





Figure 14. The Journey to Bahrain Fort (by authors).

c. **The museum:** The museum's design is a thoughtful interpretation of traditional Bahraini architecture, characterized by its introverted layout, minimal ornamentation, and its focus on providing protection against the region's intense heat and sunlight. This design philosophy is evident in the museum's layout, which includes a two-story museum wing and a square services building, surrounding a tranquil garden court. Central to the museum's exhibition space is the "Tell wall," a 30-meter-long recreation of the Tells' seven archaeological layers, providing a tangible connection to the past 4500 years of Bahrain's history. As a symbol of Bahrain's growing appreciation for its cultural heritage, the Qal'at al-Bahrain Site Museum is pivotal in educating visitors about the region's past and serving as a beacon of architectural innovation and sustainability. Therefore, this project provides an excellent opportunity to explore architectural phenomenology and how this modern structure resonates with Bahrain's historical narrative and contemporary cultural identity.

d. **Body Engagement and Ritual Practices:** In different religious traditions, how the body is engaged in rituals varies significantly, impacting how believers interact with the historic space. This interaction can range from dynamic movements to static postures, each contributing to how history is experienced and perceived. This aspect highlights how historical architecture accommodates and enhances ritual practices, making the space a crucial element in the experience of faith.(Sokol Gojnik & Gojnik, 2019).



Figure 15. The Entrance to the museum and the inner courtyard inside the museum with an entrance to the exhibition and coffee shop and an exit to the beach view (by authors).



Figure 16. The experience from inside the exhibition area (by authors).

e. **Haptic Experiences:** The sense of touch (haptic experiences) is also integral to historic architecture. Like incense, smells associated with historical rituals contribute to the spiritual atmosphere, linking the tangible space with intangible beliefs and practices(Andriotis, 2009). Similarly, the tactile aspects of the space, which can

include the texture of materials used, the temperature, and the solidity or softness of surfaces, play a significant role in the overall experience of the historic space.

f.



Figure 17. Haptic experience inside the exhibition area (by authors).

g. **The lighting:** The architecture of the place introduced natural lighting in a way inspired by traditional wind-catchers in the Middle East. The building's architecture is crafted to capture light, directing it through narrow openings in the walls. This method allows natural light to illuminate the space while minimizing the impact of UV rays on sensitive artifacts. The strategic use of natural lighting is not just about protecting the exhibits; it also significantly improves the visitor experience. It creates a welcoming, comfortable atmosphere, allowing guests to view the artifacts in a natural and less intrusive light, making the space more enjoyable and memorable.

h.



Figure 18. The lighting design from inside the exhibition area (by authors).



Figure 19. Inside Bahrain Fort (by authors).



fort; however, inside the fort itself, it was quiet. After that, heading towards the house of waves, there was a lot of traffic and car noises due to its proximity to the street.

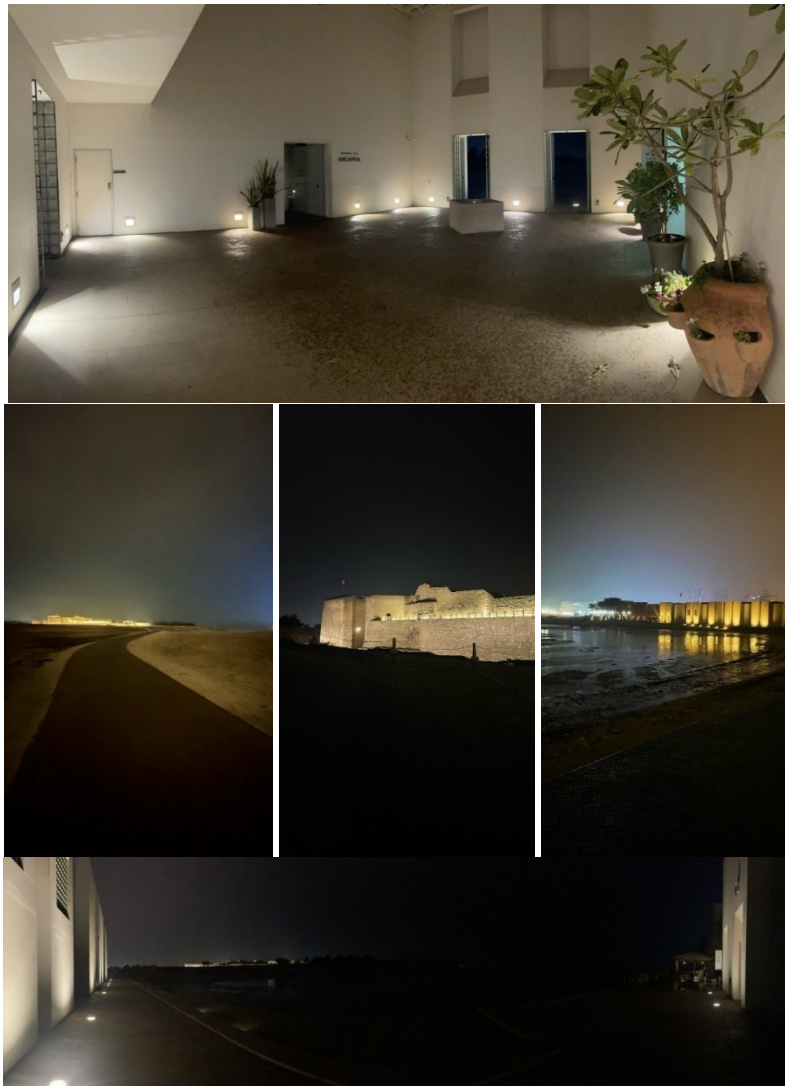
- b. **Smell:** Because it was visited the place at a time when there were no food activities around the area, the only prominent smells that were noticeable were the smell of the seawater and the smell of the palm pollen. Palm pollen is a substance from the palm that is then crafted into Pollen water, which is a popular drink in Bahrain. Palm pollen has a lovely smell, and it only happens between the end of February and the end of March.
- c. **Effect of time on the experience:** Visiting the place at different times and seasons may have different experiences with the senses, for example, the sense of smell; at the time of visiting the place, it was the season of palm pollen, which emits a pleasant scent from the palm trees. These palm pollens are seasonal from February till the end of March; after that, the palm tree starts producing dates. Visiting the place during different seasons may lead to different experiences regarding the sense of smell.



**Figure 23.** A photo that shows palm pollen (Al Ayam newspaper, 2021).

- d. **Nighttime:** Comparing the nighttime experience to the daytime experience, the experience was almost the same. However, some aspects are different. The lighting needs to be more addressed at night since no lights are on the path from the museum to the fort (figure 24). Also, there was a lot of light pollution from the beach area, but it did not affect the user experience. Inside the museum, the lighting was dim due to the use of only artificial lighting since, in the daytime, it relied on both natural and artificial lighting. The lighting outside the museum, however, is warm and calm. Even the lighting from the coffee shop was designed to create a relaxing feeling while drinking coffee near the beach. The lighting that highlights Bahrain Fort makes it look like a pearl from far away, highlighting it from all the dark agricultural land around it.

e.



**Figure 24.** Night visit inside the courtyard of the museum (by authors).

- f. Smell: Beach activities like food trucks and restaurants did not affect the sense of smell, but at night, the smell of seawater was more noticeable, and palm pollen was still present.
- g. Sound: At night, the most noticeable sound is the sound of beach activities, like children's screams and motorbikes. However, that did not affect or disrupt the overall experience. Once you get near the Bahrain fort, the sound becomes dim, and it feels quieter around the fort at night than during the day. One of the main contributors to that is the absence of bird' sounds

### 5.1 Conclusion

Considering the phenomenology theory in dealing with heritage spaces significantly impacts visitors' overall ambiance and emotional experience. Integrating heritage elements following the Phenomenology theories in designing such spaces can evoke a sense of identity and belonging among residents and visitors while also fostering a connection with the past and cultural roots. It is an urban approach to bodily experience in historic places, showing how bodily experiences in cultural heritage guide designers in shaping spaces' design principles and spatial functions. It emphasizes the challenges and opportunities of incorporating cultural heritage elements into contemporary design practices while considering the senses of visiting the Historical Place. Through case studies, it highlighted the theoretical knowledge of effectively integrating bodily experiences for visitors to cultural heritage sites. By emphasizing the importance of recognizing and embracing bodily experiences for the visitors to cultural heritage sites to create meaningful, contextually rich, and culturally sensitive spaces, the study provides a foundation for further exploration of how to design spaces that respect and celebrate phenomenology theories in the cultural heritage spaces while also meeting the needs and expectations of contemporary users. Exploring historic architecture through a phenomenological lens underscores the importance of a multisensory approach to experiencing and preserving these spaces. This approach extends beyond the mere visual appeal, incorporating the sensory experiences of sound, smell, touch, and even taste to create emotional and spiritual spaces. The phenomenological perspective, championed by notable thinkers in the field, highlights the need to consider the symbolic value of architecture, particularly in sacred spaces. The role of light and sound in creating atmospheres, the significance of olfactory and haptic experiences, and the body's engagement in ritual practices are all crucial elements that contribute to the holistic understanding of historic architecture. Integrating these aspects into the conservation and enhancement of historic spaces is essential to preserve their material aspects and maintain their symbolic and

experiential qualities. This comprehensive approach ensures that the essence of history is preserved, celebrated, and understood in its full depth and complexity, maintaining its relevance and impact in the modern world.

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