

Senses and Emotion Experience at Aceh Tsunami Museum

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Abstract. The purpose of this research is to find out how exhibitions in museums that use various senses can evoke the emotions of visitors and provide visitors with a more memorable spatial experience. In 2004 there was a very powerful Tsunami in Aceh. This incident is remembered in one of the museums designed by Ridwan Kamil, located in Aceh. This museum captures the moment Aceh Tsunami and also tries to present these past events as an exhibition area in a simulation room. This simulation room uses a multisensory delivery method involving several senses. This simulation room is known as the Tsunami Alley. The article discusses what feelings are involved in conveying messages from this space, and the spatial and emotional experience visitors feel. The method used is descriptive qualitative, and the object of this research is the Tsunami Alley of Aceh Tsunami Museum. According to the analysis results, sensory and emotional processes are inseparable and support one another. The application of integrated senses in the museum space will further evoke visitors' emotions and strengthen the message's memory. The results of this study are expected to be the development of design references regarding the delivery of news and information using multisensory methods to provide an impressive space experience in exhibition halls.

Keywords: museum design, exhibition design, sensory, emotion

1. Introduction

On 2004 December 26, the Tsunami Tragedy occurred, which hit various countries in the world, including Indonesia, to be precise, in the Aceh region. This tsunami also hit several other areas to the east of Aceh. The tsunami tragedy that hit Aceh impacted all fields, especially in the infrastructure and economic sectors. It also has a psychological impact like trauma due to fear of the disaster's return and gives deep sadness because it is abandoned by the people closest to it. Overall, the 2004 tsunami claimed 226,308 lives in the affected countries. Indonesia is the country with the most significant number of victims. Namely, 173,741 people died, and 394,539 were displaced.⁽¹⁾ Aceh Tsunami Museum was established as a memorial to the catastrophe. Aceh Tsunami Museum provides a museum, educational facility, and emergency shelter in case the region is ever again hit by a tsunami in remembrance of the 2004 Indian Ocean earthquake and tsunami disaster. M. Ridwan Kamil was the architect of the museum building. The rooms of the museum were thoughtfully created by M. Ridwan Kamil, the building's architect, to both evoke the ambience of the tsunami and to be rich of meaning. The Museum's layout has a sequence of rooms

that visitors must pass carefully. the layout is designed to produce a full psychological effect on the visitor's perception and emotion of the tsunami disaster. The exhibition area is designed in three zones, namely: spaces of memory, spaces of hope and spaces of relief.(2) One museum area that is quite memorable there is Tsunami Alley. Tsunami Alley is regarded as one of the Space of Memory. The Tsunami Alley displays a long, dark, cold, windy room, and can be heard the roar of water and the words Lailahaillahu are echoed continuously throughout this room. Several senses, including sight, hearing, touch, and smell, are used in this arena to evoke feelings and memories. Stimulation in the form of a space designed in such a way, involving several integrated sensors, is expected to evoke emotions from visitors who come. So that messages and memories regarding the tsunami tragedy that occurred can be appropriately conveyed, this article will analyze the sensory processes that occur in visitors and the possible emotions that can be aroused when passing through this hallway.

Previously there have been several studies on the integration of sensory, perception, and evoking emotions which are considered in designing a museum. For example, according to Benford et al., museums have a unique capacity to provide visitors with emotional, healing, and transforming experiences. Because museums are liminal areas separated from daily life, this is made possible. According to a visitor study, many visitors are impacted by museum visits' reflective, spiritual, and restorative aspects. For some, these aspects may serve as their primary motivator. (3) According to Pallasmaa, a space or location's quality depends not just on how it appears to the eye, as is frequently believed. Environmental character judgment is a multisensory fusion of complicated aspects instantly and artificially comprehended as a general ambience, ambience, vibe, or mood.(4) Pallasmaa, in his essay *An Architecture of the Seven Senses*, criticizes the current trend of focusing primarily on the art of the eye rather than fully engaging with the architectural experience. He adopts a multi-sensory approach to the subject, emphasizing that space and scale of architecture are "measured equally by the eye, ear, nose, skin, tongue, skeleton, and muscle". He also portrays the senses as a source of sensory thinking as well as a factor in the reason.(5).

The inclusion of the senses in the design of the museum experience, according to Jelincic et al., enables an emotional response from visitors and enhances their memory of the event. This study set out to identify any potential connections between visual and aural stimuli and emotions. On self-report scales, sound and visual stimuli were equally effective at eliciting emotions. However, psychophysiological measurements revealed that sound elicited higher arousal than visual stimuli for most emotions, with excitement being more strongly elicited by sound and sadness by visual stimuli.(6). In his research, Reden examines the role of the senses in interpreting one's surroundings and establishing what counts as a sensory experience in a museum setting. It looks at how each sense is incorporated into museums and exhibits through research and observation when visiting museums.(7)

Bedigan, in his paper, seeks to explore the role that emotions can play in interpretive and interactive museum and heritage tools and systems, taking into account the expectations of visitors and professionals concerning emotional engagement.(8) Gadsby analyzes and discovers the factors that influence visitors' emotional experiences through his research, and he attempts to understand fully why and how a museum accomplishes them.(9) Alelis et al., in their research, explore the emotional relationship of museum visitors through the use of Human-Computer Interaction technology in responding to artefacts in the museum. The findings show that visitors are motivated to find meaningful and personal connections when given the task of providing an emotional response to an artefact.(10) In the meantime, Wang's research evaluated different experience types (objective, cognitive, social, and introspective) and effects (visceral, cognitive, and emotional) in museums. It examined the communication effects' practical implications and the relative merits of the multisensory approach used in this exhibition.(11)

2. Method

This research will discuss the sensory and emotional processes designed in a tragedy museum, namely the Aceh Tsunami Museum. The part that will be specifically discussed is the Tsunami alley area, part of the space of memory, and how this area is designed to build visitor emotions with some stimulation in space, which will be discussed through theories of sensation and emotion in design and architecture. This study uses a qualitative descriptive discussion method supported by field observations.

3. Results and Discussion

Museums and exhibitions are intended to arouse emotions, memories, and thoughts. They can also revive historical settings, items, and characters. Museums are more than just repositories for cultural heritage that must be preserved for the future.(12) The museum is a place to communicate important things related to memory and history through spaces and collections that are meaningful and accessible to various groups. They serve as educational, social, and community hubs and spaces for solace and reflection. The museum's journey is proprioceptive, sensory, aesthetic, and social. Museums are places for learning, stimulating the senses, wondering, remembering past events, and making new memories.(11) The designers made an effort to address several significant design issues, including the memory of the tsunami disaster, the functionality of a museum or memorial building, the cultural identity of the Acehnese, and a new aesthetic that is contemporary and responsive to the urban context to bring back recollections of the tsunami tragedy. Special attention was given to the museum's room configuration. In other words, there is a thoughtfully planned order to the rooms that guests must pass through. The design was made to have a full psychological impact on how people view the tsunami disaster.

Tsunami Alley Area and Memorial Hall are the memory zone's physical manifestations. The museum's "Tsunami Alley" section is a small passageway with tall walls and a roaring waterfall to remind you of how terrifying a tsunami can be. Visitors enter this area through a small, dark alley to mimic the atmosphere and panic of the tsunami. The small passageway was utterly dark. A waterfall on the left and right makes a roaring sound when the water is running, alternately splashing softly and rumbling loudly. The voices briefly brought to mind the tsunami that slammed into Banda Aceh and the surrounding area on January 26, 2004. (Figure 1)

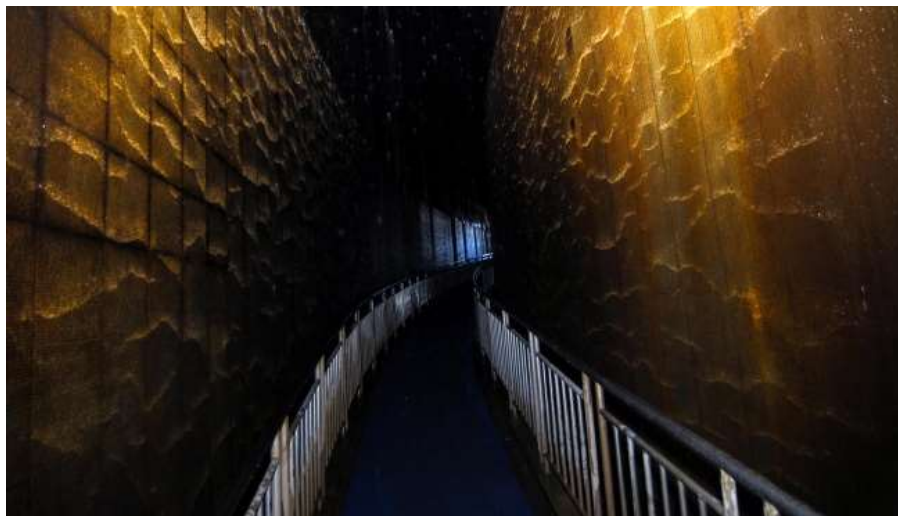


Figure 1. "Tsunami Alley" The Aceh Tsunami Museum
(www.travel.tempo.co.id)

At Tsunami Alley, the memory of the tsunami incident is tried to be presented in another form. This area is only a symbol of the disaster, but this design can make visitors feel various things. Some visitors feel goosebumps, cold, and also intimidated. This article will discuss what sensories are involved and how visitors perceive and respond emotionally and feeling to these areas. This hallway has a length of 30 meters and has a high and dark ceiling as if visitors are brought to feel small compared to the tsunami waves, which can reach tens or tens of meters. The hallways felt cold because of the wind that entered the hallways and also the flowing water, compared to what the tsunami victims felt.

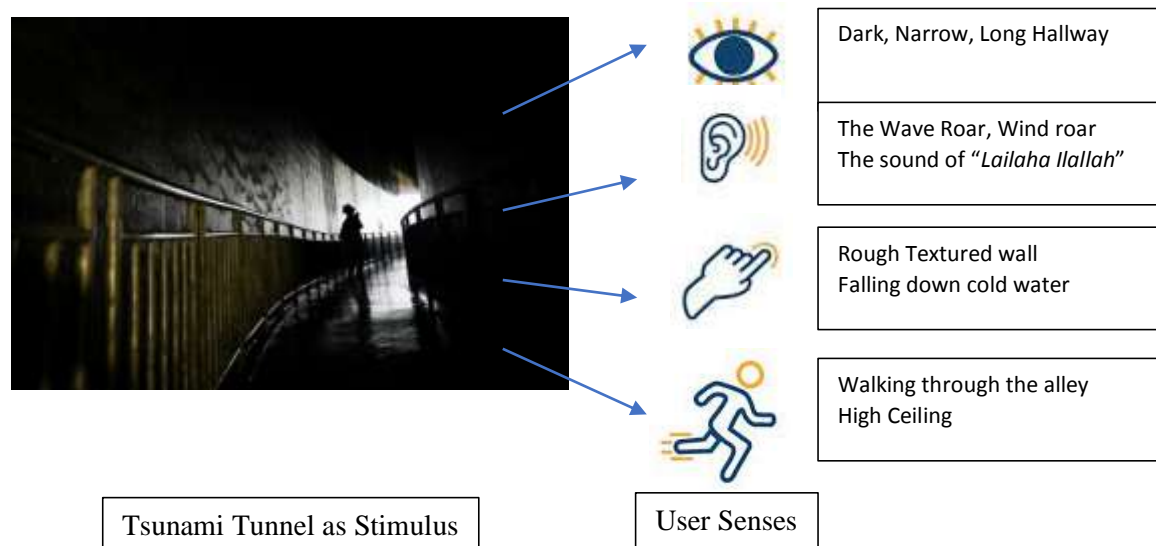


Figure 2 Stimulus and Sensory at Tsunami Alley

When visitors walk through Tsunami Alley, visually, what can be seen is a very dark room, the only light that comes from the two ends of this alley. The room is made very dark without the help of light. This situation shows the atmosphere when one is being carried away by the waves, one cannot see anything, and there is only darkness even though one has opened their eyes. This area plays the sound of saying "Lailaha Ilallahu" repeatedly and the roar of the waves To stimulate the sense of hearing. On the rough-made walls, dark and running cold water. The water splashed towards visitors because it was hit by the wind or tripped over rocks on the wall.

Sensation refers more to physical stimulation captured by the five human senses. Tsunami Alley space is a stimulus in the form of space, which is responded to by more than one sense, namely sight, hearing, tactile, and movement (proprioception) (Figure 2). Integrating the four senses involved in censoring this space will continue the process of perception and emotion. A person's perception of a situation personally will be influenced by several things, namely cultural background, religion, gender, and memories. That each visitor will have a different perceptual response, there are other interpersonal atmospheres besides environmental ones, such as cultural, social, workplace, and family. The mood in a social setting can be upbeat or depressing, liberating or confining, stimulating or uninteresting (4). Human perception will be related to the interpretation of stimulation captured by senses and involves the brain to think and make meaning of what is seen, heard, touched, and so on. According to research, the sensation of touch is no less important than the sensation of seeing. Even smell is considered one of the most influential sensations in memory. Currently, another sensory is considered to have contributed to museum visitors' experience and learning process, related to a sense of enjoyment and understanding of a message or object. (13)

Sensation by the physical human senses and perception is a physical and psychological human process that cannot be separated from one another. The integration between these processes will be sorted out by visitors and can evoke emotions. Emotions are a person's reaction to something, which

is influenced by subjectivity and physiological responses. There are six basic emotions: sadness, happiness, fear, anger, surprise, and disgust. Several emotions can be aroused when passing through the tsunami alley, including sadness, fear, and surprise.

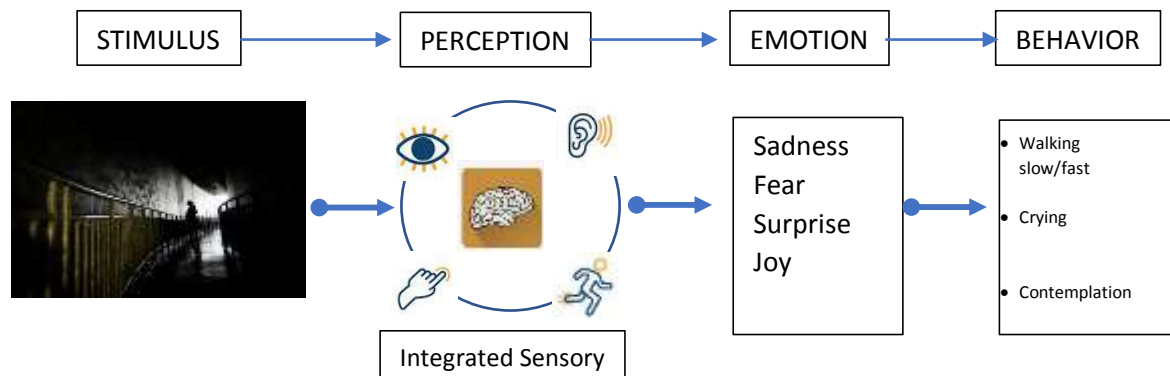


Figure 3 Stimulus Respon Proccess When Through The Tsunami Alley, adapted from *Environmental Psychology Proccess* (Bell, Paul A. 1990. *Environmental Psychology*. USA : Holt, Rinehart and Winston, Inc.) (14)

When visitors pass through Tsunami Alley, the sensory process is perceptual. The background of the formation of perceptions will significantly affect visitors' emotions. For example, sad emotions can be triggered by the background of visitors who have high empathy, backgrounds as Indonesian citizens who feel like part of the Acehnese, and someone who has lost friends and family members in this tragedy. Other emotions that can be aroused include fear, which can occur due to facing a dark, cold, and long room, and also surprising due to facing a new and unique room. Furthermore, other possibilities for a small number of people are happy to find this place (Figure3). The emotional response begins with a sense of empathy from the visitors. Empathy is understanding or feeling what another person is experiencing from their point of view, i.e. the capacity to put oneself in someone else's place.

Visitor background is very influential on the perceptual and emotional responses of visitors. If he is a Muslim, he will be moved by his emotions when listening to the phrase "*Lailahaillahu*", which means "*There is no God but Allah*". This sentence is often uttered by a Muslim when asking for God's forgiveness and help. This is also a sentence that a Muslim usually utters before he dies. Of course, the connection between the roar of the waves and this sentence will evoke our emotions as visitors. Pallasmaa illustrates the difference between vision, which separates us from what we see, and non-visual senses, which fold us into space and make us a part of it. He concludes by stating that the purpose of architecture is to enable us to locate ourselves within the cultural continuum through embodied experience and memory.(5)

Any interactive or sensory components must give the object context. The museum should use the materials it permits to replicate previous sensations and sensory experiences for visitors.(7) Visitors can be significantly affected by the presentation and interpretation of objects, spaces or their history. This encompasses the visitor's interactions with the objects on display, the location itself, and the tools and interpretive systems. (8)

4. Conclusion

Using more than one sensory (multisensory) takes on creative significance for museum exhibits' appeal and longevity, particularly for their relevance and emotional resonance. Museums should focus more on the intricate connections and interactions between the senses and experiences while actively incorporating visual, auditory, olfactory, taste, and proprioceptive experiences. It will be engaging in the potential impact on visitors from cognitive and emotional aspects, which are crucial for the development trends of future museums. The phenomenon of the Aceh Tsunami is presented

in the form of the Tsunami Alley. This Area can be enjoyed visually, audibly, tactilely, and kinesthetic. The unity between the story and the stimulus received will lead to various interpretations which are influenced by the different backgrounds of the visitors. The design will lead to various perceptions and emotions that visitors can feel. In this case, the museum not only functions as a facility that exhibits objects but can also make visitors feel a spatial experience that can evoke sensory sensations and emotions.

Acknowledgement

The author would like to thank to Universitas Komputer Indonesia for the opportunity

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