

The marine environment as a laboratory: Architecture, leisure and the senses

A research into the embodied experiences of the marine environment of Scheveningen and how architecture can evoke corresponding experiences

Research Plan

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Architecture and the Built Environment

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Preface

This Research Plan is part of the one-year research and design trajectory of Explore Lab, a graduation studio of the MSc. Architecture of Delft University of Technology. The graduation projects consist of extensive research and design which will result in the deliverables of a research paper and a design presentation which are tightly linked. The aim of this Research Plan is to construct a solid foundation of the relevance and the methodology for the Research Paper. Explore Lab is a studio in which a personal fascination in the field of architecture is explored. My fascination was twofold from the start; The sea as an environment on the one hand and the mental health of people in cities on the other hand. Unlike students of the other MSc. Architecture graduation studios, I had to structure the relevance of the theme myself and had to actively create a base of information.

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1 Introduction

Uitwaaien

The long-stretched shadow of my body touches the prints of footsteps in the sand in front of me. It is a cold winter afternoon and the sun is already setting. I hear the rhythm of water pulling back and passing over another wave of water. The beach is full of people of whom many presumably visited this place with the same reason as I: "uitwaaien". While walking in the wind, I empty my mind of thoughts which have been floating around in my mind that day. I find comfort in being together with the wind, the sand, the sea. Even the cold wind doesn't bother me at that certain moment. 'Uitwaaien' is a Dutch word that is not directly translatable to another language. Closest to an English translation would be "to get some fresh air" or in French "prendre l'air". However, these translations do not carry the same connotations as in Dutch. This shows the uniqueness of the phenomenon in the Dutch context. It involves an activity, yet also a feeling, an experience, a change in mood. According to artist and photographer Bruno van den Elshout:

"The Hague's South Beach is where I go when I want to experience space and tranquility. Where I can connect with infinity, synchronise, let go of unfavourable thoughts, get back in touch with *whatever turns out to be the most important at the moment of each specific visit*." (Grieco, 2015)

What intrigues me as an architect is that this shows that an environment has such strong influence on a person's well-being. Architects are constructors of environments and therefore I believe that by researching and using the marine environment as a laboratory, architects can learn to better understand how to design positively affecting environments.

To explore the topic, Scheveningen-harbour area becomes the laboratory. Scheveningen is a district of The Hague, a city in The Netherlands and the area where I grew up. The Hague is the only city in The Netherlands interrupting the long-stretched dune scape with its location at the border of water and land. This makes it a location where sea and architecture meet, but also where the sea meets large groups of people living their daily life.

Research problematic

In Scheveningen harbour there are few buildings which remind of the fishing industry which used to be the occupation for most of Scheveningen's inhabitants. Fish is still one of the most important industries around the harbour, yet the labour has moved inside large box-like warehouses and factory-like ships. This change is an example of how technology has changed and will continue changing the notion of labour and with this the current cityscape (Roggeveen et al., 2020, pp. 58–67). Computers, internet and smartphones have replaced physical labour to intellectual work in which mainly the visual and audible senses are stimulated. Also, duty and labour can be done anywhere with cellular network technology, which results in a constant pressure to work (Alkemade, 2020, pp. 75–77). To counterbalance the over-stimulation of the visual and audible sense, inhabitants of The Hague visit Scheveningen to take a break and reconnect with the neglected senses. Can a building also evoke a reconnection with the neglected senses and thereby create a de-stressing environment?

Now that the fishing industry is not apparent in the harbour anymore, new offices, apartment blocks and warehouses are starting to appear. These new developments are a representation of what is happening on national level. The political and economic structures in The Netherlands are creating a commercial environment in which housing developers starting new building developments in fast pace and with low budgets. The withdrawal of the state in developing houses and the large housing shortage in most cities add to this problem (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2020; Roggeveen, 2020). Designs, therefore, are often reduced to the minimum standard of living as set by the building codes. The result is distanced and generalised architecture without thoughts on how these environments positively affect the user's well-being (Hannema, 2019) (Pallasmaa, 2012, p. 34,37). In words of Pallasmaa: "homogenisation of space weakens the experience of being, and wipes away the sense of place" (Pallasmaa, 2012, p. 50). How can a building be specific for Scheveningen harbour area and reconnect people with the sense of place? The main question of the research trajectory of the project is:

How can an urban building evoke embodied experiences corresponding to the embodied experiences of daily leisure in the marine environment of the Scheveningen harbour area?

The goal of this research is to find a set of guiding themes which can lead to further exploration on how urban buildings can evoke embodied experiences corresponding to the experiences of daily leisure. This exploration will be carried through in the design of a seaweed farm in Scheveningen harbour.

2 Theoretical framework

The marine environment of Scheveningen harbour area differentiates from other urban areas as a place where all senses are stimulated by the interaction of land and sea. This specific sensory sensation is a simulation of all senses at the same time. This is how Merleau-Ponty describes experiences in his phenomenological theory. Senses are the bridge between the environment and the body. The stimuli come together in a bodily feeling; an embodied experience of an environment (Merleau-Ponty, 1964, p. xiii; Merleau-Ponty & Davis, 2012, pp. 10-15, 55-59). Architect and scholar Harry Francis Mallgrave, who connects neurological theories to Merleau-Ponty's phenomenological theory, explains this as – all senses coming together in the tactile sense, this tactile sense makes a person experience being in the world (Mallgrave, 2018, p. 12). Although all senses have their own characteristics, they correspond to qualities of the other senses as well. The senses of the altering sound of waves, the saline smell, the slow imprinting of feet in the sand, the fresh wind on blushing cheeks and a cold tip of the nose together feed the tactility of the body.

This is a process which can be explained neurologically through mirror neurons, according to Mallgrave. Mirror neurons in our brains mirror what we perceive. In this way we grasp how the perceived activity must feel and connect underlying reasons to the event (Mallgrave, 2018, pp. 67-68, 72-73). The body and the senses are thus not only important in an embodied experience, also the mind is interconnected, one's very own reasoning. As Merleau-Ponty notes "Philosophy is not the reflection of a pre-existing truth, but [...] the act of bringing, truth *into being*." (Merleau-Ponty, 2003, p. Xxii-xxiii). Here Merleau-Ponty rejects the cartesian notion that mind and body are separate. Descartes believed that the senses –which he connects with the body– can only form the beginning of an understanding which then can only be explained through science and knowledge. In other words, Descartes does not trust his senses, just his intellect. Merleau-Ponty's ideas are closer to the ideas of empiricists such as George Berkeley and David Hume, who in the early 18th century based their philosophy on the notion that all knowledge is obtained by sensory experience. They rejected Descartes view because science in their opinion only gives approximations and an abstract analysis of things (Merleau-Ponty & Davis, 2012, pp. 1–13, 39–45). Merleau-Ponty, however, stresses the importance of the mind, the senses and the body together.

Memories, ideas and imagination make a body more sensitive for certain factors which will then influence how an environment is perceived. This subjectivity of embodied experiences can be illustrated by the image of a surfboard. Many associate a surfboard with the beach, the sun and good weather. However, a Dutch surfer would probably connect it to rough weather, cold feet and the thrill of catching a wave. The message an object or a part of an environment "tells" or "gives" a person is defined by J.J. Gibson as "affordance". Senses are active and are constantly searching for affordances in the environment (Mallgrave, 2018, pp. 45–46). In other words, the body is in constant interaction and entangled in the world. In words of Merleau-Ponty: "Our body is both an object among objects and that which sees and touches them." (Merleau-Ponty, 1964, p. xii). It can therefore be argued that a person is what it is because of its environment (Merleau-Ponty & Davis, 2012, p. 56). Neural plasticity can explain this. When we grow up, new experiences create new neural connections and these connections grow when something is experienced more often. During a lifetime neural circuits are constantly taking new shapes and, in this way, reshaping the neural systems. Environments are an important factor in creating the circuits because the generation of memories uses the same part of the brain (the hippocampus) as the understanding of spatial environments and place. Memories are connected to places and places are used to store and group memories (Mallgrave, 2018, pp. 80–81).

Many architects have used a phenomenological approach to design architecture. Juhani Pallasmaa goes as far as to say that when architecture stimulates all the senses at the same time, this architecture is capable of enhancing life. In his designs he tries to design a holistic whole through

focusing on all scales, on geometry, materials and craftsmanship (Pallasmaa, 2012, pp. 12, 74-76). He also gives an example of Alvar Aalto's architecture which interacts with memory and imagination. Alvar Aalto's architecture "sometimes appear[s] clumsy and unresolved as drawings, but they are conceived to be appreciated in their actual physical and spatial encounter, 'in the flesh' of the lived world" (Pallasmaa, 2012, p. 76). Senses and memories in their multitude are thus of importance when researching and designing to evoke embodied experiences.

3 Methodological approach

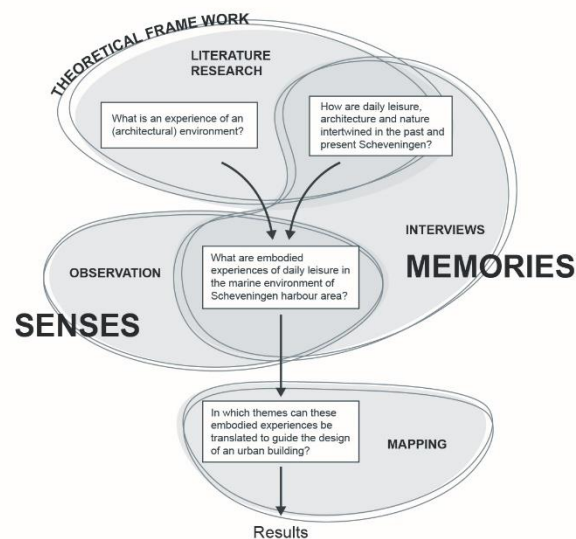
To answer the above-mentioned research question, a qualitative multitactical methodology is used which combines observation, interviews and mapping (see figure 1). Additionally, literature research is used to come to a theoretical framework. The research question is divided into four sub-questions:

Theoretical framework:

1. How are daily leisure, architecture and nature intertwined in the past and present Scheveningen?
2. What is an experience of an (architectural) environment?

Main research:

3. What are embodied experiences of daily leisure in the marine environment of Scheveningen harbour area?
4. In which themes can these embodied experiences be translated to guide the design of an urban building?



5.

Figure 1. Diagram of the research method (By author)

Interviews and observations are used to answer the question: What are embodied experiences of daily leisure in the marine environment of Scheveningen harbour area? Herein observations focus mainly on the sensory side of embodied experiences and interviews focus on the memories' side of embodied experiences. The observations are carried out by the author at seven different locations in Scheveningen harbour area, where at each location the architecture, the horizon and the sea are in a different balance (see figure 2). Recordings, descriptions and photography are used to collect data about how seven senses feed the bodily tactility. The chosen seven senses are based on research

done into sensory design by Joy Monice Malnar and Frank Vodcarka (Malnar & Vodvarka, 2004, pp. 229–262). The seven observed senses:

1. Visual
2. Sounds
3. Odour
4. Haptic, temperature
5. Haptic, touch
6. Haptic, space
7. Haptic, kinaesthesia

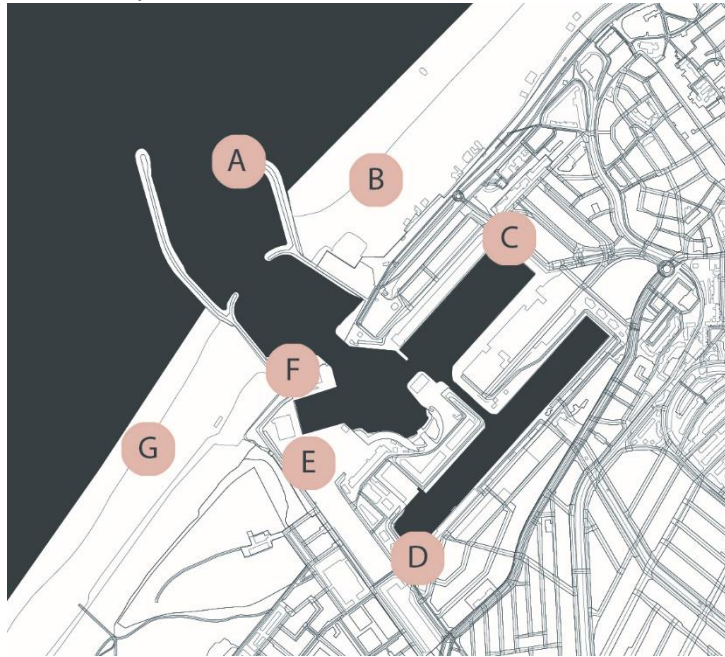


Figure 2. Locations of research in

Scheveningen harbour area

For the interviews a varied group of eight respondents with different uses of- and interests in the area is examined. The interviews included, for example, questions how they are concerned with Scheveningen, how they experience spatial characteristics of Scheveningen and how they see other groups using the area. Embodied experiences are thus collected in photographs and descriptions by the author as well as descriptions from the interviewees. Description is useful here as it has the capacity to capture subjective experiences and to evoke feelings of the described sensory clues, as Klaske Havik argues in her book *Urban Literacy* (Havik, 2014, p. 39,47-52,64). Photography contributes in the same way. When seeing an image our memories and our power to imagine – through our mirror neurons and neural plasticity– evoke feelings.

When the data is collected, the next step is “data reduction”, reducing the data into manageable “chunks” (L. N. Groat & Wang, 2002, p. 193). This is accomplished by making descriptive notes, sketching, interpreting sounds into drawings and clustering photographs. After the data is collected on what embodied experiences of daily leisure in the marine environment are, the next step is to display the data. This is done by mapping. In seven maps the reduced data of the observations and the interviews come together in a representation of the stories and sense simulation of the embodied experiences of locations. While sorting, picking and translating, the spatial characteristics of the seven locations will be looked at from different perspectives. This will lead to answering the following question: In which themes can these embodied experiences be translated to guide the design of an urban building? The answer of this question will be a set of themes which will guide the design of an urban building which evokes embodied experiences comparable to embodied experiences of the marine environment.

Next to the four main research tools, many side studies have contributed to the research, see Figure 3. For a full description of the research tools, and the questions asked in the interviews, see the appendix.

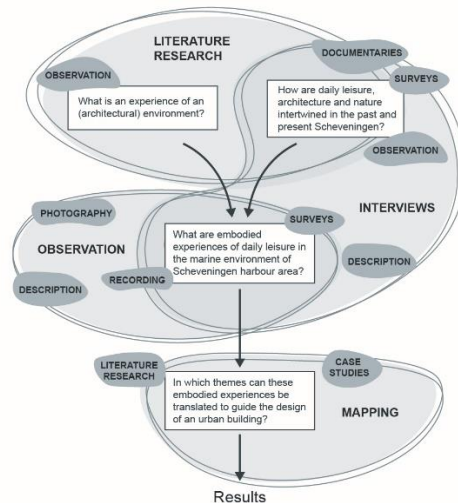


Figure 3. Diagram of the research method with side studies (By author)

4 Discussion

Research into phenomenology has pointed out that experiencing the marine environment of Scheveningen harbour area is an act which brings memories and sensory stimuli together in a bodily tactility. This embodied experience of the marine environment is specific in that it stimulates all senses at the same time, yet subjective as everyone has different bodily feelings and a different frame of reference. The specificity herein is what makes that the de-stressing effect is true for many. The de-stressing effect is not just mirroring of a calm environment, it is an embodied experience which may even be uncomfortable. It makes a person become conscious of his/her senses through a bodily feeling which is key for the de-stressing of the prevailing bodies of the 21st century.

The used method which takes observations of the researcher on the one hand –to investigate the sensory stimuli of the marine environment– and interviews on the other hand –to study the subjective side on individual and community level– focusses both on the sensory and memory aspects of embodied experiences. In this way the research goes into exploring the embodied experiences of the marine environment of Scheveningen Harbour. The methodology follows-up on observations and interviews by mapping the encountered embodied experiences. Working with photography and description brings up spatial characteristics which are then fused into a set of themes which can guide the design of a building which evokes the desired embodied experiences.

The lectures, tutorials and masterclass of the course AR3A010 Research Plan have helped nurture the awareness of the relevance of using the right methodology for an architectural research project. Before deciding to go with the current methodology, other methods were considered. Iconography as Carola Hein used in her article: Oil Spaces: The Global Petroleumscape in the Rotterdam/The Hague area, resulted in the idea to research through art, which also has the capacity to capture embodied experiences because of their evocative capacity. Also, quantitative examination with surveys came forward as an option, however this method could only confirm ideas which were already existent. See

the appendix for the survey. The discipline of architecture overlaps with many other disciplines. Therefore, unlike scientific research of other disciplines, the methodology in architectural research can vary widely. This research touches the field of philosophy, social and culture studies like anthropology and landscape architecture. Hence, a qualitative multitactical methodology is chosen. Multitactical methodology has the advantage that it can maximise the strengths of each tactic as well as complement weaknesses of the other tactics (L. N. Groat & Wang, 2002, pp. 368–370). The phenomenological approach is relevant as it gives a strong theoretical frame to the phenomenon of experience. Many architects have taken this approach to guide their designs (Havik, 2014, pp. 58–64; Mallgrave, 2018, pp. 43–56, 89–92; Pallasmaa, 2012). Next to consulting specialists, the combination of consulting on the one hand myself and on the other hand the users of the area complement each other well. As embodied experiences are subjective, it is valuable to gain knowledge in these differences as these findings would not be possible by only consulting myself. However, because of this subjectivity, consulting only others would never give the in-depth knowledge which can be obtained by consulting myself as a researcher and architect with more affinity for spatial characteristics of the (built) environment. Architecture locates itself in-between science and humanities and combines philosophy with practicality (Havik, 2020). This is also the case in this research project, the phenomenological approach and the on-site research will give the project both a practical and metaphysical dimension.

Alongside the findings which answered the research question, the research presented ideas for the program of a design brief in which the research can be continued and elaborated. Especially the interviews proved to be very fruitful. A seaweed farm will respond to both the historical ideas that a harbour is a place of labour and the future developments in innovative use of the North Sea. Furthermore, while designing an urban farm the landscape aspect and that it concerns physical labour can contribute to evoke the appropriate embodied experiences. The resulting themes will guide how to design a building which leads to a de-stressing effect, corresponding to the embodied experiences of daily leisure in the marine environment of the Scheveningen harbour area.

5 References

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Pallasmaa, J. (2012). The Eyes of the Skin: Architecture and the Senses. (3rd edition). John Wiley & Sons Ltd.

Roggeveen, D. (2020, December 22). Geland. <https://architectenweb.nl/n48616>

Roggeveen, D., Hulshof, M., & Arnold, F. (2020). The Amsterdam agenda: 12 good ideas for the future of cities. nai010 publishers.

6 Appendix

Literature research

The main books consulted for the literature research are:

Embodied experience:

Merleau-Ponty, M. (1971). Sense and non-sense.

Merleau-Ponty, M. (2002). Phenomenology of perception.

Merleau-Ponty, M., & Davis, Oliver. (2012). The world of perception.

Mallgrave, H. F. (2018). From object to experience : the new culture of architectural design.

Pallasmaa, J. (1996). The eyes of the skin : architecture and the senses.

Rasmussen, S. E. (1964). Experiencing architecture.

Daily leisure:

Graaf, J. de, Camp, D. L., & Vries-Hermansader, D. de. (1997). Europe: coast wise : an anthology of reflections on architecture and tourism.

Otero Verzier, M., & Axel, N. (2018). Work, body, leisure.

Metz, T., & Brinkman, Els. (2002). Pret! : Leisure en landschap.

Hannema, K., Kort, R.-J. de, & Schrijver, L. (2019). Architectuur in Nederland. 2018\2019: Jaarboek.

Interviews

People interviewed:

Anne-Marie, Heritage specialist and inhabitant of one of the new developments in Duindorp

Filip Mens, architect, used to have his office in the area and designed “Top Zeilcentrum”

Bruno van den Elshout, artist and photographer, worked a lot on the coast of The Hague

Willem Ment Den Heijer, born in Scheveningen, from a fisherman family and editor focussing on the fishing industry

Geert Verhoeff, initiator F.A.S.T. (surf and event location)

Hans van den Broek, initiator and management of sustainable surf school The Shore

Miech Pronk, founder HollandVis, one of the largest fish exporters of Scheveningen and born in Scheveningen

Jordy Koningh, owner of hostel in Scheveningen and initiator of new surf hostel/hotel in the harbour

For the side studies interviews are conducted with:

Camilla Stig Boccardi Christensen, owner of Studio Pneuma, architecture for the senses.

Zinzi Reimert, coordinator of the offshore test site of the North Sea Farmers

Frank Bloem, fragrance and smell designer, part of Embassy of the North Sea (interview planned)

Questions asked during the interviews:

Wat is jou relatie met Scheveningen en Scheveningen-haven?

Hoe vind jij dat verschillende plekken rond de haven zich tot elkaar verhouden?

Hoe zie jij dat verschillende gebruikers groepen zich tot elkaar verhouden?

Zie jij een verandering in hoe vrije tijd wordt besteed in Scheveningen (tijdens COVID)?

Met welk gebouw heb jij het meest in Scheveningen en waarom?

Weet jij meer over de plannen (van de gemeente) voor het gebied?

Is er een programma dat voor jou mist in het gebied? Moet er iets bijkomen of moet er juist iets verdwijnen?

Surveys

Surveys are used as side studies to gain quantitative data. Link to the survey:

<https://docs.google.com/forms/d/1sZxr0X9ZVBT6bCgCaKVsthgNpBofY28uKI6UQPr-Nfg/edit>

The surveys are structured firstly gain, personal information and information on the reason (here the topic of leisure comes in) and frequency of visiting Scheveningen. Secondly, the data on the sensory experiences is gathered (sight, smell, hearing, touch) and the question is asked if the visit resulted in a different feeling. The last question is an investigation on stories and memories of the place. For the questions about sensory experiences the book Sensory design (Malnar & Vodvarka, 2004) is consulted.

These surveys are handed out to around 20 people which varied in terms of age, place of residency and profession. The surveys are conducted on the same locations as the observations of the main research.