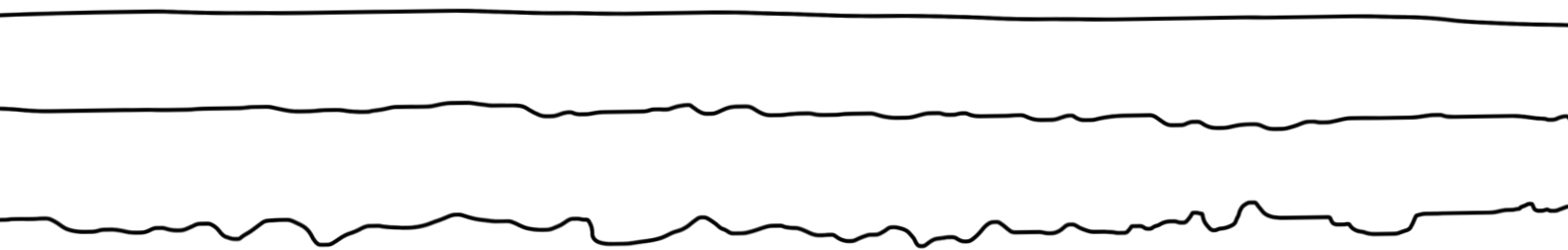


Research proposal

Imagination of water

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“The nameless waters know all my secrets. The same memory flows from all fountains.”

GASTON BACHELARD
Waters and dreams, p.8

Base of Nijmegen

Nature is detailed and designed till the last detail and we people use all its resources and creations. By looking closely you can find connections between what has been given by nature and the man-made culture/environment.

Nijmegen is the oldest city of The Netherlands and is located along the river 'Waal'. This river is the continuation of the well-known 'Rhine'. This city will be used as the site of the project. As a result of the location along the river and the hills, Nijmegen was founded. The hills in combination with the river created an advantageous location, that was used by the Romans. Because of the height, they had a good overview of the land behind the Waal and were protected from flooding. The river worked as a strategic barrier for outsiders and created the opportunity and safety to trade.

The old urban fabric in Nijmegen is formed by following the topography that river and ice ones have created. You could say that Nijmegen has organically grown in the past (figure 2). The city grew when they needed more space. They didn't really plan city expansions how we should do that today. There is no ridges grid in Nijmegen because they follow the topography of the land. Every building block and every street is because of that unique in form.

The height differences in Nijmegen are overcome with stairs and ramps. This may sound not that trilling but for a city in the Netherlands it is quite unusual and thereby unique. Next to the stairs the brick plays an important role for the identity of



Figure 1: Painting of the Holleweg from Willem Carel Nakken in 1860. © Museum Het Valkhof

Nijmegen. The river delivers the clay that could be used for baking the bricks.

All these elements show how the city is still reacting to the local components, creating an integrate city structure, that influences the whole city down to the brick textures of each street and wall.



Figure 2: Grow of the city

Molenpoort mall

The area around the Molenpoort mall (figure 3), is a part of the old core, but it fails to really connect to the rest of the city and its people. In the past city walls made a clear distinction between in and outside the city. Since the walls are broken down this clear transition doesn't exist anymore. Now a path, a flow, a continuation of elements has to lead you into the city of Nijmegen.

In most cases the start of this pathway takes place around the Keizerkareplein. If you have passed the test of this roundabout you will continue your way to the Molenstraat. What once was an entrance with a gate (figure 4) is now an introduction of the inner-city. With a lack of porosity you will not wonder around, but walk just straight ahead, till you will arrive at the big market square.

The Molenpoort mall is an enormous building that fills almost all the air within the city block. The size of this building is out of context and doesn't relate to the rest of the city structure. The mall penetrates the city block with passages through the block and has thus covered streets. The streets are part of a continuation of other shopping streets; the Moenenstraat and the Marickenstraat. Because of the threshold caused by the entrance, the shopping 'loop' doesn't continue through the Molenpoort. This is problematic for the other shopping streets, but most of all the mall.

The mall deals with a lot of vacancy. This is related to the decreasing demand (figure 6) of shops, yet the design of the mall is also part of the cause. One of you



Figure 3: Bird perspective of the city of Nijmegen with the site location, the Molenpoort mall, in red. The dotted lines are the passages.



Figure 4: Photograph of the Molenpoort (translated: "Mill gate"). Source: Archive of Nijmegen.

are in the mall you feel disorientated. You don't know the way out. The building shows no respect towards the layers of the city and its history. It was created for shopping, but not build to last forever. You could say that the Molenpoort mall is an egocentric building.

That is why redevelopment is needed in this part of the city. The mall is not answering the demands of the city and its people, so a shift in program is needed. For a new design no or almost no shopping will be created, but space for the inhabitants.

The area should transform form one big egocentric building block towards an area of empathy. Empathy for the buildings that are already at the location. Empathy for the history of the city. Empathy for people that will and are living in the city of Nijmegen.



Figure 5: Flow/routing of the city of Nijmegen. By Atty Poelma.

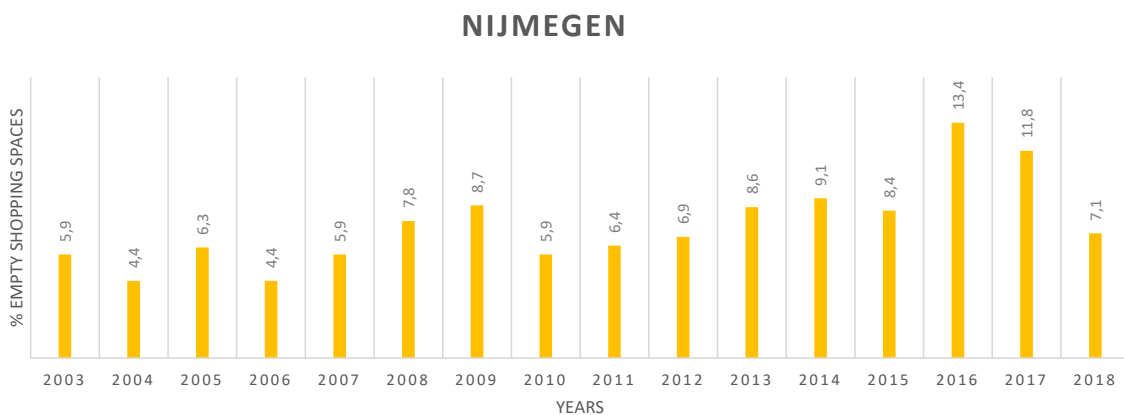


Figure 6: Percentage of vacant shopping spaces in Nijmegen. Source: Lacatus, edited by Fleurkje Ruijs.

Journey of water

To find out how to make such place, I have to solve how I can create intimacy and purity and how to capture the vulnerability of it all. To better understand the importance of these subjects I will explore the human way of thinking. The main question that will be answered in this research follows; *“How can the mall be transformed into a place of intimacy, purity and vulnerability, with empathy towards all the layers of Nijmegen?”*

Water will be my starting point. I think the journey and the matter of water can explain and express the feeling of empathy, intimacy, vulnerability and purity. The human mind has claimed for water one of its highest values, like purity (Bachelard, 1983). From the very poetic form water can take, I will eventually shift to the more material side of water. By reading the books of Gaston Bachelard; *Waters and Dreams* and *Poetics and space*, I want to create a frame of thoughts, words and images.

From this framework a more materialistic search of space and function will take place and what the matter of water can mean as a design element. Modern architecture is sometimes disliked by the people, because it is lacking detail or it is designed to build fast and cheaply. The buildings are not telling a story or are part of the collective memory. A new design should become part of this memory and has to add an extra layer on top of the already existing identity (figure 7).



Figure 7: Source: collage of ‘superstudio’. It shows how I want to design and my perspective on the existing elements.

“Denkend aan Holland
zie ik brede rivieren traag
door oneindig laagland
gaan...”

Thinking of Holland is
see wide rivers slowly
flow into a never-ending
lowland...”

“...In alle gewesten wordt
de stem van het water
met zijn eeuwige ramper
gevreest en gehoord.”

... In every region the
voice of the water is heard
with his eternal disasters
feared and heard.

- Hendrik Marsman-

Rivers and ice

The history of the Waal and therefore the history of the Netherlands is important to understand the development of growth of the city of Nijmegen. To find out the past, we looked at the early stages of the Netherlands. The research start 25 million years ago and end eventually in the present. The river plays an important role in telling this part of the story, so that will be the leading narrative.

Twenty-five million years ago (figure 8) the Netherlands did not exist as we know today. The rivers that we now know as 'Rhine' and 'Maas' were ones combined into one big river. Next to this river another river flowed in the north of the Netherlands. This river was called Eridanos. Those two rivers brought a lot of soil and stones with them. After millions of years the sediment resulted in the grow of land. Seven thousand years ago (figure 9) there is a beginning of the Netherlands as we know it today.

A big part of the reason why the rivers flow in the way they are flowing are the hills in the Netherlands. Those hills didn't form the way the alps where formed, but were caused by a glacier period. The world knows a lot of glacier periods but in the Saalian period the ice reached the Netherlands. The ice grew more and more (figure 10) and eventually covered the half of the Netherlands. Because of the weight of the ice the land was pushed away and that formed small hills, moraines. The hills blocked the river to go straight to the north of the Netherlands. Water will always find its way and thus turned left.



Figure 8: Situation 25 million years ago, with two main rivers.



Figure 9: Situation 7 thousand years ago. There is no river anymore in the north and the big river in the south is split up.



Figure 10: Period of glaciers (Saalien period). The ice grew and grew and pushed the sand away. This created the hills in the northern and middle part of The Netherlands



Figure 11: Three images of an imagination of how the rivers/streams ones have flown, based on the topography of Nijmegen.

From river to stone

The city of Nijmegen lies on a plain of sand that was flushed away from the moraines that lie more to the south (figure 11/12). Ice and also rain water flowed downward into the river. This caused small gullies. Those gullies became small valleys. Those valleys became useful for building roads. The use of those roads started already during the Roman Empire. The valleys or gullies have been of a big influence for the arrangement of building in Nijmegen. Some examples of roads that where ones valleys are; Grotestraat, Houtstraat and the Hezelstraat (figure 11).

The rivers is still bringing a lot of soil and nutrition's with them. Hereby the soil around the rivers are very fertile. Perhaps even more important, the river delivers clay what can be used in the production of bricks.

Around 1900 there were in only Gelderland already 7 stone factories (figure 12), with more than 100 workers. At the factories there was a production of two types of bricks. Bricks for erecting a building (metselstenen) and bricks that had the purpose for pavement, cellars, wells, locks and fortresses (klinkers). Those 'klinkers' are totally sintered and have a perfectly dense fracture surface. Not all sorts of clay a suitable to make 'klinkers', but the clay around the rivers is particularly suitable.

Nijmegen is a city of homogeneous materiality, buildings with a finishing facade other than brick are the exception to the rule. Brick represents the city's past through the remaining rests of the fortification and is still the material of

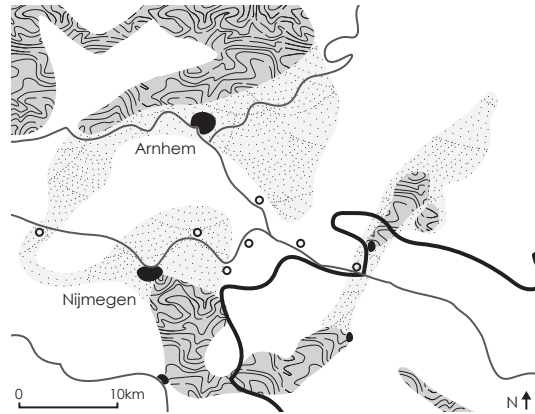


Figure 12: Situation of soil and topography in the area around Nijmegen and the brick factories in the past.

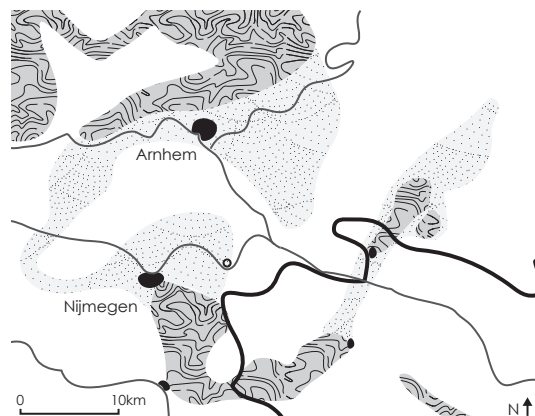


Figure 13: Situation of soil and topography in the area around Nijmegen and the location of the factory that still exist.



- Rivers
- Border
- City
- ▨ Hills
- ▨ Remnants of the hills

choice for a new project. Even though nowadays it is mostly used as cladding on the facades instead of the structure.

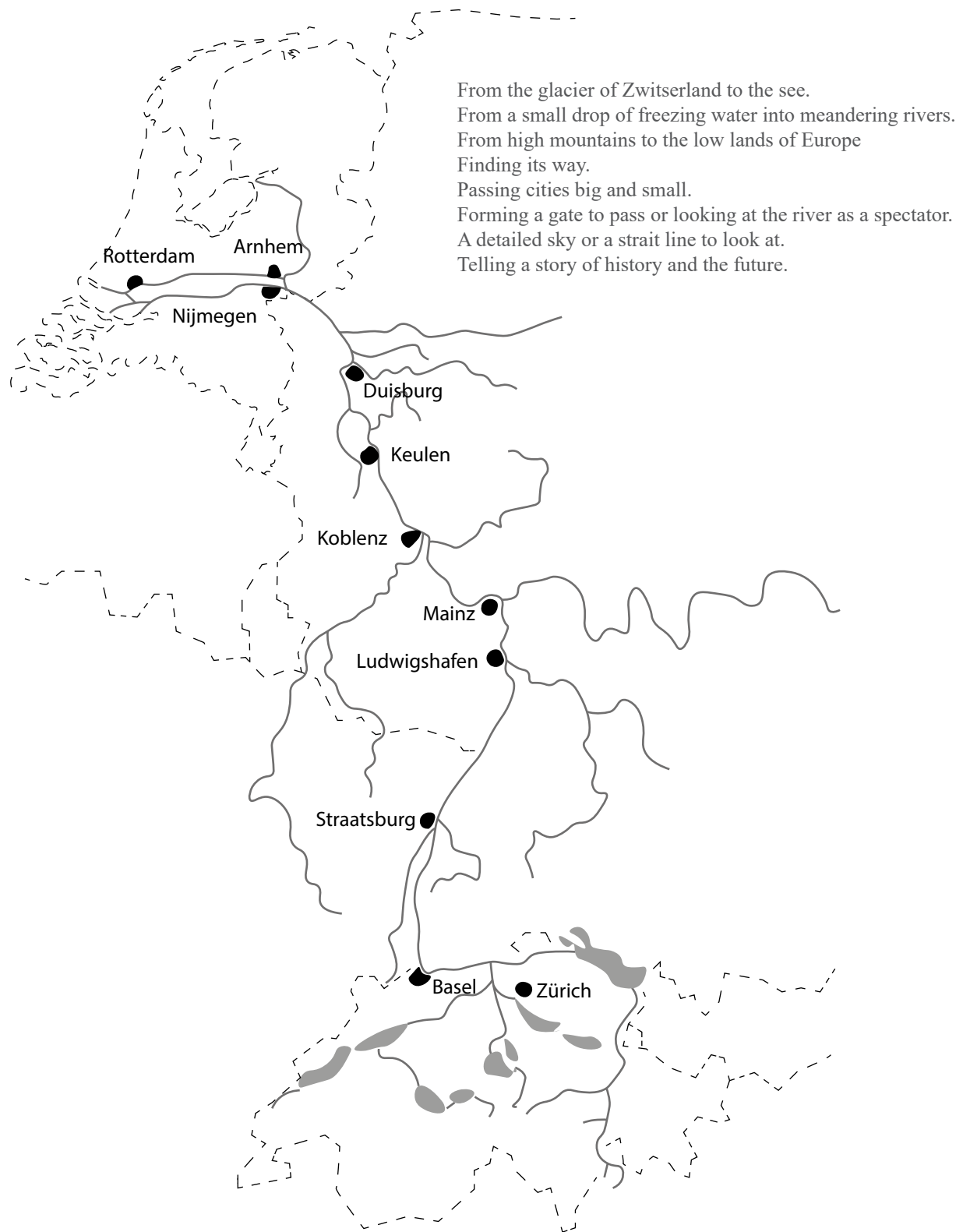


Figure 14: Map and poem of the Journey of the river. Drawn and written by Fleurtje Ruijs.

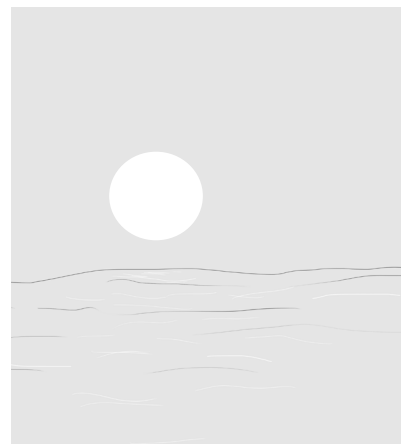
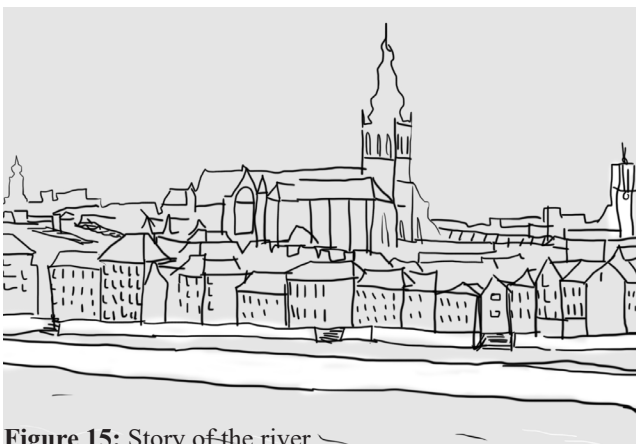
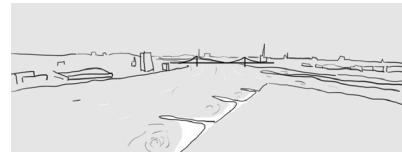
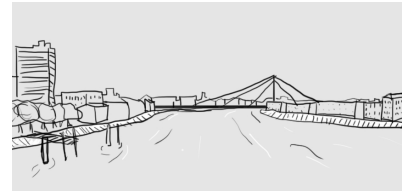
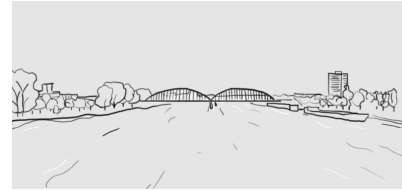
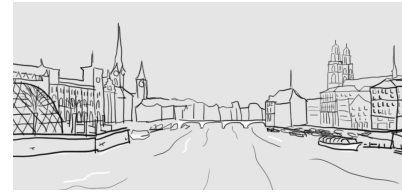
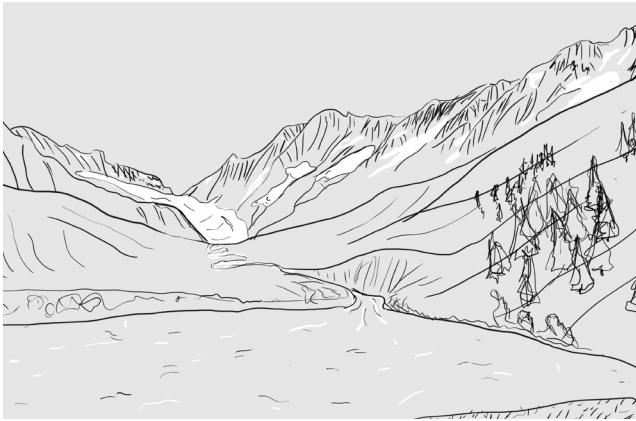


Figure 15: Story of the river.

Stairs or waterfalls

The stairs in Nijmegen accentuates the differences in height in the inner-city. It creates extra thresholds and creates a structure and layeredness between the public and the private spheres in the inner-city. The stairs creating a rhythm and a pattern and causes a different feeling of space. It has influence of the flow and the accessibility of places. And because of the stairs you are really able to experience the differences in height.

Because of the heights there are also different building typologies existing in Nijmegen. The 'extra ground level' is an example of that. Project examples that have this extra ground level are the Mariekenstraat and the parking garage on top of the Molenpoort. This extra layer creates opportunities to see the city in a different perspective. You have the feeling of being on top of the city and high buildings become low(er). You see the skyline and the roofscape not from a distance, but you are within the line of roofs.

A downside is that you can feel disconnected. You are not part anymore of the 'real' ground floor. The feeling of a dead-end. This is for example happening at the parking lot above the Molenpoort. In the Mariekenstraat this is not the case. You can see the other ground floor and chose were to walk. The typology of the Mariekenstraat also give the feeling of walking along a canal and in the Moenenstraat you can have the feeling of walking through a canyon or valley. And if you have a strong imagination some stairs could be seen as waterfalls.



Figure 16: An imagination of the flow of water within the city of Nijmegen.



Figure 17: Typology of the Mariekenstraat, compared with the typology of the canal.



Figure 18: Typology of the Moenenstraat, compared with the typology of a canyon/valley.

Feeling of space

The people in Nijmegen identify themselves with the Waal and with the amount of stairs and ramps within the city (figure 19). It makes the city unique in The Netherlands. They are proud of the long history of Nijmegen and they are very willingly to experience the city in the future. Inhabitants say that the city feels like a big village. That the city is cozy and intimate. Even though it is quite a big city.

After researching different public spaces in Nijmegen and comparing those with public spaces all over the world, we concluded that it is very important to create intimate spaces. A good public space depends on the amount of activity there is taken place. The size of the public space should be in balance with this amount of activity. Activity is created when people stay longer than necessary. You have to create places to sit, with a bench or a step and having greenery makes a space more attractive to stay

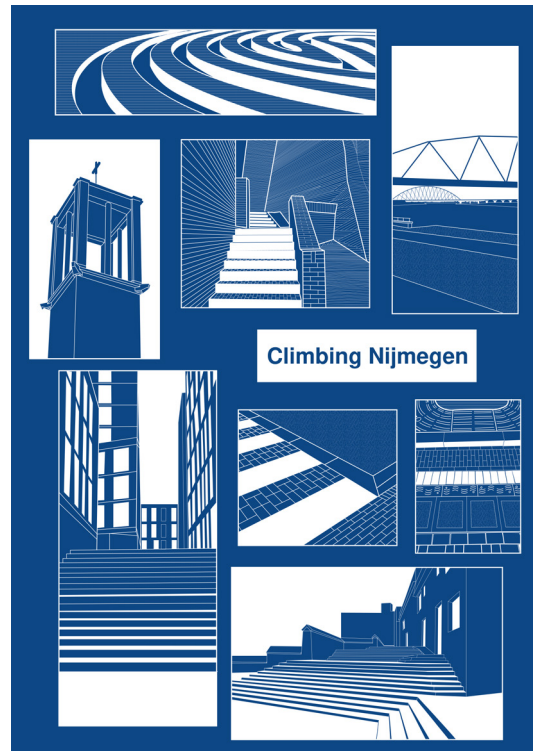


Figure 19: Poster design by for the film; Climbing Nijmegen. The film expresses the importance of the stairs and the pattern of the brick.

Imagination of Water

The imagination of water. Imagination is a major power of the human nature. Imagination is the ability of producing images. The imagination separate us from the past as well as from the reality, but it faces the future (Bachelard, 1953). It is a wandering of the mind, what could be. It is a system of the mind to adapt yourself to the present and the future. Gaston Bachelard tries to unravel the mind and especially the 'daydreams'. In his book "The poetics of space" he does this with the metaphor of 'the house'. In his book "Water and Dreams" he does this with water.

Why water, you could ask. Why not fire, earth or air? My choice of water is grounded in the poetry of this element. The flow, the freedom, the strength and the endlessness is what my fascination is about. Rivers, lakes, streams and the seas have always been important to me. To wander and meander in my own thoughts.

We think with water. We use watery language and metaphors. Those metaphors help to express a wide range of concepts and experiences. Gaston Bachelard calls it "***the material imagination***" (Bachelard, 1983). It means that water brings a strong and carried repertoire of emotional, cultural and sensual associations to its role as metaphor (C. Chen, J. MacLeod, and A. Neimanis; 2013).

Gaston Bachelard explains that in water you can recognize a type of intimacy that is very different from those suggested by the "depth" of fire and rocks. Water is a special type of imagination. "***It involves a type of destiny. An essential destiny***

that endlessly changes the substance of the being." (Bachelard, 1943, p.6).

An image of water tells more than a thousand words. Water reveals, and reflects (Bachelard, 1943). Water is a matter of relation and connection. We are surrounded with water and exist of water. It flows between and within our bodies, across space and through time. Water gathers stories about history, identity and it collects memories. (Strouet, 1983)

"The material imagination" is also a part of the theory of bricolage. Bricolage has everything to do with imagination. If bricolage is dealing with the things you have at hand, imagination is energy that drives this.

In every design is a bit of bricolage. Panagiotis Louridas concludes that; "***Bricolage is the creation of structure out of events***" (Louridas, 1999). It is the primitive foundation of thought. It is a life process that explains the transition from nature to culture and doesn't have a form (Scalbert, July 2011).

The link between bricolage and the material imagination of water is that it both explains this primitiveness of thoughts. Water is what wrecked Robinson in the first place, but also saved him. It gave him destiny. Water is what Robinson drove to thinking and seeing beyond.

"The lake of pool of stagnant water stops us near its bank. It says to our will; you shall go no further; you should go back to looking at distant things at the beyond." – J. Strouet (1983)

Robinsons tries to find order on his island. He tries to find use of the things he has at hand and he becomes a natural force that is part of the island. He is afraid of what nature can bring him, nevertheless he tries to work with it as much as possible. He is being the designer, the builder and the inhabitant of his creations (Scalbert, July 2011). His story is about surviving and that drives our minds to its limits. For architect the situation is different, but it tell us that we can try to rethink our design and go beyond.

To life in a society that has everything it is not difficult to deal with what we have. That's why I don't want to project the theme of bricolage on the (re-)use of materials, but on the process of thinking. The process of design.

Bricolage in my research will not be about materials, but about elements. Elements of the existing to make something new. To use elements of the existing, the elements should be worth saving. If that is not the case than you should build something that ones will be worth saving. Bricolage in terms of architecture is, in my opinion, not to build a building, but to rethink your actions. Thinking about the aging of buildings and use of them in the future. You should not build a building only for the need of today, but for also for the need that will come.

The shelter

In the urban plan, we designed a place for a new public building. With the thought of creating a place for the people of Nijmegen. That leaves the question what the city and its people needs. I already told in the introduction that I want to create a place of empathy, intimacy, vulnerability and purity. By thinking along the river, a journey in nature and going beyond, the typology of 'the shelter' came to my mind.

The shelter is a place you can hide from the elements. Robinson needed a place to hide from the 'wild animals', from rain, wind and sometimes the sun (figure 20). He needed a place to feel safe, to rest and eat. These are the basics people need to survive, but how about nowadays in the city? We live in a civilized world, but a lot of people still have to survive. A shelter sounds primitive, but for some it is something they do not have.

A shelter can be a place to sleep and rest, but it can also become a place to escape and reset. A place to escape from loneliness or stress. A place to be yourself and evolve. Shelters are mostly in desert places, but maybe we need it now in the city.

A lot of cities are coping (or not coping) with the amount of homeless people. Nijmegen is one of them. When you walk through the city you will see at least some buglers. A lot of them have social issues and of course economical issues. The city is trying to get them out of the inner-city, but by doing that they just move towards different places.



Figure 20: Drawing of Robinson when he goes over his fence to reach his shelter. Source: <https://www.heritage-history.com>

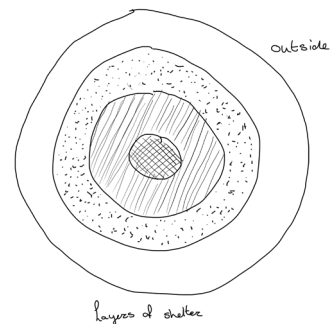


Figure 21: The layers of shelter.

Next to help solve the issue of the homeless people, I want to create a building for all the people. Give a place where they can take a minute or be creative. It will become a mixt-use project that will fit towards the needs of the inhabitants of Nijmegen.

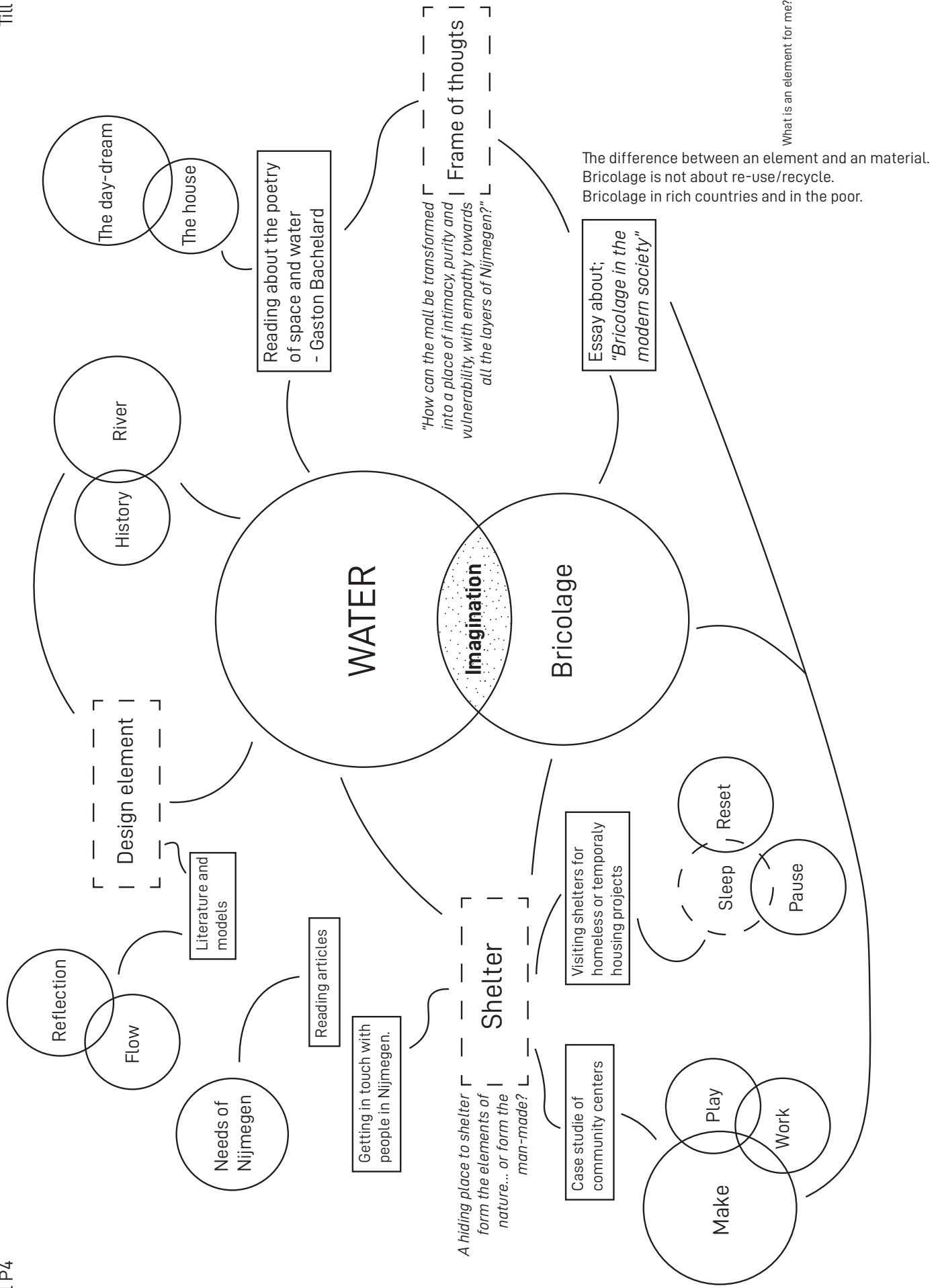


Figure 22: Diagram of methods

Methodology

The research that is already done has a strong narrative, a line or you could see it as a river. It flows from the big scale to the smallest and from the very far past to the future. I will continue this working method for the rest of my research. Maybe it will not go so far and so big as in my previous research, but it will try to look beyond.

To work as a bricoleur I shall interrogate water. Water as an element, but also in concept of thoughts. I want to try to discover new significant and new possibilities with designing with water. The framework of thoughts will be evolved by research by literature. Gaston Bachelard will in this case be my main focus of reading.

I want to clarify how bricolage will play a role in my design and therefore I shall write an essay. This essay will be about "Bricolage in the modern society". It will explain the difference between a material and an element and how I think bricolage should be used in architecture.

After a framework of words is set, I will go into the matter of water and explore the capabilities of it. Main focus will be reflection and flow. For the reflection I want to make models. A small sequel of models explaining what reflection could mean for architecture.

Flow can be researched by studying the river further, making schemes and by looking at case studies. It will also contain a literary study to clarify the term. Eventually it will be about composition of spaces, stairs and ramps and with models digital

or physical that can be studied.

As an addition to these studies, research should be done for the program of the shelter. The scope of the program should be concretized. To find out what especially homeless people need in a shelter I want to contact existing shelter(s) and to see it can be organized. I want to speak with people that are or have been homeless and hear their stories.

My design will not only be about homeless people, but about creating space for all the people in Nijmegen. Programming multiple functions should contribute to this. A case study will be done of existing community centres or mixt-use buildings, to get a better understanding of the program. This study will have the form of text, images and drawings.

With using my hands, theorising about water and bricolage and by going in conversation with the people, I will have a wide scope of material to work with for my design. The research and design process are intertwined and will be in constant dialogue throughout the whole project.

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