

LSRM FINAL ASSIGNMENT

Self-Assessment on Research Methods

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THE IMAGINATION AND CREATIVITY OF A CHILD

The benefits of designing a playground with an open character.

I INTRODUCTION

This paper is written in context of the subject: Lecture Series Research Methods, AR3A160. The relevance doing methodological research lies in the fact that the way one does research and where ones focus is on, will influence the answers one will find. Being aware of this, having the knowledge and the ability to choose different research methodologies will lead to different outcomes. For example when someone does only a literature study he or she will find answers that can miss the link with the context.

From this course I gained the insight that there are numerous methodologies for doing research. The TU Delft teaches a specific way of doing research, which students automatically adopt almost without questioning it. However, there are also other ways of doing research and there is no right or wrong. It depends on the specific subject which methodology is the most suitable for the research. This is also what came across in the lecture of Tom Avermate in which he explained four different epistemologies; typology, phenomenology, semiology and praxeology ¹. Epistemologies can be described as different lenses through which one can look at something. Of great importance is that these epistemologies are not mutually exclusive, they appear and can be used at the same time. This is something I also would like to do in my research paper as well.

The design topic of my studio, Interiors Buildings and Cities, is to create a playground to celebrate the 100th birthday of Aldo van Eyck. The aim is to design and build, on a 1:1 scale, a series of play structures. This play structure will be designed for children and my research will be based on the view and opinions of children. When we went on a fieldtrip to some of the remaining playgrounds of Aldo van Eyck, the thing that struck me most was that after visiting three different playgrounds I realised I looked at them from an adult perspective instead of the actual child perspective. I looked at the child as if it was a little adult instead of a child. It was a real eye opener to me, which is illustrated in photographs 1 and 2. This point of view also described in one of the essays of Aldo van Eyck, who argues that main task of education is to stimulate children in being children, not just to 'make' adults ². I want to use the outcome of this research for my own playground structure design. Therefore the main research question for this research paper will be: *"How can the experiences of the child contribute to the design of a play structure?"*



Figure 1: Playground Aldo van Eyck from adult perspective.



Figure 2: Playground Aldo van Eyck from child perspective.

II RESEARCH-METHODOLOGICAL DISCUSSION

To get a grip on my research question the approach will be on two different epistememes; typology and phenomenology as defined in the lecture and in the writings of Tom Avermate ³. I choose to focus on two different epistememes because my research question consists of two parts. The experience of a child is a phenomenological research, while the design of the playground structure is more typological. Combining a more subjective research with a more objective research will lead to a broader overall picture. Phenomenology is the study of perceptual experience or the study of being. It is about architecture and the built environment and the way they are perceived and experienced. Phenomenological method is a descriptive method; where perception and experience are described. When a large group of people experiences or perceives the same, the outcome becomes less subjective (intersubjective) ⁴. Typology on the other hand describes things or elements that share a particular characteristic or a set of characteristics. It is also described as the study of types ⁵.

The book "Kinderen buiten spel by Hans Bleeker and Karel Mulderij" describes the child's world and the importance of the 'experience space', which is described as a place for children that has a special meaning to them. The book explains how children memorize their surroundings by experiences they have had. The child-like space can be mapped, as it were, by giving the benefit value, the 'do-value' of the various points. An example given in the book shows how children describe the value of a place: 'here I have caught a big stickleback fish, there I have built a hut and there is the garden of that angry man who always takes away the ball ⁶. In this example we see the importance of the different senses like sound (a yelling, angry man, which makes it a garden with unpleasant consequences) and feeling (the heavy weight of a big fish). Designing a playground for children means not only to design a playground from the viewpoint of what an adult wants for a child, but from the viewpoint of what a child wants and how he or she wants to use it ⁷. This is the phenomenological focus of my research question.

The renewed interest in the basic play structures of Aldo van Eyck can be seen as a reaction on the new playgrounds with bright colours, plastic structures and animal shaped elements, which are placed randomly in playgrounds today ⁸. In the playgrounds of Aldo van Eyck there are different elements with typologies that return in almost every playground. These elements have the same function, but depending on the situation and the location, have varying programs ⁹. The different elements appeal to different ways of playing. The climbing equipment requires a lot of flexibility and can be played both under and on. The sandboxes require more creativity from children. Here things can be built or dug, but water can also be added. The climbing rocks require another task for the child, here the imagination is much more central and the child can think up different games on and around the rocks. Therefore typology will always be part of designing a play structure.

III RESEARCH-METHODOLOGICAL REFLECTION

One of the earliest examples where architecture, the built environment and the way they are perceived and experienced are looked upon is in a phenomenological approach is by Auguste Choisy. His book *Histoire de l'Architecture* dates from the end of the 19th century, in which he describes the history of architecture and has a closer look at the Greek Acropolis in Athens. Choisy proposed, with a combination of plans and perspective drawings, a series of carefully disposed phenomena when a spectator moves along the scene ¹⁰.



Figure 3: drawings of the Acropolis (illustration from the book 'Histoire de l'Architecture).

The 1960s and 1970s are an important period of phenomenological thinking in architecture. People like Gordon Cullen and Kevin Lynch have contributed to this. In the work of Gordon Cullen similarities with Choisy can be drawn in the used techniques. The photographic montages of Cullen try to capture the movement by showing how a pedestrian moves through space with the changing views of the city ¹¹. The drawings of Cullen glorify the historic city and are a plea against modernism ¹². Kevin Lynch took

another approach by creating maps based on interviews with people. The so-called 'mental maps' are a representation of people's views of the city and the environment. Lynch describes the legibility of the city which means the way the cityscape can be 'read'. People need to be able to recognize and organize a city into a coherent pattern in order to generate an image or map. These can be categorized into paths, edges, districts, nodes and landmarks to make the city more legible ¹³. Lynch uses photographs and drawings to create his mental maps.

A new approach, from the late 20th and early 21st century, in the phenomenological thinking is Virtual Reality (VR). Virtual Reality is described in the Oxford Advanced Learner's Dictionary as images created by a computer that appear to surround the person looking at them and seem almost real ¹⁴. Also the built environment can be experienced through a computer generated scenario. The aim of using Virtual Reality as a medium in the built environment is to better understand the built environment as a product and to gain insight into the processes of its construction and operation ¹⁵. In this way Virtual Reality is used as a prototype in order to see how something is experienced and used. Using the outcome elements can be easily adjusted or adapted before it is built in real life.

Looking at the history of typological research one of the first architects who used this episteme are Quatremère and Jean-Nicolas-Louis Durand in the 19th century. Quatremère describes a 'type' as the reason behind architecture with a strong link to the past ¹⁶. Durand came up with a classification of architecture; a classification according to the function or use of a building ¹⁷. An approach whereby buildings can belong to the same family if they share certain characteristics (see figure 4). He uses drawing plans and elevations as the main tool for analysing ¹⁸. After Durand the Modernists in the 20th century had different approaches towards typology. These different approaches had the rejection of the past as a form of knowledge in architecture in common. A more recent example of an architect who works with the episteme of typology is Aldo Rossi in the late sixties. According to Rossi the definition of type is based on the juxtaposition of memory and reason ¹⁹.

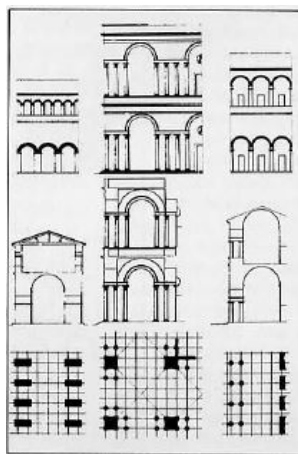


Figure 4: Facade combinations. Durand, 1809. (Illustration from the journal: Oppositions, On Typology.)

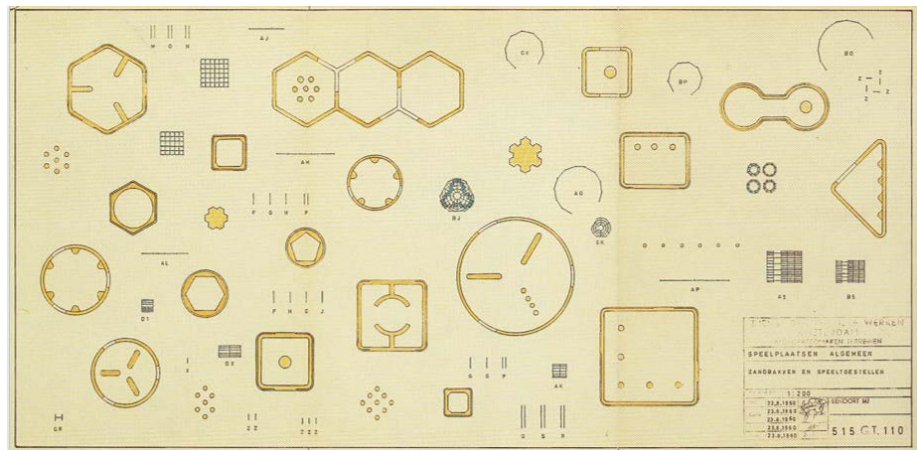


Figure 5: Drawings of Aldo van Eyck with the different typologies; sandboxes, diving and climbing frames, play tables and climbing rocks (illustration from the book: Aldo van Eyck: de speelplaatsen en de stad by Lefaiwre, L., Fuchs, R., & Vroege, M.).

As described above the mythologies are changing through time. With respect to my main research question: "How can the experiences of the child contribute to the design of a play structure?", many of the methods mentioned above could be applied. However they need some modification. For the typological classification it seems obvious to look at Durand and categorize them according to their function and use ²⁰. The difference however is the design assignment, which focusses on a different scale: playground equipment instead of a building (an example of a sandpit can be found in figure 5). Different playground equipment asks for a different use, creativity and imagination. Besides that, I think it is also very important to have a look at the past. In my design assignment I will have a closer look at Aldo van Eyck's playgrounds whereby creativity and imagination are the key. But I will also

look at other examples, like the NEMO Science Museum Amsterdam and Johan Cruyff Courts are important to look at. These two latter examples also call upon the child's creativity but the difference is that the imagination and creativity are limited into a specified direction.

The function and use of the equipment emerges seamlessly into the phenomenological episteme and focusses more on how the different playgrounds / places are perceived and experienced. All the given methods of the phenomenological episteme focus on the existing situation except the most recent development in Virtual Reality. Both the older and newer phenomenological methods are relevant to my research question. Virtual Reality has great potential of interaction with the user, the child, and adjusting changes after feedback. Also the mental maps described by Lynch is something that is useful when working with children, because their world view exists of places with different do-values, which is described as a place with a special meaning.

Another point worth mentioning is the target group: children. As described above children have a different view on the world than adults have. Next to that, the different ages (probably between 4 and 12 years old) of the children using the playgrounds also have influence on the use and the experience of the playground equipment. Children also play at various places which are originally not intent as a playground and give a new meaning to these places. It is therefore important that a place can have certain characteristics that can capture the imagination, evoke adventure and excitement ²¹. The need of focusing on a (target) group instead of focusing on an individual is also something that comes across in the texts of Kevin Lynch. He describes that each individual creates and bears his own image, but there seems to be substantial agreement among members of the same group ²². This will be also the case doing research on the way a playground is perceived by children. By having a trial group or sample group which is large enough, the obtained results will then apply to the vast majority of that particular age group.

IV POSITIONING

Architecture balances between being an art and a science. It is not only an art focussing on the beauty and the feelings. It is not autonomous, but it has a relation with its surroundings, its environmental context ²³. It is also a science based on stability, usability and technology. It is essential that a construction doesn't fall apart, is stable and safe to use. Architecture goes back to Vitruvius who describes the three underlying principles: Venustas, Firmitas and Utilitas. Doing research in the experience of playground equipment with children is as complex as architecture. It also involves the Firmitas and Utilitas, stability and usability, for children, but it is also about the beauty and the way the equipment is perceived and experienced. Thereby this main research is two-folded. From the lectures my focus will be on the epistemes phenomenology and typology described by Tom Avermate.

In general, doing research and looking at it from two or more different perspectives makes the research less subjective, than looking at a (design) problem from only one point of view. Phenomenological research is sometimes described as a little bit subjective, because it is about the way someone perceives something. However Lynch describes that people of same age group can be classified and that among members of the same group the same experiences come forward. On the opposite typology is a more objective study. Although the focus of my research is phenomenological, adding an extra layer of typological research will strengthen and objectify the outcome.

Taking all this into consideration and taking my own experience of the fieldtrip to the playgrounds of Aldo van Eyck into account, I came to the conclusion that it is almost impossible for an adult to displace oneself in a child. An adult can try to look the way children experience things by, for example, looking from the height of a child. However as an adult you have larger dimensions and other sensory feelings, like longer arms and legs. So can you combine design aimed for a child and realise the ideas you have for the new equipment? My research approach therefore will focus on the experience of the child with the equipment. This is in line with the approach of Kevin Lynch, who interviewed people and

made metal maps out of it. I will use the interviews with children to understand their “experience world”. Based on this interview, the typology of the chosen play structure a concept version will be made. With this concept version the children can play. By means of a hidden camera you can analyse who and how much the equipment is used and draw conclusions from it. For example the equipment is too big and the other is broken too quickly.

The next step is to interview to the children again in order to investigate why one playground is more attractive than the other. This gives answers which cannot be known to an adult. For example a particular equipment doesn't feel fine when it is touched or it is too heavy for a child. This can be seen as a real life Virtual Reality, whereby children are observed and adjustments are made. After this a second trial version can be made, in which the experience of the child / children can be included, in order to develop 'better' play equipment (see figure 6). In this way the equipment can be optimised. This cannot be reached by an adult alone, because an adult cannot fully take a children's place, both in physical world as spiritual world. In addition, a child cannot think on the same level as an adult to design playground equipment himself. To answer my research question: by combining the design of the adult and the experience of the child, in the described way an interaction is where the experience of the child contribute to the design of a play structure.

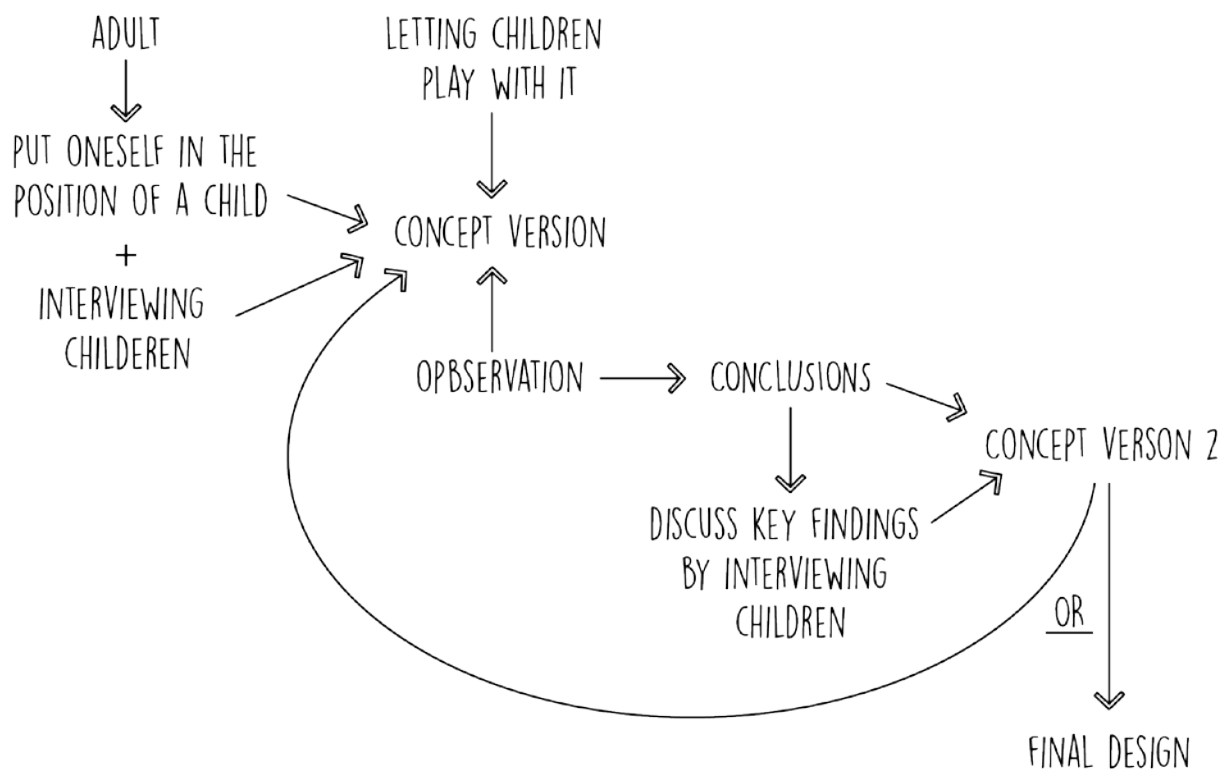


Figure 6: schematic drawing of design process (own illustration).

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