



Shervin Azadi - 4701380  
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TU Delft - ExploreLab

# [playscapes].04 [reflection paper]

Mentor Architecture    Roel van de Pas  
Mentor Building Technology    Hubert van der Meel  
Mentor Research    Martijn Stellingwerff  
Board of Examiners delegate    Luiz de Carvalho Filho

## Introduction

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Through this reflection paper, I will try to take a distance from my graduation project and look critically at the process and product of it.

Throughout the last eight years that I have studied, practised and researched in the intersection of architecture and computer science. This journey has revealed the essential difference between these two fields for me. The first one has proved to be humane, sensational and feasible, and the later has unfolded as esoteric, logical and abstract. Despite this inherent difference each of them offers rich perspectives to the world. Following up on this intersection can have a tremendous effect on the reliability, efficiency and sophistication of build industry. However, my main reason for devoting these eight years and this graduation project to this subject is that regardless of the discrepancy, both of these fields have stemmed out of the same reality. Therefore, beyond its numerous practical benefits, handling this paradoxical situation has a more subtle but deeper value to me.

My graduation project has started out with the two rejections. First is rejecting the way of the sensational architect, who wants to design with affection and passion and build based on his intuition and common sense. Second is rejecting the way of the rational architect who wants to reduce space to numbers and crunch them in his machine to calculate spaces and find the optimized space for everyone. Although there are values in each of them, none of them can answer the complex and wicked problem of space. I think that there is a third way and my graduation project is trying to move toward it by bringing these two mentality together and forming a synthetic method which would enable us to answer the complex questions of energy, structure, etc with sophisticated calculation, create a space which accounts for diversity and delicacy of humans, and finally give rise to new options that are not in our field of possibilities yet.

## Elaboration on research method chosen and the scientific relevance of the work

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Trying to have a grasp on this synthetical approach, I started to look at each of these two mentalities to find a connection point. The computational mentality brings a pair of numerical glasses which is trying to reduce everything into numbers to be able to compute them. The humane mentality, on the other hand, brings perception and sensation which are not reducible to numbers at all. Through my research, I came across the work of people like George Stiny, and this hinted that geometry can work as the intermediary between these two worlds. Up to this point, the main research method was the Literature Review. However, after this point, I have shifted mostly toward Research Through Design for two main reasons. First, the fact that I needed to evaluate and assess the results of my research, second is that I wanted to have a prototype which would be a functioning starting point for any sequel that I wanted to do this line of research. From this point in my research, I have focused on designing the

structure of this interface. Through this research, I came to the understanding that I am designing a system (in the cybernetic meaning of the term) for the interaction of silicon-based intelligence and carbon-based intelligence. This has resulted in a website that enables people to geometrically express what they want and the computer running certain analysis on it and give them feedback on the ways that they can make it more efficient. Up till here, it was clear to me that the system that I am creating is not geared toward space as a product but completely in contrast, by establishing the necessary circular relations it will establish a dialogue between these two entities. This has rendered itself a game to me. Not a game of winning and losing but a game in which each of the sides is trying to reach equilibrium. (The basic version of this is up and running on [playscapes.github.io](https://playscapes.github.io))

## Relationship between research and design

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Beside the gained knowledge and insight which has been framed, formulated and expressed in my research paper, my research had a by-product which was the prototype that I was using to evaluate my ideas and drive my research ahead. I chose my site and my program based on my research. Through my research, I understood that my project is shifting the focus of design from product to process. This has caused me to choose Binnenrotte as my site. Since it has a very dynamic and diverse space and it needs to accommodate for these dramatic shifts in the program. Beyond the initial choice of site and program, the relationship between research and design has three main aspects.

The first aspect of this relation is that my prototype currently is being used as the main platform for people to negotiate and create their own spaces on the site. This gave me insight into the way that I need to handle the massing and detailing so they are compatible with the prototype. On the other hand, the prototype is configured to the scale and necessities of my site.

The second aspect of this relation comes from the field of cybernetics. Through my research, I acquired the system theory paradigm as my method. Besides the research and the prototype, this method has propagated throughout my project. The modules are designed with respect to this method, and even the relation of the project to site, transportation, etc is framed and resolved through this method.

The third aspect of this relation is how my research has changed my understanding of the architects' role which I will discuss in detail in the last section of this document.

## The relationship between the graduation project, studio topic and the master track

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The name of my studio, Explore Lab, is the most descriptive about the essence of it. It nourishes the student to methodically question the accepted paradigm, critically assess its' merits and flaws, and explore what lays beyond it.

In my project, I have started my exploration with a question. I gained the possibility to be critical about the conventional methods. I found a new paradigm and did my best to apply it to both my research and design. This had a fundamental influence on my understanding of architecture and the way it is practised and perceived. Finally, the research and design came together to create a cohesive project which is not only explorative and informative but also pragmatic and feasible.

## Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results

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Through this section I will talk about the relevancy of this project in three levels, why, how and what.

The recent advancements that computer science has gone through have changed our life fundamentally and will continue to change it in the future at a higher speed. Therefore it is crucial for architects to cope with these changes and account for them. And this is why my project is an attempt toward finding common ground between a humane architecture and these technological breakthroughs.

One of the main difficulties in the process of participatory design is the negotiations that architect and future inhabitants have together. Through my project, I create a geometrical interface to incorporate users of space in the process of space formation. This interface was a very basic solution addressing the same issue in the participatory design process. Further developments of such an interface can reduce the hassles of participatory design and involve the users furthermore in the process.

The modules that I use in my project are making the market flexible and agile. However, nothing is stopping people from making it themselves for their home, using it as foldable tables and stools.

## The ethical issues and dilemmas in doing the research, Elaboration on the design and potential applications of the results in practice

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Throughout the project, as I was researching and designing, a shift happened in my understanding of the role of the architect in the project. I have started the project thinking that architect is providing an improvement to a currently functioning setup, by reducing the costs for people and municipality, empowering people to shape their spaces, creating affordance for the time that the plaza is not used for market and activating it through those times.

As I have researched more and more, I understood that projects which are constructed in one-go create a discrepancy between themselves and the neighbourhood. Therefore I started to think about social models that within them my market is only a proposal which part of it will be constructed and if it was appreciated by the users and it created social entanglement then next phases will be executed as well.

Although this proposal sounds more appealing on the surface, it opens up further discussions on multiple aspects like who has a say, financial matters, how much participation is counted as approval, who should oversee the process, etc. Despite the relevancy of these issues, they are beyond the scope of my project and my knowledge.

Due to these limitations in time and knowledge, I have decided to perform an analysis of the consequences and merits of different scenarios.