

Reflection

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Master Track: Landscape Architecture

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Introduction

The border between Bulgaria and Romania follows the Danube River for more than 800km. Having in mind that there are only two bridges connecting the two countries, I started my investigation to form my graduation problematique. By researching the relations of the two countries and their needs, I formulated my project. My graduation project focuses on the connection between Romania and Bulgaria regarding multiple flows. Transportation, green and water infrastructures are the flows which will form a new connection for the two countries. A bridge is going to be designed and implemented nearly in the middle of their long borderline. My main research question is to design this bridge in a way that is going to propose an international public space, uniting the two countries in a social, cultural and economic level. How can the bridge influence the urbanization and the landscape around? How can we as designers stimulate the urban flow so as to interact positively with the environment and its natural processes? These were the research questions that drove my project from the beginning. Along the way, some changes took place, regarding their importance in the project but they are still a strong part of my problematique.

Motivation

The idea of bridging was always an interesting topic for me therefore I wanted to investigate this theme deeper during my graduation project. During the phase of research and design and by investigating into relevant articles, case studies and site visiting, I concluded that bridges are landscape infrastructures that facilitate the idea of connection through the framing of the landscape, sense of orientation, symbolism, imageability and adaptability of the design. As a consequence, they are not only products of engineering; they can also have landscape dimensions. For example, green corridors or animal bridges are two types where engineering and landscape architecture are combined.

My previous studies were in architecture where I was trained to think and act as an architect but I was feeling that something was missing from my approach. When I entered the Master of Landscape Architecture in TU Delft, I realized that landscape architecture can combine both nature and engineering which was the layer of investigation that I was missing before. Natural processes are an important aspect of every design and they should not be forgotten. One of the strongest motivations for this graduation project was to combine my architectural background with my current studies. My project intertwines architecture and landscape architecture to facilitate connection through the design of an engineering product and the manipulation of natural processes of the landscape.

Flowscapes

Bridges are closely related to flows such as traffic, people's movement and natural flows. The Flowscapes studio integrates flows in landscape planning and design. Flows are described as the movement and scapes are the territories. Both are closely related with each other. The emphasis is given on the interaction of humans with their environment and biodiversity. In the border between Romania and Bulgaria, the flows and scapes are either blended or absolutely separated from the borderline. My approach from the beginning was to preserve the uniqueness of each country but to connect the green and water infrastructure in order to reinforce it.

At the beginning of my research there was a doubt whether my design should focus on the construction of the bridge or generally on the notion of connection through several flows. My first approach was to focus on the construction of the bridge. Through researching and designing the bridge was proved to be the best infrastructure in order to connect these countries. Alongside, I was investigating for the changes in the landscape that a bridge will bring

but I was not able to combine both in one project. What made it difficult was the amount of information for both fields. I found myself divided between an architectural and landscape project. Having a lot of information for each “project” I was not able to detach myself from the projects in order to realize their connecting point. By following the obligatory courses of my Master during this confusing period, made strong decisions and combined the projects in one. That is a moment in every project where the designer needs to be determined and take fast and strong decisions that will develop the design.

The first obligatory course that I followed was Research and Methodology in Landscape Architecture which I found crucial for a successful design. By following this course I discovered that by excluding other options of connection than the bridge is not vital for the success of my design. Therefore, I broadened my horizons towards other forms of connection which do not necessarily require the structure and engineering of the bridge. This decision was taken nearly in the middle of my graduation thesis and helped me to improve the landscape layer of my design. By investigating in other types of connection, I came across valuable problematics and notions that could reinforce my argumentation for connecting the two countries. For example, the notion of symbolism and cultural references that the bridge can offer. Romania and Bulgaria are countries with different cultures and language. Until now, they mainly communicate in English or have no interaction at all. By offering a common place of reference, they can both relate to a same thing. As a result the communication becomes easier because the bridge acts as a motive for discussion. In addition, by reading articles about bridges in the book *Flowscapes*¹, I came across interesting topics that I implemented in my project as well. For instance, the notion of framing the landscape and landing of the bridge regarding the existing territory around by looking into examples such as the Erasmus Bridge, Oresund Bridge and Golden Gate Bridge.

All these findings in the middle of my graduation thesis changed my way of thinking and designing. Analyzing and understanding bridges turned out to be a different procedure than expected. The articles and case studies that I focused on provided me with good examples to build my project problematique and recite a coherent story of my graduation project. By adding extra layers of thoughts in my story, my project became richer. My research was not monofocused anymore. An interesting experience was the Honors program as well, where I was asked to present my project. The procedure of presenting the project in short time and the effort to make an interesting presentation, were a good exercise for me to practice and to understand my project better.

Another interesting experience was the combination of landscape architecture courses with an architectural course. I followed for a quarter a bridge design course from which I acquired the knowledge needed to design my own bridge. The interaction with architecture students and the several lectures I followed were important for the development of my project. It is evident that in the beginning of the course my focus was only in the bridge design. Soon enough though, and with the guidance of my mentors, I was able to work at the same time on the landscape and engineering parts of my thesis which was my goal. I believe it is quite difficult for a single person to work on both layers at the same time. The information that one is gaining from the analysis and investigations is too rich to be processed. Although, by having support and advice from my teachers and fellow students, I could process the information and implement it in my project slowly. I believe that in the future different practice fields can be more integrated with each other. Especially in a university level, students from different fields should have the opportunity to interact and collaborate. More interaction and communication among students give better project results.

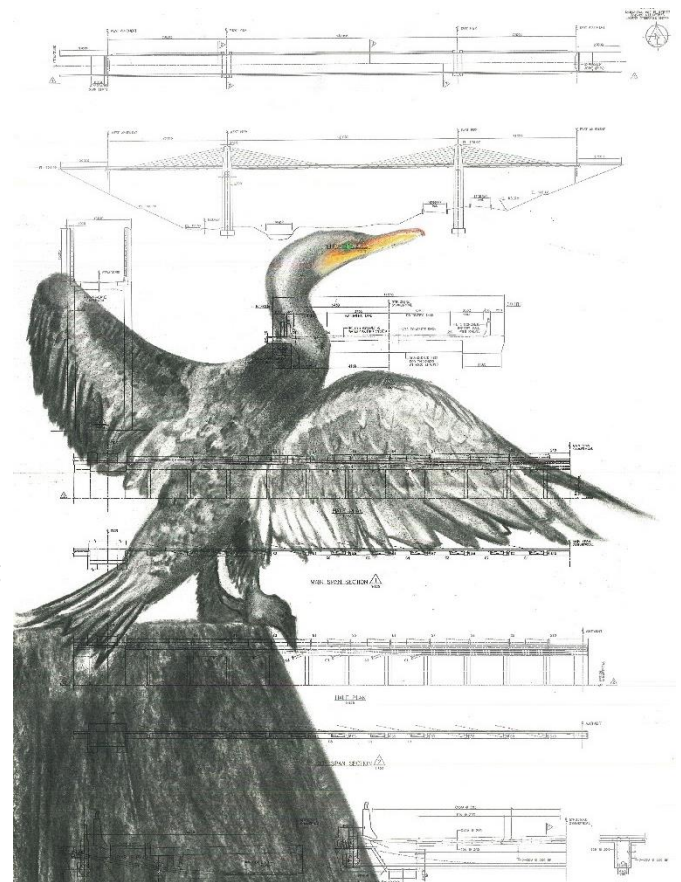


Figure 1: Charcoal drawing by the author.

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Steffen Nijhuis, D. J. (2015). *Flowscapes. Designing infrastructure as landscape*. Delft: TUDelft.

Having a wide range of information, gives the opportunity for more experimentation on different ways of representing the project. As far as my design is concerned, it is focused on both engineering and landscape, therefore the drawings should depict this bipolar nature. By experimenting with different materials, the feelings and thoughts are better expressed in the drawings. Charcoal was for me a pleasant surprise which released my thoughts. The lesson that was given to me by these experimentations was to perceive my project from a different perspective. I realized that the main focus of my project is not the bridge, but the effect that engineering has on nature. How the two elements work together and create conditions for a better future.

Multidisciplinary approach

A project that deals with international connections and multiple flows tends to expand in design. In my graduation thesis, I realized that in order to be precise and accurate on my words and acts I should enlarge my design. My thesis started with a desire for a landscape bridge design. It changed into a landscape bridge design with a public space and it ended up being a landscape infrastructure that intertwines natural processes, steers the urban expansion, changes the existing landscape into a coherent one and stimulates social awareness. Personally, I am glad that an idea of a project can expand so much that it changes in its core. Landscape architecture is a field that concerns multiple layers and flows in a territory, therefore it changes constantly.

A good landscape architect needs to be ready to change the world around him. The results might not be visible instantly to the people because landscape architecture plans for the future, including the long term. For that reason, in a landscape design, all flows must be considered and calculated from the beginning. Nature changes constantly and so must the design adapt to these changes. On the other hand, since landscape architecture can influence nature, each design becomes complicated. During my research I realized that my design touches upon notions from different fields that I was not able to understand by myself. For example, the manipulation of sedimentation and the steering of the urbanization. Landscape architectural designs are multidisciplinary designs. Different fields of expertise need to collaborate in order for a design to be successful and create conditions for the future. In this project I learned that collaboration and good communication with the mentors and other experts are crucial. A strict schedule, patience and strong motivation are key elements for a successful design.

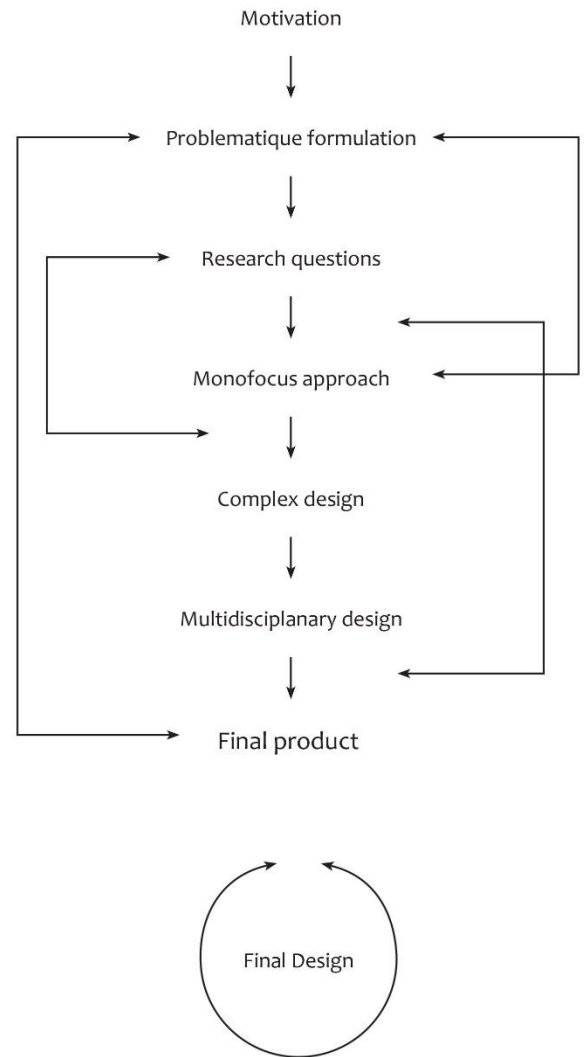


Figure 2: Diagrammatic process of the graduation design. A circulation of thoughts until the completion of the final design.

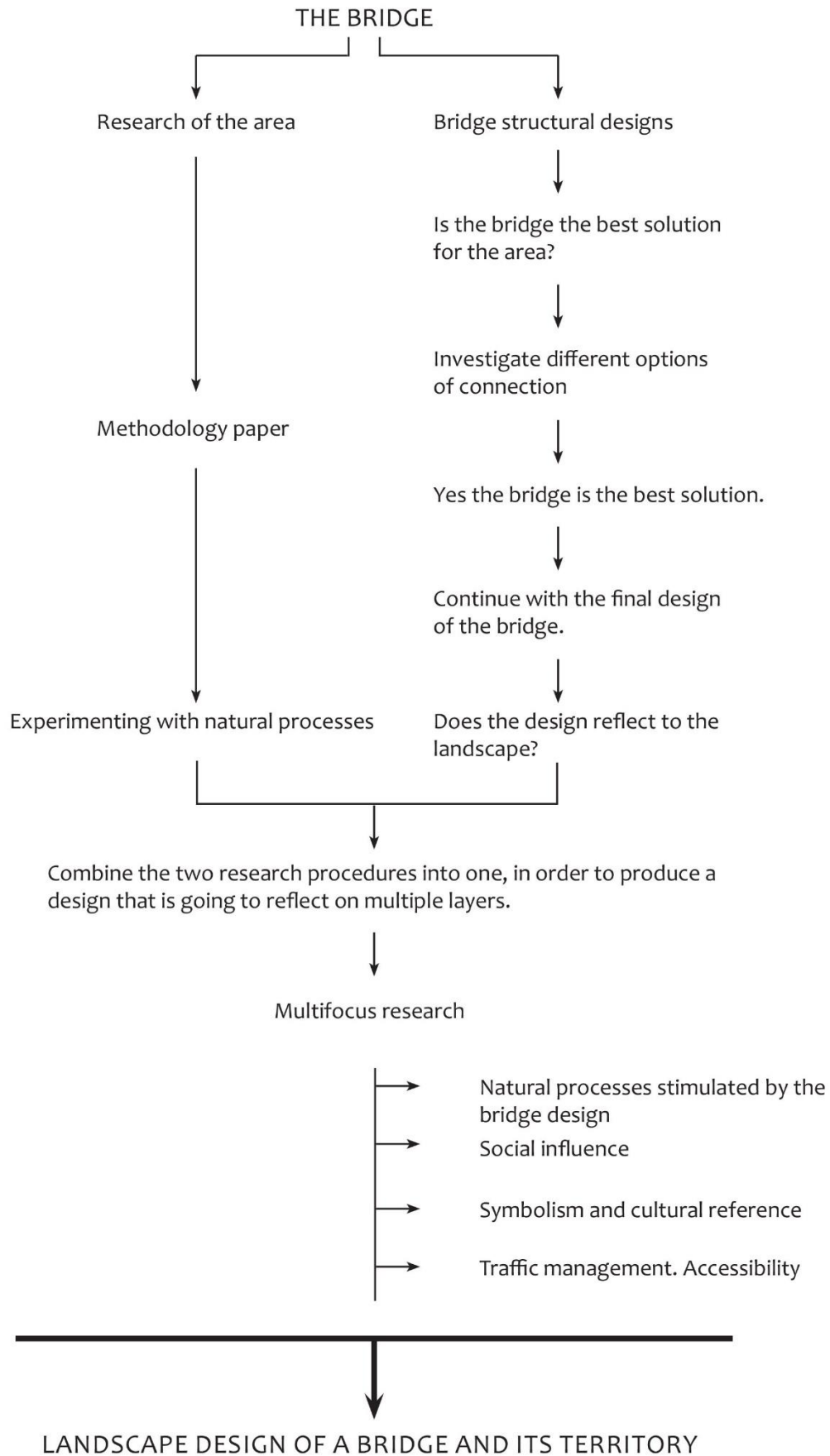


Figure 3: Evolution in the design idea: from a bridge to a landscape with a bridge