REFLECTION

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Reflection for graduation studio Methods of Analysis and Imagination

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Introduction

For the course of the studio Methods of Analysis and Imagination, Position in Practice, I have chosen to dive into the transformation of an abandoned Cotton Factory in Belgrade. Situated at the junction of the historic city center and the industrial area of the port, this abandoned mega-structure immediately intrigued me. The inaccessibility of its historical value, as well as the amount of potential waiting to be unraveled is what awaken my interest. In the course of my studies, I had not yet designed this kind of scale and dealt with industrial heritage, especially when abandoned and inaccessible. However, I could see the implementation of what I had previously done for Msc1 and Msc2, which had mainly focused on the creation of public spaces to allow an accessible and more democratic built environment, happening in this specific project.

This investigation started with the main concern that was the possibility of turning this abandoned factory into a modern, re-industrialized self. My utopian approach was to try and opt for a revaluation of the human relationship with the industrial, rather than repelling all these industrial buildings outside of the city. This lead to the main question of:

How can re-industrialization transcend Belgrade's abandoned industrial heritage from its liminal state?

Approach

In order to grasp the conceptualization to this question, I dissected the main approach into three parts:

1. **Scale down** the structure of the factory to a human scale
2. **Introduce** new types of spaces into the existing structure
3. **Open up** the building in order to make the industrial building type visible in the city landscape

1. Scale down the structure

As I started dealing with the design, everything of this project that had appealed to me in the first place, soon started to become a struggle. As I tried to enrich myself with a catalogue of options available to defy the enormity (figure 1), The possibilities seemed endless and never one singular seemed to be enough to embody the richness that was offered by this self-assigned project.
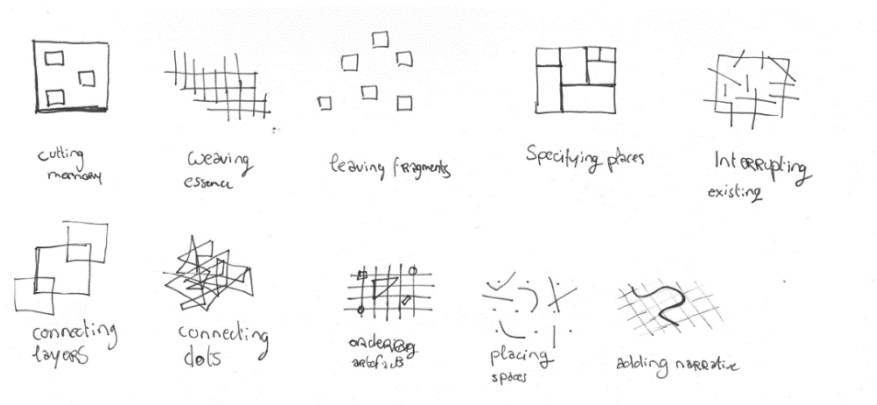

Figure 1: Catalogue of attempted possibilities to scale down the structure.

So to understand what type of approach would potentially work for this specific building, I deviated from the urban scale into the very detailed measurements. Through this investigation, it became clear that the factory is dealing with a horizontality that is very specific for this building type. As the light would come from above, there would be little to no windows, turning the roof into a vast canopy with a uniform and repetitive interior with a specific grid of 5,5 meter and a height of 5 meters up to the truss, with a total of 7,5 meter for the roof. (figure 2)
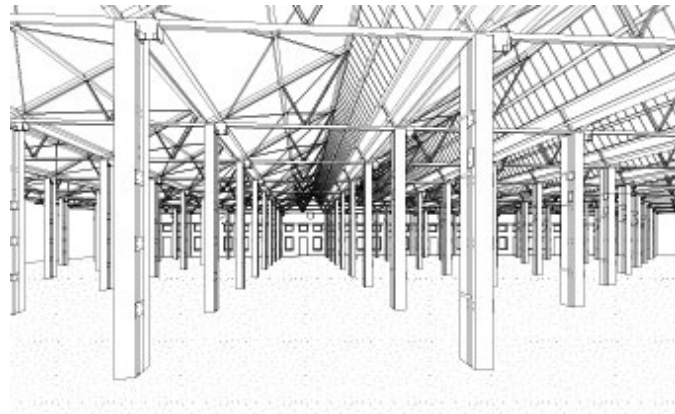

Figure 2: Understanding of the specific scale and repetition of the factory's interiors.

2. Introduce new types of spaces

With the understanding of the specificity of the grid, I went to dive into the possibilities of dealing with this structure on a very detailed scale. This hyper focus was meant to be detached from the bigger picture, which would be re-introduced on a later scale. At first, the dimensions of the hall itself were observed as well as the understanding of the possibilities in adding levels in a section (figure 3). Also, the investigation into the detail of the existing structure and its bolts joints added the insights on the possibilities of manipulations of the structure. (figure 4)
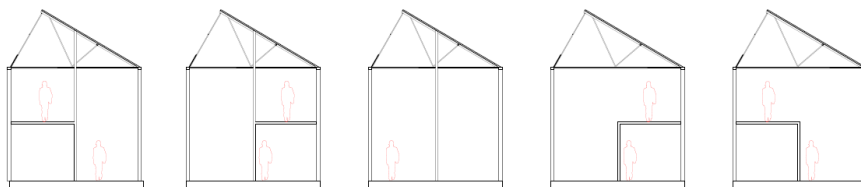

Figure 3: Possibilities of adding additions into the existing structure.
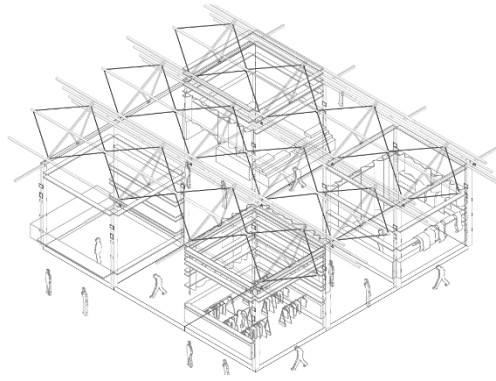
Figure 4: Possibilities of adding manipulations of the joints of the existing structure.

With this information, attempts were made to use this information of structural interventions on the bigger scale by examining the grid and placing objects within it (figure 5), using this method as a way of fulfilling the previously mentioned catalogue of figure 1.
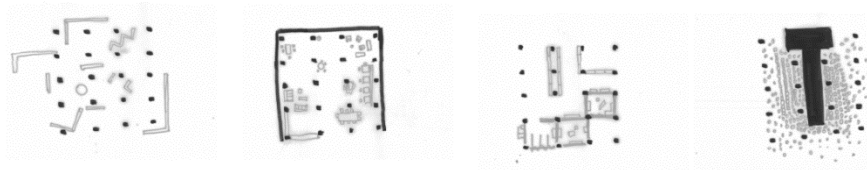

Figure 5: Possibilities of adding manipulations of the joints of the existing structure.

3. Open up the building to the city

As I now had many ideas and ways of establishing spaces and interventions into the structure of the hall, I needed to understand what type of interventions were going to create specific interactions. These specific interactions would be mainly the basis of this rethought of industrial processes, crafts and exchange of knowledge. The foundation for this investigation was to utilize the strict dimensions of the grid, the possible interventions within the grid and to allow for different interactions to happen. The basis for the interactions were mostly set on the programme, which was a market space, workshop spaces, shops and educational spaces. (figure 6)

Figure 6: Market, workshops visible to visitors, shops semi-visible to visitors and educational spaces private.
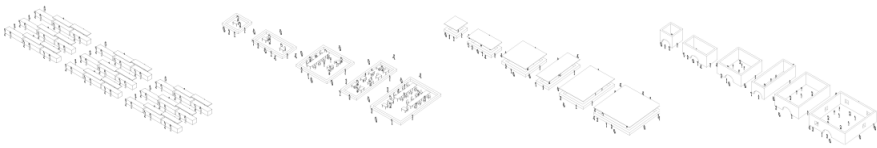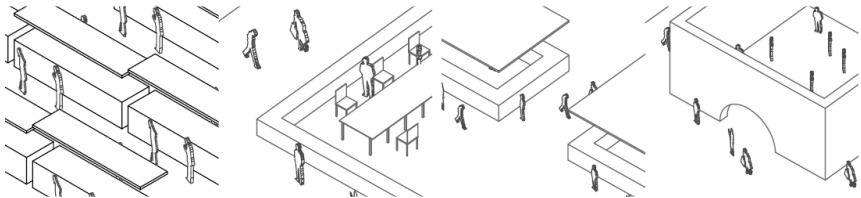
Figure 7: Zoomed in to the diagrams of figure 6 with the human scale.

Challenge

Now I thought I had all the ingredients to start designing spaces inside of the factory. However, it was impossible for me to move this project forward with a grounded reasoning. This 3-steps approach seemed insufficient to provide me with an understanding of the layers involved in this urban fabric. Especially since I was trying to address this project on the specific scale of 1:1000 or 1:5. With the help of the tutors, as well as my attempts to understand what I really wanted to achieve with this graduation project, it became evident to me that the essence of the assignment lacked clarity. Every week, each of the project proposals I came up with could shift the totality of the project which made it even harder to make a choice. Finally, the definition of the project's essence, as the "textile village", is what contributed to a more specified approach to the design.

The creation of a village inside a mega-structure, is a common practice in the built environment. This rationale allowed me to understand more scales of the project simultaneously. As the factory once started as a small workshop space, slowly evolved and turned into an urban building block owned by one company, the abandonment in such a scale was established (figure 8).
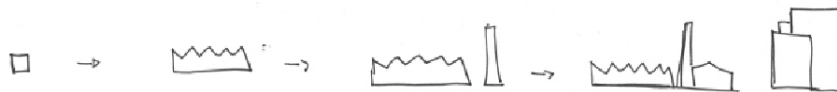

Figure 8: Steps of the development of the factory from a small workshop into a mega-structure in the city of Belgrade

Method

Going back to the approach of opening up, scaling down and adding a structure, the introduction of a village could now start to make sense in a theoretical framework as well. In an edition of Forum in 1962, Jaap Bakema writes about the importance of the balance of collectivity and individuality within the architecture.[1] In this article, he proposes a way of designing for 'no employees', by setting basis for living conditions that could be adaptable for different types of residents.

Bakema's in depth analysis of the Diocletian Palace in Split shows that the method of the transformation of the palace to be a collective attempt to turn the abandoned palace of a fallen empire into a city, now residing thousands of people. This adaptation is described to be made possible the multiplicity of the Palace its strong structural envelop, making possible to host public spaces by using its remains as a fortress, generating a city inside.(figure 9)
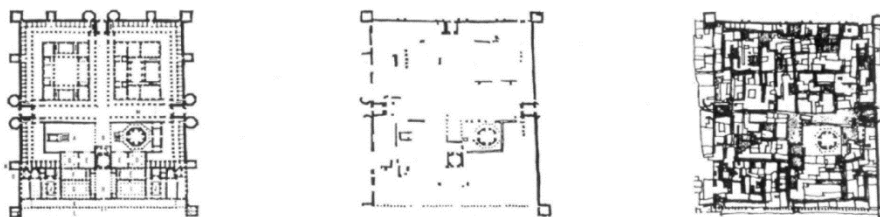

Figure 9: Scaling down of the Diocletian Palace, its abandonment and its new occupation
Source:

This phenomenon seems to be applicable to the factory, which was once a state-owned company, failing to comply to a societal transition and leaving behind the structure of a singular authority. Similar examples of this are commonly seen in city centers. In the case of the amphitheater of Lucca, or the amphitheater of Arles, a process of scaling down happens with the assembling of co-existing, as a way of 'parasiting' pieces of the city. This often results in traces of the previous structure left behind and used for the case of the new one, as layers of Spolia.

In order to proceed, I had to research the necessary elements in order to create a modern micro-city. In Mutations, the chapter called 'How To

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[1] Jaap Bakema, "Bouwen Voor de Anonieme Opdrachtgever," *Forum* 1, no. 1 (1962): 59–70.

Build a City – Roman Operating System'[2] seems to provide ingredients on the basis of a Roman city.(figure 10) The elements of infrastructure, main axis, public buildings and public spaces necessary gives strong insight on how to get an ancient society to function on an independent scale.
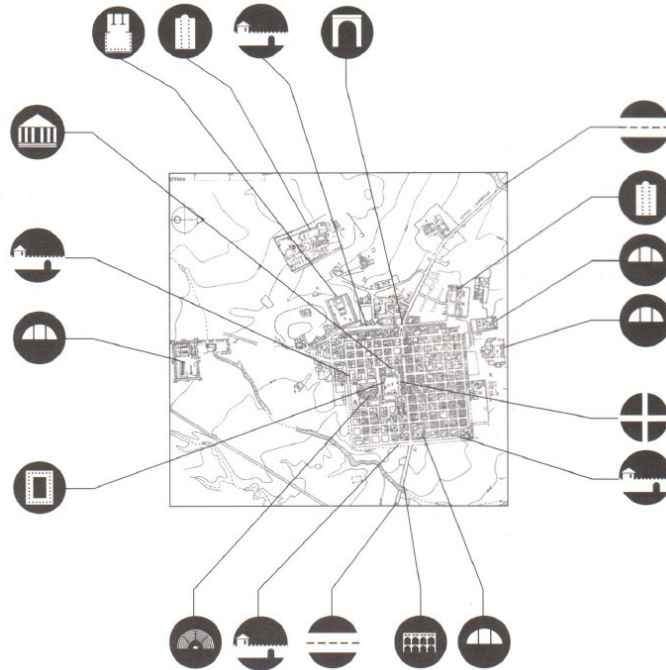

Figure 10: Diagram of the principle of the organization of a Roman City
Source:

Similar to the case of Diocletian's Palace, the diversity of several structures and scales available on the site of the factory provided to be a strong basis for the development of the public spaces and public buildings.

This lead to the development of the main axis of the factory to be established, as a way of entering the urban block. The creation of public spaces, created in the central areas and in proximity of the public buildings have been configured to carefully develop the basis of the city. (figure 11)

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[2] Rem Koolhaas et al., *Mutations : Rem Koolhaas, Harvard Project on the City ; Stefano Boeri, Multiplicity ; Sanford Kwinter ; Nadia Tazi ; Hans Ulrich Obrist.* (Barcelona: Actar ; Bordeaux, France, 2000).
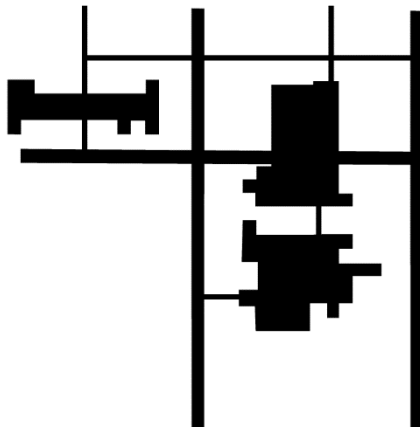
Figure 11: Cardo et Decumanus (main axis) of the micro-city and the squares and courtyards created.

With the principle of the city planning and the knowledge on the building structure, a strategy was developed to add structures inside the structure of the factory, allowing for the opening up and scaling down. (figure 12)
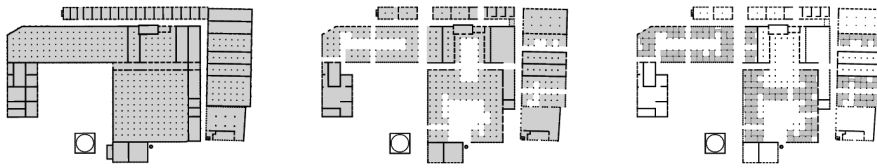

Figure 12: Scaling down of the factory, from a mega structure into a micro-city.

This process of trial and error, paired with a lot of hesitation, is something I have experienced quite often when designing. In this case, my hyper focus on a specific scales of the project individually and ways to solve this resulted in inability to move forward. In order for me to move forward with the design, I tried to understand the entire picture of the project and positioning into practice what I find the essence of the design. In this case, as I was designing on a scale that would still largely keep the massiveness of the structure, my intuitive longing for the creation of a village made its way to my approach.

Reading upon Bakema's views on a democratic built environment, as the "right of every individual to develop this responsibility into a form that suits him, and his way of living is function in this process of awakening" helped me understand and place the core values of my previously developed designs and project them onto this one. This mainly my fascination to design for a society and integrating similar conditions of living to what I am experiencing at home, with regards to the smallest detail within the picture.

This project is a response to the currently rapidly developing society and the inability of buildings to keep up. Even if the focus of this investigation regards the conventional industrial building type, this phenomenon is and will be relevant for other building types that fall into the category of a mega structure which could potentially benefit from scaling down.

As for the project, the method of scaling down now has been developed into ingredients, set by existing conditions on site combined with the notion of the 'anonymous employee'. As I now have a set of parameters concerning the building method, material use, public space creation and types of spaces in general, I will design the village further. I plan to go into more depth as to understand how this society will function and develop into more detail how the public buildings, the workshops and the living spaces will interact and exchange knowledge more specifically.

Literature

Bakema, Jaap. "Bouwen Voor de Anonieme Opdrachtgever." *Forum* 1, no.

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