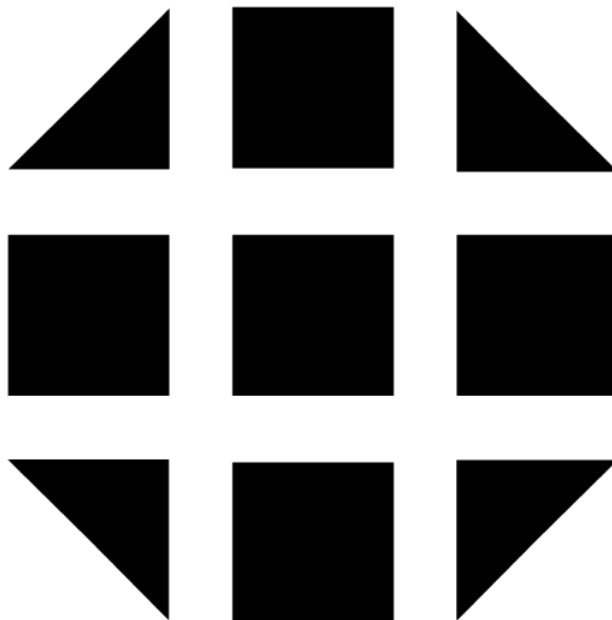


P4 REFLECTION

ARCHITECTURAL PAINTINGS

Research on the role of painting in the architectural design process



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INTRODUCTION

The following text is reflecting upon my graduation process, regarding both research and design and their degree of interdependence.

In the last years of my architecture study, I realized my architectural design process lacked a proper tool for exploration that stimulates my creativity and allows me to explore the multidimensionality of architecture and not only its visual character. In search of new means of representation and exploration, I stumbled upon painting - a tool used by many renowned architects.

I have always been interested in looking at sketches and paintings made by architects for their projects but haven't really considered the importance and vitality of this tool within the architectural design process until I did my history thesis in the first year of the Master's track. For the history thesis I analyzed the painting that Zaha Hadid made for the competition of the Irish Prime Minister's Residence (Image 1). That's when I realized that Hadid's painting is not simply an artwork or a creative expression but a very well thought out composition that depicts a building and conveys the main ideas of the project for the competition. By analyzing the painting from both an architectural and artistic point of view, it became evident that Hadid's painting has an immediate effect on the forms of her architecture and not the other way around. After realizing that Hadid developed her own architectural style by using painting as a design tool to explore architecture through abstraction, I became interested to learn more about how painting can become an integrated part of the architectural design process. My fascination to learn more about the topic led me to the decision to join Explore Lab and pursue the answer to the question - *"How can painting be used within the architectural design process and architectural development?"*.

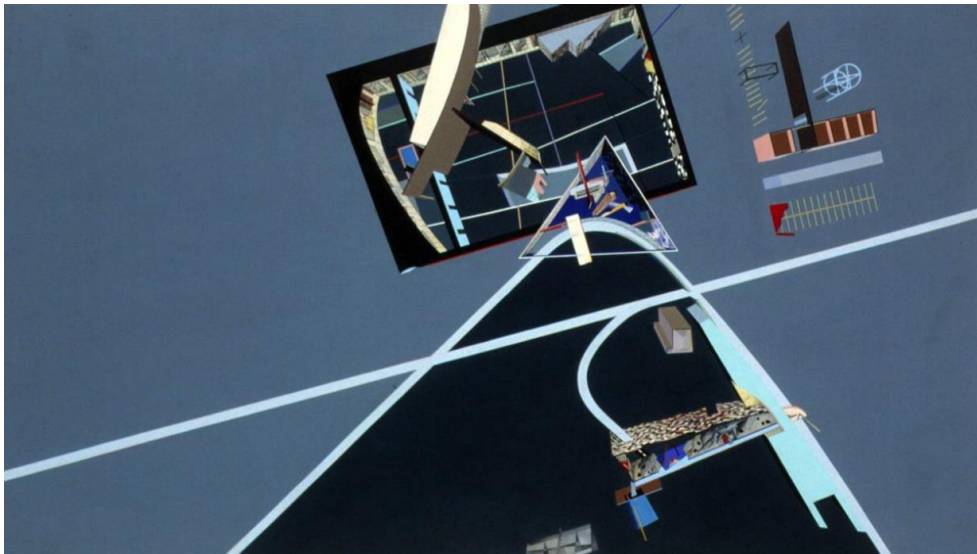


Image 1: Final painting for the Irish Prime Minister's Residence. Source: Zaha Hadid Architects, n.d.

RELATIONSHIP RESEARCH AND DESIGN

In the beginning of my graduation, I didn't know what kind of building I was going to design and where it was going to be located. By gaining more understanding of the research topic and based on the outcomes of the research, were defined two criteria for the design project - to address the multidimensionality of architecture (social context, historical context, cultural context, etc.) and to use paintings as a tool that contributes to the understanding of the building as a whole. When choosing the location of the project, I looked at a few different locations in Bulgaria and their history. There was one location that perfectly fitted the first criteria - the location of the former mausoleum of Georgi Dimitrov in Sofia, Bulgaria. This became the location of the project.

After choosing the exact location, the vision for the project became clear - to create a building with an awareness and remembrance of the past and embracing a glowing new future that stimulates constructive discussion by addressing the multidimensional character of architecture. Another starting point for the project was to keep as much open space as possible above ground to preserve the park and therefore have a bigger part of the building below ground.

The design process started by learning more about the history of the site and analyzing the location, while parallel to this I was making paintings. Because of the socio-historical context of the location time became a particularly important topic for the project. I spent a great deal of time making abstract drawings of circles that represented the cyclicity of time and how future, past and present intersect and affect each other. In themselves, however, these drawings had nothing to do with architecture but from these abstract drawings sprang a combination of plans and sections which were all interwoven. This also became the basic idea for the project. Namely the part above ground represented the future, the part below ground the past and the ground floor and the atrium represented the present that is the link between past and future. This idea defined also the function of the building - a museum underground where art will stimulate the visitors to form their own point of view on different topics and a café above ground where people can discuss their diverse points of view and generate ideas for a better future. This basic idea also came back in the construction methods that I chose - for the part of the building below ground were used construction techniques commonly used in Bulgaria while in the part above ground were used more contemporary and innovative construction techniques.

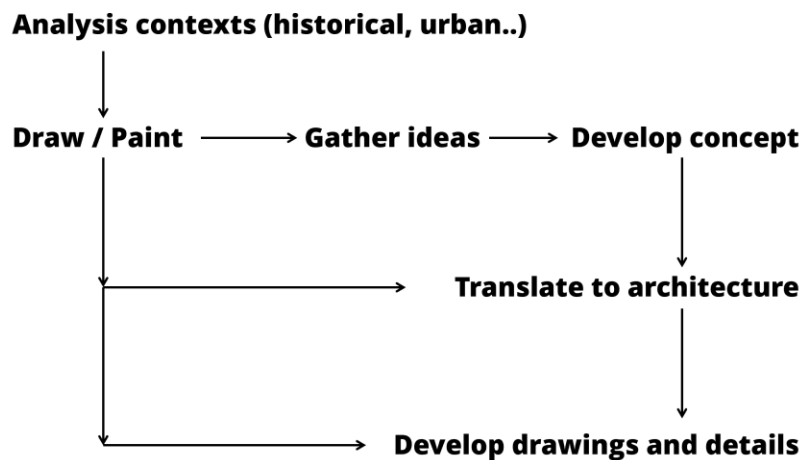


Diagram 1: The role of painting within my architectural design process

Another aspect in which the abstract paintings informed the design was the development of the floor plans for the part of the building above ground. The floor plans were developed by analyzing and exploring a lot of variations of the traditional Bulgarian folk pattern (Image 2). On one side, based on these paintings was developed the layout of the floor plans and on the other the patterns incorporated in the abstract paintings come back in the details of the building. An example for this is the placement of the wooden lats in the ceiling and the pattern that they create (Image 3) which was based on the paintings of the Bulgarian folk patterns.

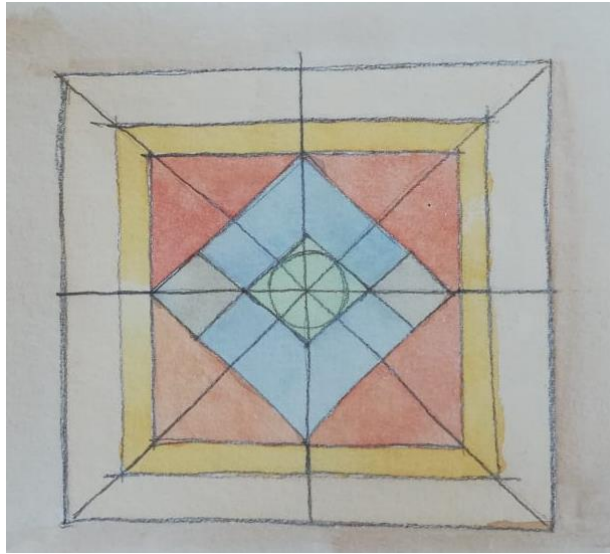


Image 2: Conceptual painting of a Bulgarian folk pattern

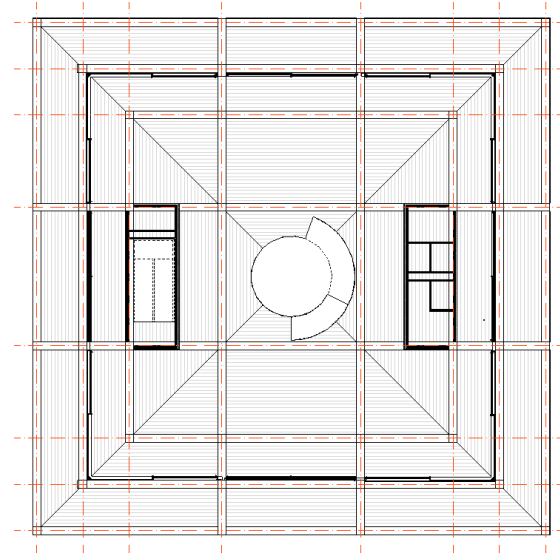


Image 3: Reflected ceiling plan showing the ceiling pattern

Something intriguing that I observed during my design process was that in the beginning I was only painting and analyzing the location but not working on the architecture itself. By making the paintings I generated so many ideas for the project that at some point I became oversaturated with ideas and the architectural object was already starting to take shape in my head. Because the basic idea was formed and the general layout of the plans and sections was defined based on the paintings, it was very easy to create the building and translate all these ideas to architectural objects. Furthermore, during this process of translation, whenever I had to make a decision I was always coming back to the basic idea for the project.

What I found difficult, however, was to incorporate abstraction in my design process after the conceptual design phase of the project. During the conceptual design phase I defined the whole concept and vision for the project and big part of the architecture using painting and abstraction as design tools. Then after I started working on the architecture itself, whenever a challenge came up, I immediately referred back to the main concept for the project and, similarly to Aalto, through sketches found rather technical solutions to the challenge. As the challenge was already solved, I didn't find the necessity to explore new ideas through abstraction by using painting.

PROJECT IN A WIDER CONTEXT

This project is relatable to a wider context in two ways. The first being the architectural design process and using painting as a tool within it. The goal of incorporating painting as a design tool from the early stages of the architectural design process is to stimulate creativity, imagination and innovation. By starting to directly work on architectural plans or volumetric studies, either in a digital or analog way, it is much more difficult to tackle the complexity of the architectural projects because the architect is limited by the tool as the representation is too literal and does not allow for multiple interpretations. Furthermore, when using time-consuming techniques, such as painting, the level of consciousness in the elements of a building and its representation increases and in this way the production does not go ahead of the mental processing which is often the case with digital technologies. To understand the importance of using paintings and drawings as integral part of the design process is especially important nowadays, when the digital tools play a central role in the architectural process. For architects, who choose to incorporate painting as a tool within their design process, the digital tool should be only used to translate the paintings, drawings and models to a precise model of the building based on which the building is going to be constructed but not for inspiration and exploration which is usually the case nowadays.

The second context is the building itself and the ideas incorporated in the project. While the design is specific to the local socio-historical context and ambitions of the project, the vision - to create a building with an awareness and remembrance of the past and embracing a glowing new future that stimulates constructive discussion by addressing the multidimensional character of architecture - is applicable to other places. In this way the project can work as a case study on how architecture can be meaningful, tell a story and stimulate diversity. Furthermore, the vision to create a building with the most up-to-date technologies and minimal services, led me to create a building without an active heating and cooling system while maintaining a comfortable and healthy indoor environment all year round in a climate with cold winters and hot summers. Therefore the project can also work as a basis for further research to design buildings without active heating and cooling systems while maintaining the high comfort criteria indoors.

RELATIONSHIP TO STUDIO, TRACK AND PROGRAM

The Architecture Track at TU Delft is rather free and allows for a wide range of possibilities. Based on their personal preferences, students can go down more abstract and conceptual, or more technical and practical paths. With this project, I aimed to combine the abstract and conceptual with the practical and technical. According to me a well-designed and meaningful architectural project should embed all these aspects, as a project can neither neglect the historical, social and cultural contexts of the site, nor the way the building is experienced by the visitors, the way it is materialized or the effect it has on the environment. Therefore, this graduation project tried to address the multidimensional character of architecture on all points and focus on it at all scale levels.

The Explore Lab studio is known for the freedom it gives to students to find their own methods, depending on their individual interests and preferences. This framework of the studio allowed me to follow my personal fascination and do research on paintings but also to have an unconventional design process, experiment and set my own project outline. Having the freedom to choose a site and project brief that address the multidimensional character of architecture, gave me the opportunity to explore how painting can be incorporated as a design tool in my own architectural design process.

TUTORING

Overall, I am very satisfied with the tutoring from all three mentors. Each of them guided me within their own field of expertise but at the same time gave me the freedom to explore. Whenever I was too zoomed in to a specific problem, instead of directly providing me with a solution, they broadened my horizons by giving me a different perspective from which I can look at the problem so that I can keep exploring new ideas and find my own solution. I found the discussions with all three mentors also very useful because the feedback I received was constructive and helped me to further develop the design and research.

Some questions I had were too technical and therefore I had to discuss them with the specialists in the respective fields. I am satisfied with the input from the climate design specialist, however I could not get any constructive feedback from the structural engineers and they weren't open for meetings or discussions.

CONCLUSIONS

Reflecting on my academic career up to the start of this graduation project, I realized that my architectural design process lacked a proper tool for exploration that stimulates my creativity and allows me to explore the multidimensionality of architecture. I was mostly focused on the 'form follows function' approach, explained my projects based on diagrams and started working with masses and volumes at a very early design stage. This resulted in very functional and technically well-designed but not always as meaningful projects.

I am grateful that I took the opportunity to begin this experimental and challenging personal exploration by following my fascination and benefit to the greatest possible extent from this last opportunity provided by the university. This graduation project proved me that painting and abstraction can be an integral part of my architectural design process and that these tools can help me create more meaningful projects for a better future for all.