Reflection document

Information

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Geometric Wasteland

A collection of towers, built out of recycled bricks by a robotic arm, which serve as a starting point for unorganized activities and encourages further exploration of the Brettenzone in Amsterdam.
Part of a larger plan of solving the fragmentation of the Brettenzone by introducing a new layer of recognizable brick structures.

Reflection

This reflection is based on the aspects as given in the Graduation Manual, it will be used to look back on the project to see weather research and design are integrated and the pre-set goals are achieved.

The relationship between research and design

In my project there are two main topics; one is the brick (its recycling and future possibilities) and the other the Brettenzone as a design location. The research for the brick was divided into three parts: craftsmanship and character, reuse and recycling and possibilities with brick. For the Brettenzone it was about finding the right intervention (program and location) to showcase my chosen technique.

My research into the brick was mainly an overview of the waste streams and the way we could use these in a design, also with the help of new techniques like robotic arms. What wasn't taken into account was a design criteria I later on the process decided to stick with; bricks as the main structural material. This decision to use bricks not only as façade cladding but also as my loadbearing structure had a significant impact on the rest of the design process and the possibilities the bricks and the robotic arm gave me. The research done up until the P2 ended up being only a very small part of the information I needed to design with bricks the way I did in the end.

The relationship between the theme of the graduation lab and the subject/case study chosen

The studio Architectural Engineering has the aim to make an architectural design that is based on a technical fascination. For me this technical fascination was the recycling of brick and achieving the old brick

characteristics with new technology. Translating this fascination into a case study proved to be quite difficult for me however.

What I realized looking back at my studies is that we were always handed the program requirements and the design location and now during my graduation I, for the first time, had to come up with these. Besides the fact that this process was new to me, the technical fascination I chose also gave little rise to a specific general design question. If, for example, you choose purification of water as your technical fascination then you will probably end up designing a building that uses a lot of water (swimming pool, sauna complex etc...) so that you can showcase your fascination. For me brick as a material didn't give that clarity to what I should be designing with it. Looking back I should have kept a closer eye on this relation between problem and solution. But in some way this problem is part of the Architectural Engineering studio, you start with a 'solution' (your technical fascination) and then find a 'problem' to fix.

Looking back this process of formulation your own assignment has probably been the most valuable. It is a skill that is becoming more and more important for architects, they have to look at their surroundings and come up with interventions/proposals that can then lead to new assignments. The time that you just waited for a client to come to you is a thing of the past.

The relationship between the methodical line of approach of the graduation lab and the method chosen

Having struggled with the formulating of my case study (of which the final location and program wasn't found until a few weeks before my original P3) also meant that my research was quite general. When the case study became more clear and I decided to go with the robotic arm as my guiding technology for the architectural design I still had to do a lot of research on this specific technology because in my initial research it was only mentioned as an option without looking into all the do's and don'ts of the technique.

A more general research isn't necessarily a bad thing but looking back I think it could have really helped me in formulating my case study if earlier on I would have chosen a more specific technique. That way I could have made an overview of the possibilities of the technique and from that work towards a case study that could showcase the opportunities of the technique.

In hindsight I think I bit off more than I could chew. Having only your technical fascination to figure out and translate that into an architectural design can already be challenging enough for a graduation. The studio also shows this by offering a variety of contexts and programs so that you in a way don't have to think about those anymore. For example the design of the beach houses, the location and program for these designs is pretty much fixed from the start which really enables you to dive into the technique and the architecture to see what it can do within these boundaries. I, however, tried to come up with everything myself. I worked on:

- A specific technique (with its own demands)
- A specific material (with its own demands)
- Finding the right context
- Coming up with a strategy for the whole area
- Formulating a program
- Making a design

In the end there were so many unknowns that it became really hard to solve all these issues and bring them together in one design.

The relationship between the project and the wider social context

This graduation project deals with two problems. On the one hand there is the problem of the fragmentation of the Brettenzone that prevents it from working as the recreational buffer zone it was intended to be and on the other hand the problem of material scarcity. My solution links these two subjects by using recycled bricks to create multiple small objects/pavilions throughout the Brettenzone creating a recognizable structure that connects the Brettenzone.

This approach could really work, but it is also very location specific. Parts of the Brettenzone are already used as recreational area and there are a lot of potential users living directly around the area. On top of that there is already a good main infrastructure present, so all people need is a little extra convincing to go off the beaten track and discover the unique qualities of the Brettenzone.

The fact that the bricks are recycled didn't really influence the design, but that also has to do with one of the outcomes of my research; a lot of the character of old buildings is in the imperfect stones and whole bricks, with small imperfections due to their previous life, could be taken out of the waste stream. This meant that the way we design with bricks didn't have to change because we used recycled bricks. For future designs with bricks it would be good however to take into account the ways we can reuse the material. My research and design are based on more traditional ways of building with brick. More modern construction methods in which bricks are cast into concrete for example might be faster but are also a lot more difficult to recycle.

Summary/Conclusion

My graduation project became something really big when I decided to start from scratch on every front: technique, material, context, and program. Especially since deciding on my own context and program wasn't something I had done before during my studies. In the end however that decision of also figuring out the context and the program isn't a decision I regret. Like I mentioned before it is a skill that is more and more asked of architects and now I saw first-hand how difficult it can be.

What I do regret is that in my graduation plan I said I would work a lot with models and look for a way of working similar to the one in the BuckyLab (Msc 1 design course in which building mock-ups is part of the design process), but I never got to working like this. In coming up with my research subject and case study I forgot to constantly check what this would mean for the rest of the design process. Since I didn't have a robotic arm to experiment with it became more a theoretical than a practical process.

I am a practical person that likes to (learn by) work(ing) with its hands and develop the design by experimenting with mock-ups. Even though I already knew this, it was in my graduation plan that I wanted to work with mock-ups, I now also know I really need it to work on a longer project such as this graduation project. This is something I should really take into account when looking for a job after my graduation.