

Reflection

Explore Lab 33

Rohan Shenoy 5238781

Mentors

Roel van de Pas (Architecture)

Hubert van der Meel (Building Technology)

Elise van Dooren (Research)

Tutor

Sabina Tanovic

Delft University of Technology Faculty of Architecture and the Built Environment

Department of Architecture MSc. Architecture, Urbanism and Building Sciences

The relationships between research and design.

The graduation research project is the continuation of a personal quest of mine which started with the History Thesis paper where I explored the relationship between learning environments and *flow*. *Flow* - a theory in positive psychology by the Hungarian American psychologist Mihaly Csikszentmihalyi – is a state of mind where an activity becomes so enjoyable that people do it for the sheer sake of doing it no matter the cost. Doing activities in such a state enhances knowledge acquisition and creativity in individuals due to its hyper-focused nature. For my graduation studio, I conducted a research project exploring the relationship between *flow* and the choice of sketching tool on an architect's ability to ideate. As my research project did not directly lead to any conclusions that I could directly apply to my design, I simultaneously explored *flow* through neuroscience and educational/workspace settings. In doing so, I was able to develop a clear methodology of utilizing perceptual concept sketching – where I made use of the value and the oblique perspective - to emphasize the cognitive-emotional dimension of architecture in the design process. Thus, I was able to take value from the conclusions of my research project and the science backed evidence from my secondary research to inform my design decisions and shift away from a “designerly ways of knowing” mindset.

the relationship between your graduation (project) topic, the studio topic (if applicable), your master track (A, U, BT, LA, MBE), and your master programme (MSc AUBS).

My graduation project, A Living Lab for *Flow*, is positioned under the chair of the Explore Lab Design Studio. My project was conducted under the supervision of ir. Roel van de Pas (General Coordinator Explore Lab), ir. Hubert van der Meel (Coordinator Building Technology Explore Lab) and ir. Elise van Dooren (Research Coordinator Explore Lab). I also had external supervision from my History Thesis tutor, Dr. ir. Sabina Tanović and consultations with neuroarchitecture experts such as Itai Palti, Juan Luis Higuera-Trujillo, and Karina Lozano. Within the chair of the Explore Lab Studio, my project challenges the design mindset of “designerly ways of knowing” and seeks to highlight the importance of designing with tangible observation rather than abstract speculation. Moreover, it also identifies the emergence of the discipline of neuroscience within architecture as a movement that has the potential to measure the impact of the built environment on subjective indices such as well-being. By utilizing neuro-architectural design insights and techniques, we can bring back the bodily experience in architecture and begin to design with the ‘mind in mind’.

Elaboration on research method and approach chosen by the student in relation to the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work.

The research approach that I used for the project falls in line with the studio's method of inquiry. Explore Lab is a thesis laboratory to explore topics that cannot be explored in a 'regular' thesis studio and rightly so, I challenged myself to take an approach that challenged the traditional academic research and design process that I was accustomed to. I became an explorer and undertook an expedition to discover the topic of *flow* from a standpoint of the individual to the multiple, from subjective to objective, from quantitative to qualitative and from causal to sequential. From the use of a daily diary to track my personal *flow* experience, to conducting interviews with my fellow students and peers, to using existing scientific studies, to experimental sketching methods, to conducting surveys, to conducting a sketching workshop and through the constant re-calibration of my way of living, I sought to become my fascination and embody *flow* itself. Embodying *flow* became the main driver for me in the pursuit of the project. The drawback to this was that becoming an expert on flow made it quite difficult for me to pin down the project in one design as the wealth of knowledge I had was too rich to make a concrete decision. Additionally, hyper-focusing on a state of *flow* - which normally came easy to me - suddenly became very difficult to attain. I was in a state of transcendence and had reached the point of *metaflow* towards the end of the year. This was one of the principal reasons as to why I decided to take an extension. In doing so, the summer break also gave me the opportunity to see my family for the first time after three years as a result of the pandemic. I believe that seeing my family again cleared some of that blockage and allowed me to come back to Delft more motivated than ever. As such, I was to formulate a design approach that I was finally satisfied with. I found the design approach of perceptual sketching and rough model making with the use of paper to be greatly beneficial to my design process as I was finally able to address the cognitive-emotional dimension of my design decisions. It also allowed me to unlock my creative potential as I did not have any structural constraints to hold me back. As a result of this, I was also able to explain the design of my building to my mentors and tutor with ease as it focussed on the narrative and the sensual side of the design. Therefore, I find the formulated design approach to be quite relevant in the both the professional and academic sphere.

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

The project stems from a quest to bring back what can be considered as a speculation on what an office or educational building would like if it was designed to meet the needs of its neuro-diverse users. Having an evidence-based design approach, acknowledges the giant leaps that neuroscience has taken and shows what architecture as a discipline has been missing out on. The results of the project, both research and design, address the brain and how our context plays a crucial role on its plasticity. For the final month, between the P4 and P5, I would like to develop the project visuals and technical drawings using a mixed representation of CAD line drawings and my perceptual sketching style. If time permits me, I would also like to develop the project in the style of an editorial publication so that it does not end up as a project that is sitting somewhere in the cloud online but as a physical object/digital object that people can take inspiration from. Finally, my ambition is to also make a dynamic presentation using interactive elements and short animations that will keep the viewers and the jury engaged throughout the defence of my title. After the P5, I plan on continuing with design approach, which I serendipitously stumbled upon, in my practice as an architect and I also plan on continuing my research with *flow* as I know that my personal development is one of the keen passions of my life.

Discuss the ethical issues and dilemmas you may have encountered in (i) doing the research, (ii, if applicable) elaborating the design and (iii) potential applications of the results in practice.

One of the biggest ethical issues with the research that I conducted was the privacy of the participants who took part in the workshop. I was aware of this issue from the very moment that I started conducting the workshops, but I made sure to have plenty of conversations with my tutors on the procedure that I needed to follow to make sure that their privacy was respected. In the elaboration of my research paper, I made sure to use pseudo-names for the participants so that no one else, apart from my research mentor and I, were aware of who they were. I also felt like I was crossing a boundary during my in-depth analysis of their audio interviews, even though I had their permission to analyse the data that I had collected from them, since I became increasingly aware of each of their speech mannerisms, and it almost felt like I was intruding upon their privacy. In the design project itself, designing a neuro-architecture centre means designing for data collection and that is again relating to the ethical dilemma of data privacy. This has been a topic of discussion between me and my tutors as well and through the discussion we also addressed the benefits of data collection for this specific project. The results of the data collected from neuro-architecture labs are being used for ethical purposes as the aim of neuro-architecture is to provide evidence on the impact of spatial settings on the brain which can be used by architects to better inform their design decisions. This means that the personnel within the organization do need to factor in the ethical considerations in the development of a research framework. They will have to be stringent about who has access to the data and make sure that it is only being used for the purposes that have been stipulated.