

Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information		
Name	Femke Lokhorst	
Student number	4284917	

Studio		
Name / Theme	Explorelab	
Main mentor	Suzana Milinovic	Chair of Urban Design/Theory & Methods, OPVIS Architecture
Second mentor	Jan van de Voort	Building Technology
Argumentation of choice of the studio	Throughout my studies at Architecture, I have devoted my projects to design for a better balance between human impact and the rest of the natural world. My parents being both biologists, I am truly passionate about nature and have learnt a great deal about in what ways it can thrive. As David Attenborough said, "for a species to thrive, the species around it need to also thrive." What I have always had trouble with understanding, is how cities have become so 'unnaturally' organized, with boxes for human activities and boxes containing some resemblance of nature, perfected in our own ways. This way, the city desperately needs maintenance to stay in the same orderly way, while nature is dynamic and changing. I think adapting how our rational design process relates to dynamic processes of nature might become a huge step forward into recreating balance with the natural world, so that future generations can enjoy the beauty of life around us for longer and with greater wellbeing. As I aim to develop my own way of research and design to attempt this, Explorelab was for me a logical choice, as it gives me the freedom to spend my time doing whatever I deem most necessary in achieving these goals.	

Graduation project	
Title of the graduation project	A\Wakening - An attempt to awaken the process of creating a living environment for ourselves in a way that allows for other species, that we need to also thrive, to coexist with us.
Goal	
Location:	Essenburgpark
The posed problem,	Looking into design with or for nature, in most current of though existing in architecture I notice three shortcomings if we would aim to (re)create balance. Firstly: there is always a distinction made between the realm of the human and the realm of nature. Claiming

	<p>we are not nature will only bring us further away from the solution. I propose a new divide between the rational mind (of an architect) and the organic, dynamic way in which life (societies and ecologies) intrinsically is. Secondly, in all design trends see an attempt to understand nature as something that can be of benefit to ourselves. However, we are beings of altruistic nature and being of service to others can truly give us purpose and happiness. It only means we would need to find a way to include nature into our moral community. To really come to care for it. This brings me to the third shortcoming. Speaking of nature or ecology in a generalist way makes it almost impossible for humans to really give it value. When the trouble we face is about something local, something containing entities with faces and personalities (or leaves and branches), it suddenly becomes easier to come to care. I don't think architects should design buildings using nature or providing nature, I think architects should design by guiding processes of nature: people, plants and animals and all those need to thrive.</p>
research questions and	<p>Through what process can I understand a place of nature that is alive and dynamic well enough that I can come up with a balanced design for it, which acknowledges a synergetic cohabitation between people, plants and animals?</p>
design assignment in which these result.	<p>The design will be about making informed decisions on how to perform change to a place of wilderness in a way that it can be also of use for humans. To re-introduce ourselves in a way into a true dynamic ecosystem of life-forms. Constantly asking myself which values I take away from the place through intervening, if and how I could re-introduce those and how severe the consequences would be if I wouldn't. This process is a narrative of conscious design that needs a protagonist. In my case I have decided to design a public 'outdoor' school. This archetype is very common in the Scandinavian countries and exists in the Netherlands as a type of Steiner school. As primary school kids carry curiosity and open minds, it is still possible to influence what makes it into their moral community. Also, we spend more time indoors then we need to. Children don't need the screen time adults do at their workplace nowadays, so this makes them easier subjects to adapt to the concept.</p>
<p>[This should be formulated in such a way that the graduation project can answer these questions. The definition of the problem has to be significant to a clearly defined area of research and design.]</p>	
Process	
Method description	
<p>Preliminary research: The first part of my research was a literature- and case study to investigate the concepts such as nature inclusive design and human ecology and to discover in what ways other designers, that ask themselves similar questions, learn about and implement non-human organisms into their designs. This was necessary to position myself and come up with a suiting strategy for the second and third part of my method.</p>	

Field Research: Inspired by several sources (see references), I came up with the strategy to visit Essenburgpark every day. To write, draw, film, photograph, record sounds and to do inventories of inhabitants. To bring life to this place from within. I knew I needed to stay aware I am an architect and not a biologist, which is why I will connect all my observations to mapping. On the one hand I will be creating a huge 1:500 map of the entire area that will, over time, become more and more detailed as I collect more data from the site. To collect this data for the main map, I work with 1:200 fold-out maps per section of the park, to take with me. In these maps I can draw the locations of my observations immediately in the right spot and work on an accurate placement of paths, plants and waterbodies. On the other hand, I will be creating more zoomed out 1:2500 maps, to be able to tell stories of my discoveries through mapping. Furthermore, I do an inventory of inhabitants like architects would do when they design for several target groups, only my inventory will contain plants, animals and humans. To do the inventory of plants I made an herbarium that is connected to my map through a system of numbering. Each herbarium page will have a list of the inhabitants needs and what it can provide. A logbook will go along with these maps, describing the journey of visiting a place every day. While performing this, it is important to stay aware that nothing is static. Everything is a process. Therefore, I organized my data of the area into activities. In native American language, there are only verbs and no nouns. So 'water' is referred to as 'flowing'. To them water is an activity. In my maps (that are in themselves static) I try to be as clear as possible about the degree of permanence of everything that I draw/photograph/write about. While some things are very momentarily (appearance and disappearance of mushrooms), some can stay the same for 100 years (large Poplar trees). In ecology this also connects to the concept of the succession rate. Not all sprouts of a tree become a new tree.

Design process: What I have mainly learnt from the field research is that value doesn't exist by itself. It is an activity that needs to be carried out by an entity. An oak tree doesn't have value until I have an opinion about it or it becomes of use to me somehow. In the same way it can be of value to butterflies (laying eggs in the bark), squirrels or the fungi in the ground. To be conscious and design for the dynamic you need to be as aware as possible about these realities. I want to pursue this philosophy through framing. The first step in design would be to prioritize some of these entities who give value above others. What if insects would be my main target group? What would my building look like? What would be consequences? This way I can try out different target groups and decide what is sensible.

[A description of the methods and techniques of research and design, which are going to be utilized.]

Literature and general practical preference

[The literature (theories or research data) and general practical experience/precedent you intend to consult.]

Philosophy

- *A Life on Our Planet*. Directed by Alastair Fothergill, Jonathan Hughes, performance by David Attenborough. Netflix, 2020.
- Bregman, Rutger. *De Meeste Mensen Deugen*. De Correspondent, 2020.
- Harari, Yuval Noah. *Sapiens*. Sapiens Press, 1983.
- Mallgrave, Harry F. *From Object to Experience: The New Culture of Architectural Design*, 2018.

On ethics / value and sustainability

- Singer, Peter. *The Expanding Circle*. Princeton Univ. Press, 2011.
- Zylinksa, Joanna. *Minimal ethics for the anthropocene*. Ann Arbor: Open Humanities Press. 2014.
- Barad, Karen Michelle. *Meeting The Universe Halfway*. Duke University Press, 2007.
- Massumi, Brian. *99 Theses On The Revaluation Of Value: A Postcapitalist Manifesto*. University Of Minnesota Press, 2018.
- Lokhorst, Femke. *How to transition into a 'fair trade' architectural culture*. TU Delft, 2020. (AR2AT031)

On design with/for nature

- Pawlyn, Michael. *Biomimicry In Architecture*, 2Nd Edition. RIBA Publishing, 2019.
- Browning, W.D., Ryan, C.O., Clancy, J.O. *14 Patterns of Biophilic Design*. New York: Terrapin Bright Green, LLC, 2014.
- Steiner, Dieter, and Markus Nauser. *Human Ecology: Fragments Of Anti-Fragmentary Views Of The World*. Routledge, 1993.
- van Stiphout, Maaik. *First Guide To Nature Inclusive Design*. Nextcity, 2019.

Methodology of field research

- Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I., & Shlomo, A. *A pattern language: Towns, buildings, construction*, 1977.
- *My Octopus Teacher*. Directed by Pippa Ehrlich, James Reed, performance by Craig Foster. Netflix, 2020.

Visualizing data

- Johnson, Bayard, and Russell Means. *If You've Forgotten The Names Of Clouds, You've Lost Your Way: An Introduction To American Indian Thought And Philosophy*. Createspace Independent Publishing Platform, 2013.
- Borges, Jorge Luis. *Over De Ijzeren Gestrengheid Van De Wetenschap*. 1970.
- Atelier Hoko. *Habit@At*. Math Paper Press, 2014.

Relevance

- Meadows, Donella H. *The Limits To Growth*. Universe Books, 1972.
- Haraway, Donna Jeanne. *Staying With The Trouble*. Duke University Press, 2016
- Hardin, Garrett. "The Tragedy of the Commons." *Science*, vol. 162, no. 3859, 1968, pp. 1243–1248.
- JSOR, www.jstor.org/stable/1724745. Accessed 14 Apr. 2020.
- Ostrom, Elinor. *Governing The Commons*. 1st ed., Cambridge University Press, 2015.

- Haworth, Michael. *“Genius Is What Happens: Derrida and Kant on Genius, Rule-Following and the Event”*, The British Journal of Aesthetics, Volume 54, Issue 3, July 2014, Pages 323–337.

Practical preferences: Interviews with Bob Hendriks (Explorelab graduate, Loop-biotech CEO), Maaïke van Stiphout (Landscape Architect, Nextcity), Eric Wemmers (Essenburgpark initiator), Catherine Visser (DaF-Architecten, Landscape architect Essenburgpark).

Reflection

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

I see this graduation project as an ongoing pursuit of finding design methods that can help humanity reconnect with our natural surroundings. After writing my thesis on the human process of giving value, in search for what could instigate change towards a more sustainable culture, I concluded that it is too complicated to appoint a real instigator for change in our morality. To understand what we care about, we need to work from an individual's perspective. It is impossible to conclude what society cares for through looking at its behavior (money?), but I know what I care about and what those who I care about, care about and if I open myself up and be humble towards my environment, I can learn what the living entities in it care about. I therefore believe that I will find the answers to my questions by looking at something specific as opposed to a generalist view. This project is therefore a suited continuation of this train of thought. To apply concepts acquired in my thesis onto a real design case. Another studio I did that relates to my research is my MSC2 Global Housing project in Bangladesh. In this studio we tried to understand a culture that is very estranged to us in a complicated political, economic and environmental setting well enough to design for it. This initially seemed like an impossible task. Who are we to pretend we understand what's going on and what is needed? To be as objective as possible towards the issues described, we came up with a book of patterns. This book contained all types of behavior and activities we saw happening in the streets connected to the spatial conditions. That made it possible to see how certain design intervention could potentially shape the people's lives. My research now reminds me of this book of patterns in the way that the ecosystem of Essenburgpark initially also seemed too complicated to grasp. The entities that live in it have different cultures and behaviors that I had little awareness of. By describing patterns, I slowly unravel these 'foreign' ways of being inside the place. I therefore believe that this graduation project relates to my master track and master program, through the application of concepts acquired in courses I have taken throughout this track and that have slowly build up to the understanding and methodology I now put to use.

2. What is the relevance of your graduation work in the larger social, professional and scientific framework.

One could argue that it is clear enough how much needed a transition is towards a balanced relationship with our natural surroundings is and how all building from now on should happen in this sustainable fashion. However, the building industry has a huge accountability in the unsustainable extraction of resources and therefore of great influence concerning the issues of mass extinction, decrease of human wellbeing, climate disasters and ultimately our own survival. But why are we making so little progress in this industry? Why aren't we fully living this new revolutionary chapter and are we still scripted by many pages of the old?

There is very little control you can have over a system with (partially) decentralized, distributed governance such as the culture of capitalism. We can't server update a new ethic onto society. The best chance to influence such a system seems to apply leverage on its most critical points. If this were true, then an architect that is part of the transition should try and perform this leverage and find those critical points. Architecture answers to the desires of a society, but like any designed product, it can also show society a fulfilment of desires they never knew they had. It is important for the architect in the transition to understand that it is not about acquiring status as an acknowledged architect. As explained in Haworth's essay titled "genius is what happens" any transition can never be traced back to one instigator. It is always a motion of events and discoveries influencing each other. Like running a relay. It is not the finish line that matters, it is carrying that stick from one place to the next. It is important to acknowledge that our ethics do change, ethics is an activity, and we will either succeed or fail in trying to push for a change. For a sustainable transition, there is a need to dissolve the ego of architecture. Architects want to be ground-breaking, but it isn't their success that matters in a transition, it is about their attempt, each one exercising their potential, and what can be learned from this. That is how things evolve, from numerous failing attempts and a couple of successes. It is necessary that architects understand themselves as part of this process and appreciate fellow architects just as much for their contribution as their own. As for education: It is important that a seed for change is planted in the architect's mind as a basic architectural tool. We need to train architects to become capable of systemic change, so that architects can use the fact that they are a huge part of the problem to become a huge part of the solution, through staying with the trouble. This graduation work is an attempt to rethink our relationship with the natural surroundings, to find balance, to uncover and advocate for the preservation of values created by nature without our intervening and to reestablish a place in all this for ourselves. I see it as following of my train of thought into a possible design strategy that could serve as an inspiration and place for speculation on the ongoing debate of how to fix the culture of unsustainability.