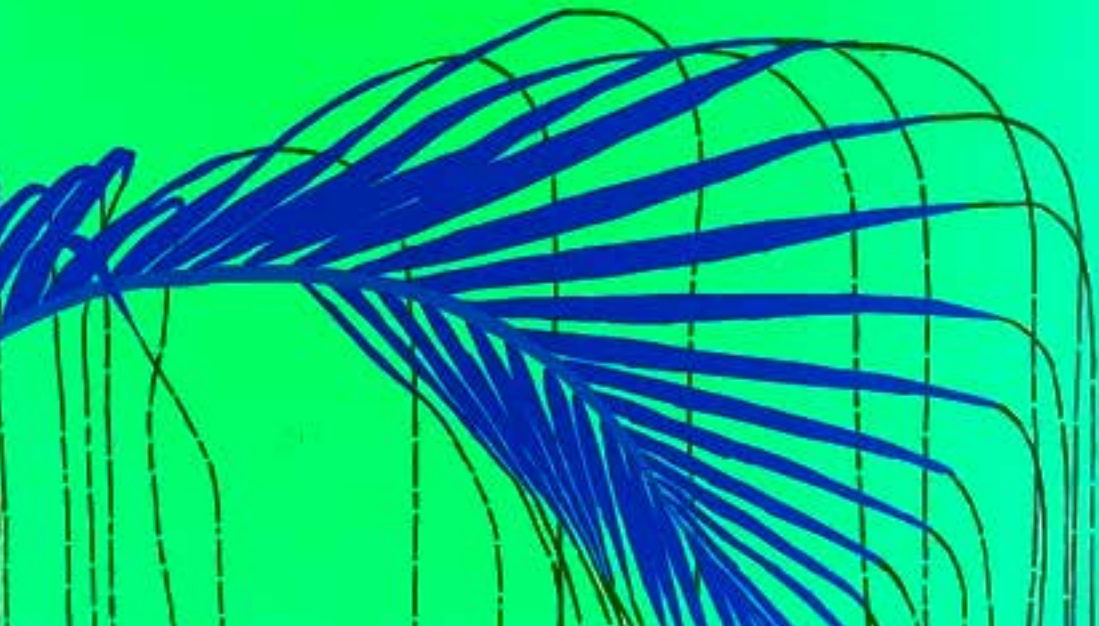


institute of
advanced
design
studies

2020-21

ADES

*Student
works*



CIRCLES of SPACES → ARCHITECTURES → FACILITIES & ...



how mushrooms die
how to
how to

SOURCE of mycelium forest

STONE FUNGUS



? years ago Italy

CHAMPIGNON



home cellar

families farmers workers

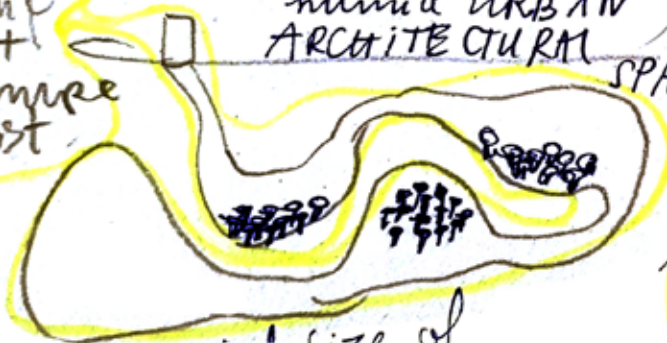


SOURCE of mycelium

agricultural + urban organic waste + manure compost

urban metabolism secondary use of dark and humid URBAN ARCHITECTURAL SPACES

Paris 17 century Budapest Hungary



varied size of enterprises



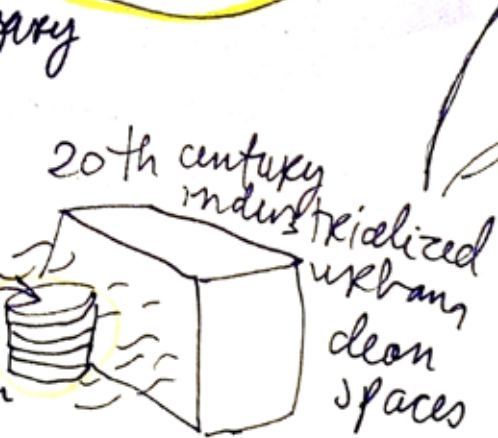
production
LOGISTICS → LABOUR → SKILLS SHARING
range? which mushrooms are ~~the~~ open for work?

knowledge is distributed?
all circles of metabolism
supported

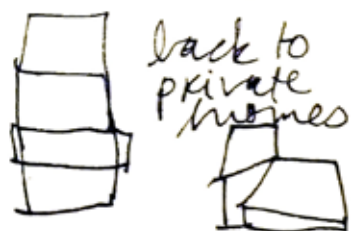
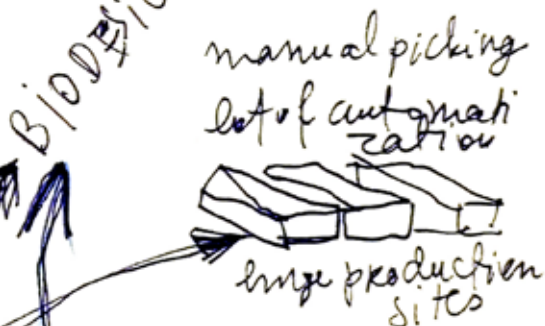
ZOOM: more typical/historical actual modes of working with mushrooms



place/people/knowledge communities
(communal green house)
SHITAKE



SCIENCE OF MYCOLOGY
diffused/selected in laboratories



AMATEUR
mycologists from mid 1950's + hobby mycologists

2020-21

ADES

*Student
works*



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advanced
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studies

ADES

The Institute of Advanced Design Studies (ADES) is an independent school of design offering study programmes in sustainability for postgraduate students and professionals. Our programmes are based on a transdisciplinary approach to sustainability and we accept students from all backgrounds. We recognise the complexity and multi-disciplinarity of the challenges we face today with climate change, environmental degradation, work-life and the changes in global society and that a new type of expertise is needed to tackle these challenges.

ADES is built to train a new type of designer, equipped with Design Thinking tools and design process tools, versed to work in transdisciplinary teams, while empowered to employ their own discipline, be it in design, chemistry or bioengineering, to solve the multi-disciplinary problems of today. ADES works with guest lecturers who are global thought leaders from a diversity of disciplines, from designers to biologists, engineers, and philosophers, to achieve holistic approaches appropriate to solving the problems of today.

“The Institute of Advanced Design Studies is where design, science, technology, socio-economic trends, human behaviour and ecology are seen as intersecting elements: each being essential to the future prospect of the other, and together forming a comprehensive whole on which to base the designs of our sustainable future.”

— Karina Vissonova, Founder



ADES 2020-21 Student works

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Budapest, Hungary 2021

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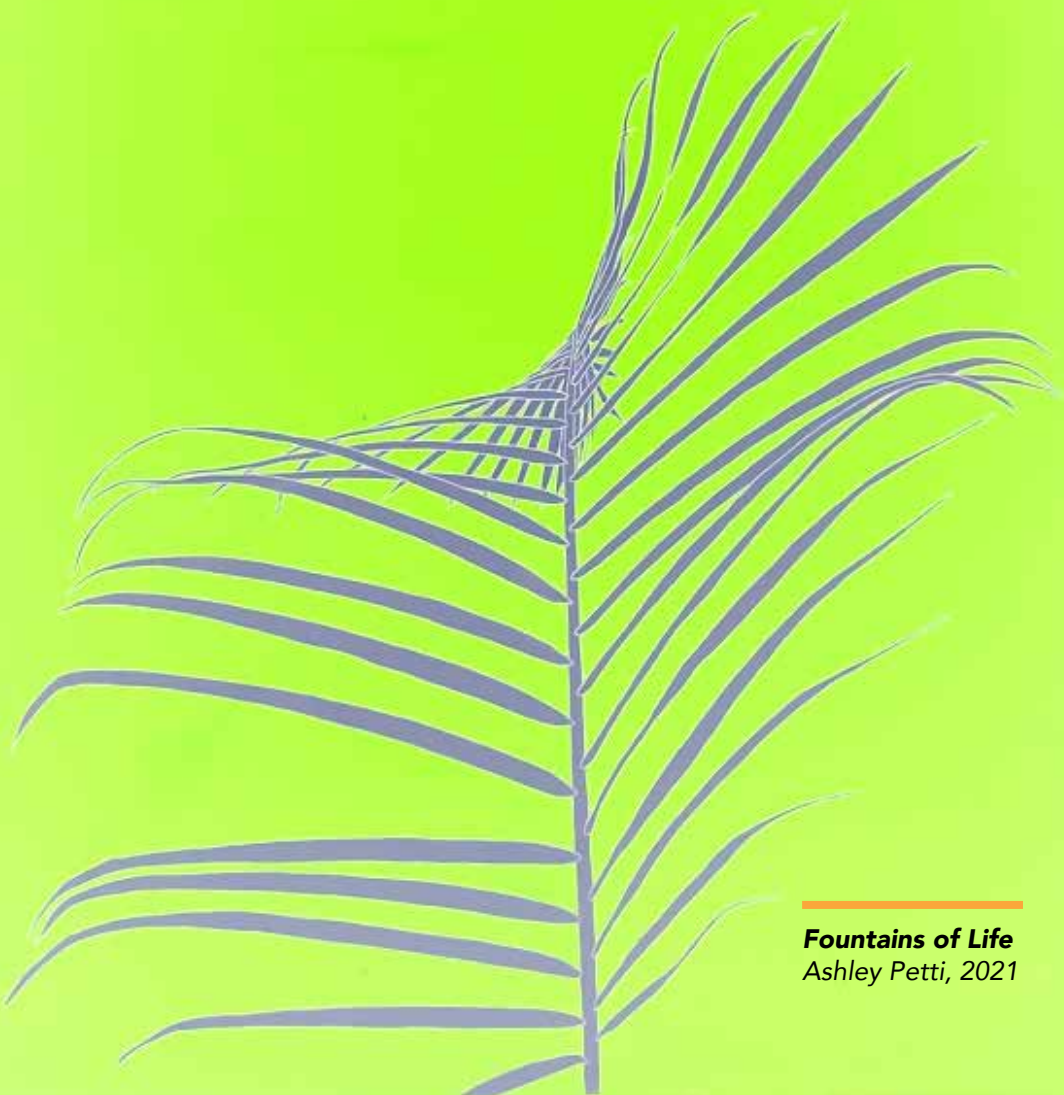
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Fountains of Life
Ashley Petti, 2021

Foreword

Education runs through the history of societies like a cotton thread connecting stories and facts of the past with now and with the immediate future. (Cotton, because it is a symbolic reference to material making and as synthetic threads were invented only decades ago.) From philosophy and religious scholars, through trade apprentices to institutionalised academics – the thinkers that built our social norms, – or at least pinned down the language around the social norms of the different times.

Education is as if a parallel route to the “real world”, a station of transit from one set of human capacities to another. For some of us, this IS the journey. Most, dip their feet as if it were a juice to fuel one to get ahead – ahead of self, ahead of fellow humans, ahead of time. Off we run into our greatness, gearing up our KPIs, getting a business card with a desired title. Education is supposed to be about the ability to imagine and to realise your path in this world. You employ yourself, your virtue and traditional knowledge of your community, you mix it with a given trade or science - and you externalise it all through the economic system which is here to support us all and our dreams. Or is it? Have we taken a wrong turn somewhere, because the world does not appear like that. Maybe it was never meant to, but it would be nice. I dream.

I do. ADES is born.

COVID happened and stirred up so much in education. I think education was heading for its entropy. Satisfied scholars, proud teachers, graduates with high rate of employment and industries bulging with young and capable experts. What can go wrong? It was going so well. But COVID was not a cause of the shift that followed closely in its footsteps. It was a meteor which would have hit us sooner or later, regardless of the conditions in which we find the education sector. The cause might be found in the decreasing ability of traditional education to train a workforce for the rapidly changing world. Industries for which one applied to be trained for, no longer exist in the same form when one graduates. New industries pop-up for which no education yet exists, because they were seeded in a hybrid of disciplines – always unique and tied to relationships and networks. Standards of training fail, because we changed. Students today are increasingly looking for self development - what can I do to contribute to this world? Plucking inspiration in disciplines alien to their training and succeeding in doing so. “Transdisciplinary” is on everyone’s tongues.

But COVID did happen, and what changed was our ability to rely on the personal touch, sharing ideas as we share the air we breathe. Co-generating knowledge shoulder to shoulder. Exchanging words to come with something new, something hybrid, something applicable across disciplines. That all was gone. Time and location dedicated to co-working on a new knowledge “what will design for sustainability look like”, gone. 10 years of researching and designing design education for sustainability and coming with a model that should change the face of design education, diverted. Zoom.

Did anyone expect that Zoom has a chance of replacing face-to-face, shoulder-to-shoulder interactions? No. I did not expect it. However, students joined from distant locations and time zones, while working in their design stu-

dios and home offices. Some even joined from the street. Professionals met to co-learn, to co-generate knowledge and to look into possible solutions for the burdens presented by climate change, overproduction and resource use, and waste (how much of it is there, really?). Students with master degrees and portfolios of a decade worth of projects behind their belts. Students with successful design brands. Not everyone was able to go through with the tight schedules, the level of preparedness for the kind of journey that ADES had planned for them. Those who did are here, in this publication.

This is your success, dear students! You are the pioneers in the new phase of what transdisciplinary education looks like. You have invested hours of work to obtain a mere sliver of knowledge of this so very rich and beautiful world. What you have gained is your mind being ready to gently and steadily change the path of humanity. Education can do that. That is what it is for, is it not?

Karina Vissonova, PhD, Design philosopher, Founding Director of the Institute of Advanced Design Studies, Budapest.

Student works: 'Thinking Design'

Module 1 (M1)

"Design" can be interpreted in multiple ways. Designing chairs, homes and graphics come to mind first for most people. Yet, acts of "designing" result in the material world we live in - built environments are designed, so are tools and toys, medical equipment and home electronics; from what we wear to the services we use - all, one way or another, are fruits of design labour. In this introductory module, we sought to gain an overview of "design".

In order for us to advance design to truly innovate for a radical sustainability, we must gain an understanding of the foundational conceptions of design. We must learn about the motivations which lead us to think and act, and build the world we have built during the past several decades of industrial development. We arrive to realising a need for a new kind of designer to address the complex multidisciplinary problems of today. This module is the first step towards going beyond making greener products and becoming a Thought Leader in sustainability by bridging science and technology with environment and people.

Results

Students explored the most frequently acknowledged literature in the fields of design, technology, and philosophy of design; got acquainted with studies of ethics and the latest shifts in the world of design, such as materials, service design, and green design movements.

We learnt about Design Thinking and Critical Design and to “think” design before “designing”, through practicing creative writing. In today’s world, most of our information is generated via visuals, such as memes, videos, and images. We experience the world more and more with our visual senses. Because of the speed of information, this experience is increasingly superficial. Students practiced creative writing techniques for an in-depth understanding of the thought processes engaged in design. Through these exercises, students learnt to employ cognitive skills over motor skills when approaching the process of designing. In this exercise, we paid particular attention to potential outcomes of design manifestations, such as byproducts, side effects, and externalities of design - often the factors left to be resolved by other disciplines than design.

Students became equipped with the basic thinking tools used by a contemporary designer. They collaborated in transdisciplinary teams, and enhanced the skillset they entered the module with, and learnt to apply it in a new industry, a new field of practice. Students were overall acquainted with design knowledge: how are things planned and made, what are the modus operandi approaches, methods, design theories. They were introduced to insights into Philosophy of Design and of Technology, studies of ethics and values in context of design and technology, and they learnt to apply the knowledge from these fields of studies in creating solutions.

M1

Moderators

Steinar Valade-Amland (DK) *Design Thinking workshop*
Author, Advisor, Head of Strategy & Business Development,
Three Point Zero

Adam LeBor (UK) *Thinking through writing workshop*
Author, Journalist, Writing coach and Editorial trainer

Cameron Tonkinwise (AUS) *Sustainable Design Histories,
Scales, Practices*
Professor of Design Studies, Director of the Design
Innovation Research Centre, University of Technology Sydney

Stephane Vial (FR) *Philosophy of design, Values and ethics
in design and technology*
Design Researcher, Professor at the School of Design,
University of Quebec

Karina Vissonova (HU) *Design for Sustainability*
Design Philosopher, ADES Founding director

Judit Boros (HU) *Systems Thinking and Mapping in Design*
Design Strategist & Researcher, ADES Course lead

Ecolitious

By Blanka Borbély, Sanni Hujanen, Ashley Petti, Viktoria Popova

We are happy to present the 'Ecolitious' project, which we associate with ideas connected to 'ecological, living, demolition, catalytic, holistic, delicious and appealing. Our output is a complex conceptual design for a hands-on knowledge-sharing hub addressing everyday sustainable living.

We envision this as a community- and ecology-focused living lab' that would serve as a local open platform. The idea is represented as a 'giga-map' (see the following pages): a word-cloud organised into Mental, Social, Economic, and Environmental categories, and broken down to scales S (the scale of the home, or the immediate Output), M (the surrounding natural context, also called the Outcome), and L (the scale of the neighbourhood, meaning the broader Impact of the design). Through creating this map, we aimed to embrace the wickedness and complexity of our project. We explored our motivation and obstacles, products, and by-products. A sectional illustration is also a part of our presentation, depicting how 'Ecolitious' might manifest itself spatially.

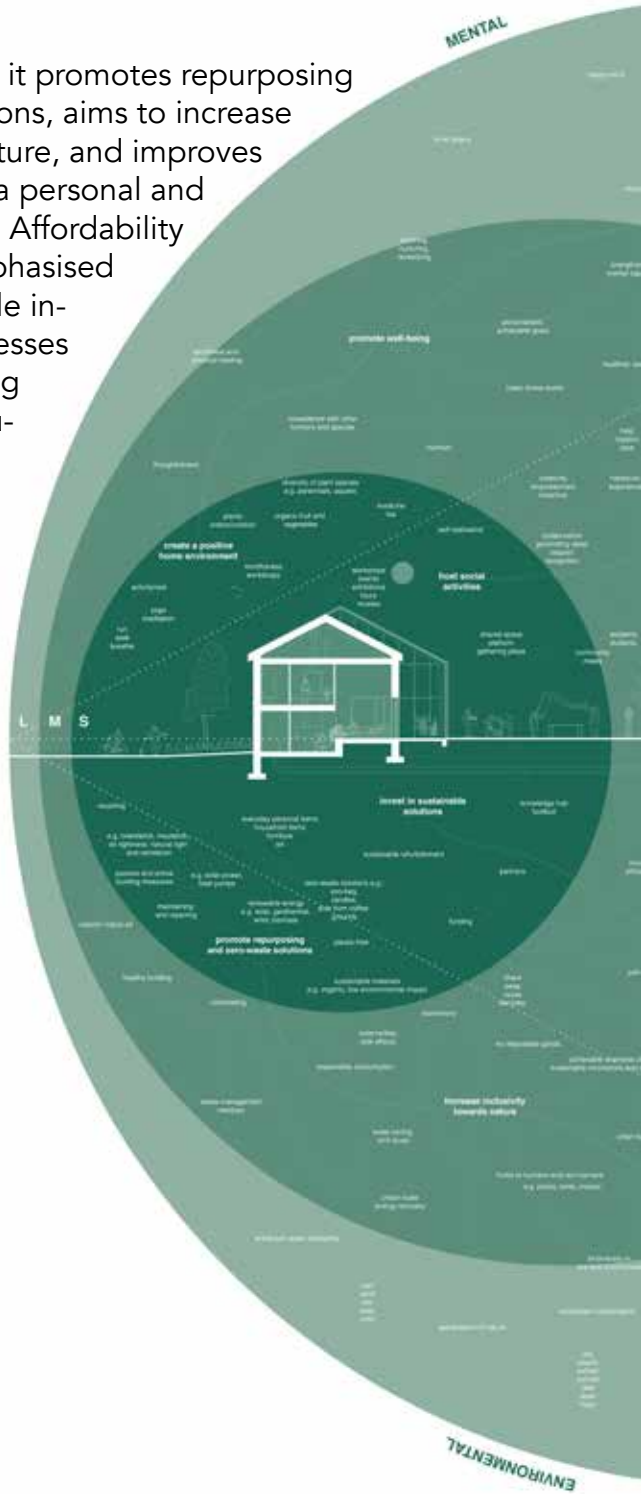
This project is a combination of our individual fascinations and touches upon interconnected problem systems. It confronts issues such as a lack of engagement with nature, shortage of affordable and easily attainable sustainable solutions, poor waste management and energy efficiency in homes, and the need to build mental and community resilience. In response, our mission was to map

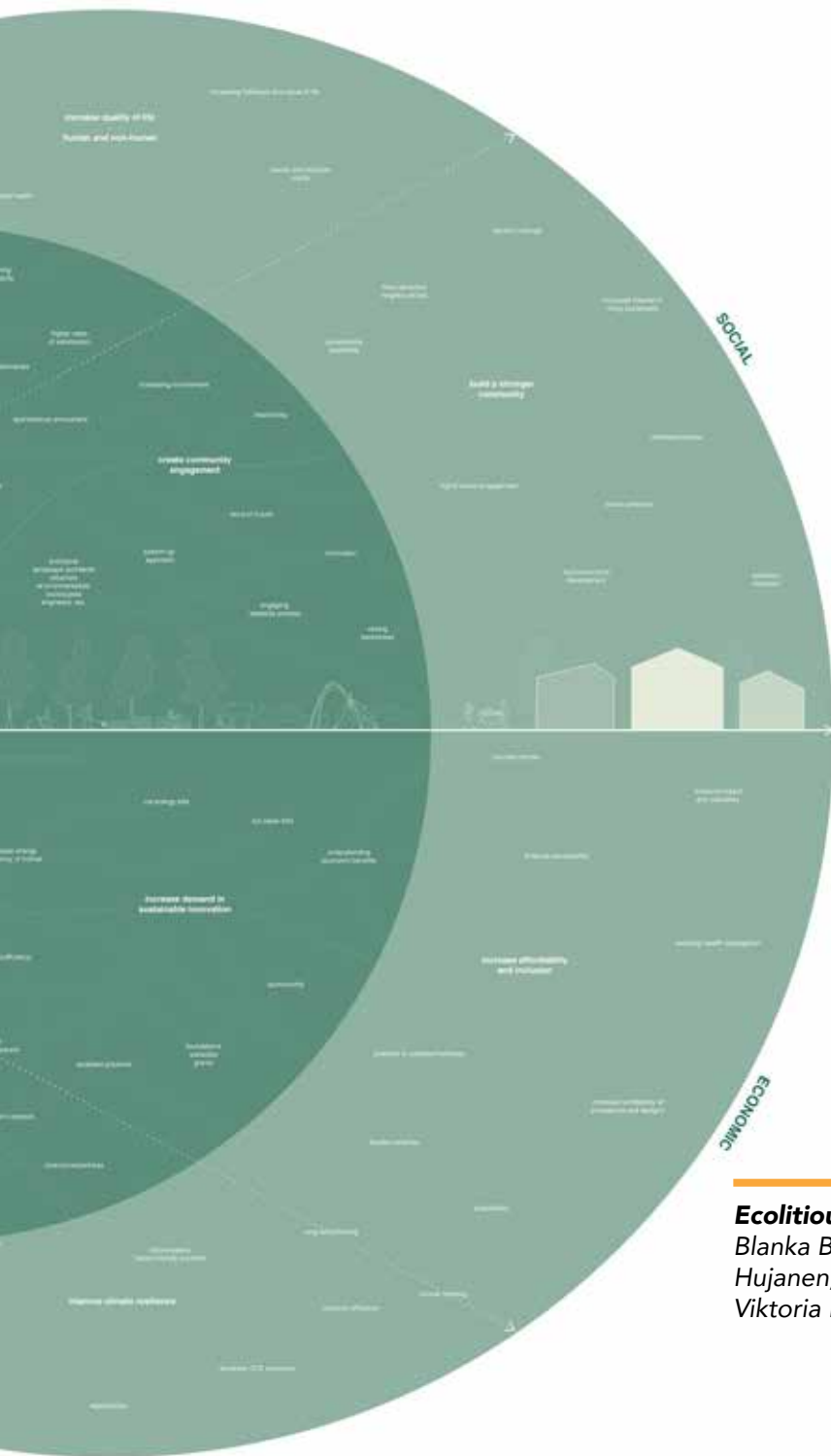
out an extensive network of ideas connected to sustainable living that could give space to social cooperation, education, inspiration, hands-on experimentation, and knowledge-sharing within everyday, residential neighbourhoods. To achieve this, we envision creating an open platform via the refurbishment of an average home within a suburban area into a net-zero-energy building. This space would host permanent installations as well as temporary exhibitions, workshops, lectures, and events. Typically, finding appropriate sustainable solutions and designs requires a lot of time, money, and effort, and the research process can become overwhelming. This is why bringing localised ideas directly to people would be more effective in evoking progress.

Both the refurbishment and the operation of this 'communal home-space' would be open to anyone interested in transitioning to a more sustainable lifestyle. Even though sustainability is not a priority for everyone, other outcomes such as saving money on energy bills and maximising resource efficiency could also provide incentives for engagement. The design aims to motivate interdisciplinary collaboration between neighbourhood residents, spatial and industrial designers, students, educators, artists, ecologists, sociologists, engineers, and decision-makers. The products, methods, and ideas vary in scale: from larger ones, such as installing solar panels, to small-scale learning opportunities like workshops on repurposing unused textiles. This house and its biodiverse garden would serve as an experimental lab for a wide range of social activities and for people to share their work. It can be packed with relatable, achievable solutions and inspiration, encouraging locals to engage and participate.

We invite you to explore our map's details. In relation to

environmental issues, it promotes repurposing and zero-waste solutions, aims to increase inclusivity towards nature, and improves climate resilience on a personal and neighbourhood level. Affordability and inclusion are emphasised concerning sustainable innovation. Social processes give space for building stronger local communities by encouraging community engagement and hosting a wide range of activities. Finally, it supports well-being by showcasing how home environments could be improved both for humans and their surrounding natural systems.





Ecolitious gigamap
 Blanka Borbély, Sanni Hujanen, Ashley Petti, Viktoria Popova, 2020

The green app

By Veronica Antonucci, Csenge Csík, Csilla Hódi

Our goal was to create a digital tool about sustainability in the fashion business, green events, and materials to reset a balance between our behaviour and the environment. We aim to raise awareness, connect people and businesses and provide people with information to be intelligent consumers. In the form of an app, the purpose is to support kick-off initiatives towards a radical change in values and raise awareness of imbalances and their ecosystem costs. Our vision for a long-term change is to see a vibrant and growing community, more conscious consumers, a shift in large companies' production culture, and optimizations of the supply chains.

The app serves as a platform for knowledge exchange, community building and aims to create a value shift. Inspired by biomimicry, we have taken inspiration from mushrooms and copied their way of doing things. Our concept is based on the fact that knowledge transfer can be analogous to the reproduction of mushrooms.

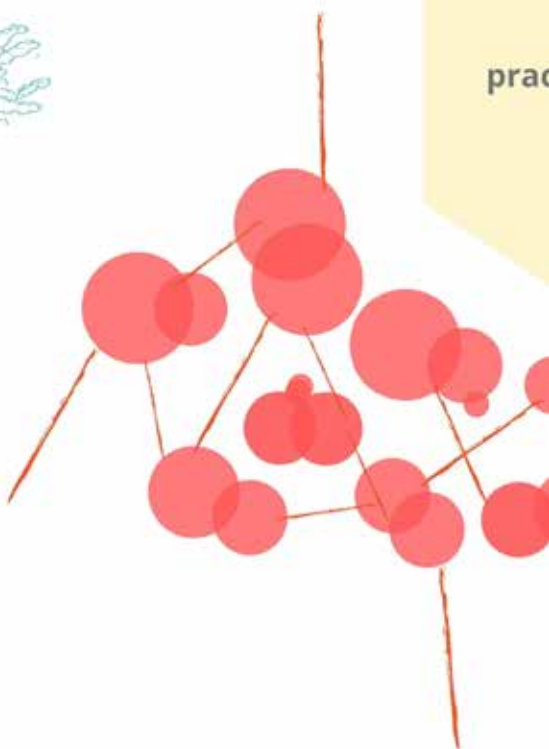
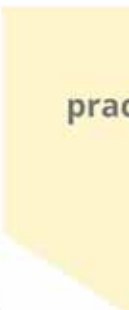
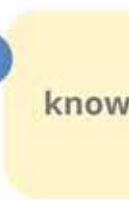
The reproduction of fungi takes place in the following way: millions of microscopic spores are formed on the underside of the cap of the fruiting body in the tubes or on the lamellae [1]. They serve the asexual reproduction and multiplication of the fungi. The wind spreads the fungal spores. Under favourable living conditions (humidity, warmth), they germinate and grow into fine fungal threads. Since the spore has only half a set of chromosomes, the mycelium forms also have only half a set of chromosomes. When two such fungal lines meet, they unite. They form a new, widely branched fungal plexus with a complete set of chromosomes.

Under optimal conditions, this fungal network includes new fruiting bodies above ground. The old fruiting body dies after the spores fail. The fungal network in the rootstock (soil, tree trunks, etc.) remains intact during the cold season and forms new fruiting bodies the following year.

As mushrooms' simple goal, the online platform wants to grow and spread the knowledge based on its content. Like the mushroom threads, we assume that people, manufacturers, designers, and event organizations can reunite and thrive for a better future. We want to help build such a self-sustaining global network and an exchange of resources. The goal is to signal toxicity in the system through structured information on sustainability. The app provides accessible information for conscious decision-making and a change in the systems of production, distribution, and consumption. We want to detect the nutrients for partners, collaborations, and clients by decomposing unsustainable values.

Like the mycelium qualities, the app decomposes non-functioning structures, redistributes resources between generations, creates accessible nutrients for other species. It infuses habitats with information-sharing membranes, spreads spores to reach distant places, and co-creates symbiotic relationships with other species.

Why is this app different? There are already various apps on the market that help consumers check products regarding their sustainability or ingredients, such as "Co-decheck", "Fair Fashion," "EventSustainability," "JouleBug," "Giki" or "GoodGuide." However, the app aims to provide knowledge and information and act as a space for community building. The aim is to raise awareness of imbalances and connect people, to get them active so that they motivate others to reflect on their behaviour. It is envisaged that with a paid service, sustainable material producers or manufacturers could be brought together with design creators and organisations to overcome the current barriers.



The green app

Veronica Antonucci, Csenge Csík, Csilla Hódi, 2020

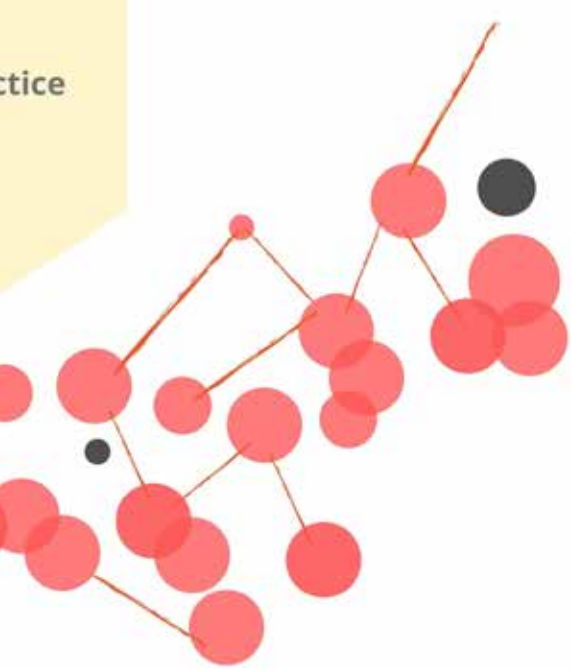


ledge

ctice



Users sharing knowledge spread like spores to reach distant places: schools, brands, artists, designers, manufactures, researchers, journalists, consumers.



New connections with mycelium properties enabling initiatives and changes: decomposing non-functional structures; redistribution of resources; creating nutrients; information infusion; co-creation.



A house down the street

By Blanka Borbély

Chances are, your current home is using way more energy than necessary. Our built environment is filled with buildings that are inefficient in terms of their energy performance. They are outdated, or this was never a consideration in their design, to begin with. This means that we end up spending more on energy bills than we're ought to, and unless we live in a place like New Zealand, where sustainability is at the forefront of social and governmental initiatives, most of our buildings are still powered by fossil fuels. This made me wonder what can be done to better inform people about sustainable interventions they could apply in their homes to increase the amount of nature-friendly solutions and decrease our reliance on coal, oil, and gas.

The key seems to lie in engagement and raising interest by providing an easily accessible, first-hand, interactive experience of passive and active sustainable measures and designs. Many people are overwhelmed by the thought of climate change, partially because they don't know what they can do to reduce its effects. Here I see the potential for change. I envisage a showroom and knowledge hub, only more integrated into the city's fabric: this would be an average house within a residential neighbourhood, redesigned to become zero-energy. It would be open to the public, presenting regional methods, technologies, and circular designs. It could exhibit the work of locally relevant manufacturers, designers, artisans, and

artists. Individuals, school groups, and professionals could interact with the designs by looking around in what appears to be just another house down the street. Allow me to walk you through my thought process.

I recently got a puppy. Our regular walks in the morning always start the same: we go up the street, take a few turns, and make our way toward the patch of forest still left reasonably unaffected by the developments of the surrounding suburban neighbourhoods. Since my dog stops once too often to sniff around or play with the occasional ill-fated bug that crosses his path, I'm often left staring at the now-familiar houses and gardens of the quiet residential area. I try and imagine what it would be like to live in them and how I could implement improvements to their design - an occupational hazard, I'm trained as an architect.

Let us imagine an ordinary home in a middle-class neighborhood on Budapest's fringes, where I grew up. Most of the houses you will find here are tailored for family life: stand-alone, two-storey structures with large gardens, each separated by tall fences. Overwhelmingly, they seem to be brick buildings with tiled pitched roofs. Heavy plaster and paint cover the facades in often unfavourable colours. A dirty-looking, pale yellow appears to be a popular choice. Now let's imagine that we can take a tour of one of these homes. As you approach the front door through the garden gates, you first have to cross the driveway and what seems to be a fairly well-maintained lawn. The car is still considered essential due to the city's existing infrastructure and despite the extensive public transportation system. The front garden is small, with the building close to the front of the site, almost completely concealing a much larger back garden. The front door seems heavy, and the windows have bright white plastic frames. The front facade seems guarded, punctured only by the minimum number of windows to let in some daylight, but still to obscure resi-

dents' everyday activities from the prying eyes of neighbours. It seems that the building was oriented to provide privacy, facing the street and opens instead to views on the opposite end. If orientation towards the sun was a consideration, it doesn't show.

We are safe to assume that the internal layout is quite generic: the ground floor has a living room, kitchen, dining area, and a toilet. Upstairs: two bedrooms, a study, and a bathroom. The living spaces and bedrooms look over the back garden. The furnishings are likely a mix of inherited antique furniture and self-assembled pieces from IKEA. In terms of machines and appliances, you will probably find everything that is needed for a comfortable life and more.

These are basic observations, but a closer look can tell us more than what first meets the eye. The external brick cavity walls have no insulation layer. The windows have double-glazing, but they are outdated and, by the looks of it, have been put in hastily, which leads to decreased airtightness. The largest glazings are facing East: that's where the back garden is. The pitched roof is a logical choice for this climate, as it has to withstand heavy rain and snowfalls. Budapest is in a temperate climatic zone, with an average annual temperature just above 10 °C. There are large differences between summer and winter, but the building requires heating for most of the year. Currently, there is a gas boiler in the basement, connected to the grid. Due to the lack of insulation, the unfortunate orientation of openings, and poor airtightness, much of the heat escapes from inside, resulting in hefty bills. And because summers can be quite hot, the building also requires some cooling during the summer months. It is managed as much as possible through natural ventilation, which is not always sufficient. Electricity expenses are even higher than they need to be. It is, again, the result of the lack of South-facing openings that could benefit from solar gains, as well as the use of conventional light bulbs and a wide

array of appliances, mostly with poor to average performances: a fridge, freezer, washing machine, dishwasher, kettle, toaster, etc. Electricity is also provided by the grid - another high annual cost.

I could go on, but in short, it would seem that an ordinary household like this generates a lot of wasted energy, which is costing their residents an unnecessarily large sum year-to-year. Most people in this neighbourhood live busy lives: in the mornings, they drop off their kids at school and then go to work to be able to upkeep their standard of living in these inefficient homes. As I walk these streets with my dog, I see that most use their recycling bins - some even compost, and there is the occasional solar panel on the rooftops. It seems that people try, even if in small ways, to be a bit more Earth-conscious, cut their bills, or at least to follow the instructions of the municipality and separate their plastic and paper waste. This makes me think that given the opportunity, many people living here would engage with sustainable initiatives that could help them lower their energy costs and improve their and their children's quality of life, given that they are presented with financially viable options. This gave me the idea to create an easily accessible, hands-on experience to show them solutions they could see themselves benefit from.

One possible approach to this issue could be an interactive showroom and knowledge hub (much like a Living Lab): one of the houses within the neighbourhood converted into a 'Passivhaus' and then made open to the public. My reasoning for using an everyday building within an existing residential neighbourhood is twofold. Firstly, it would be easily accessible by people in the city, schools, and universities, which can spark up interest in sustainable design solutions. As we move toward a future that has to become non-reliant on the fossil fuel industry, education will play a significant role in finding nature-friendly alternatives. Secondly, a showroom like this would also demon-

strate the viability and advantages of various solutions, all based on locality. A micro-scale intervention like this could present the mission of becoming more sustainable as something attainable, attractive, and less far-fetched than it might seem at first.

What would the same house that I described previously look like a showroom for sustainable design solutions? As you enter through the garden gate (now open during daytime), you might notice that the lawn seems less manicured and has wildflowers attracting pollinators. The driveway has a solar-powered charger for an electric car and a bicycle stand. The original plastering of the house has been replaced by brick cladding. Maybe you notice that the external walls seem a bit thicker due to the added insulation. During its installation, airtightness was also improved. The tour guide who welcomes you and a group of others also bring attention to the windows: they are triple glazed, argon-filled, some with heat-reflective coating. You wonder what difference that makes compared to the double glazed, air-filled windows you have at home, and ask your guide. She explains that its performance is at least two times better, and when you show interest, she shows you a more detailed description in the interactive mobile app of the building. It also has a contact form for the manufacturer and examples of alternatives.

Perhaps the most noticeable change from outside is the unheated conservatory that has been added to the Southside of the house, where a path leading to the back garden used to be. It acts as a thermal buffer zone between inside and out. An adiabatic collector connected to a hot water tank sits where the glasshouse meets the original roof. The conservatory roof has integrated solar cells, while the original roof displays larger PV panels (for electricity) and solar heat collectors (for warming up domestic water). You enter through the front door, and you see 1:1 scale section models of the external walls with different insulation

options. Each of them is labelled with a short description. The tour guide can also tell you about pricing and construction costs. You think about asking for an evaluation and cost calculation of your own home, so you send a request for this to one of the manufacturers through the mobile app. The models are set in front of a green wall with phase change materials behind them, which help with air purification and humidity regulation. You admire the plants as you are led into the greenhouse through a glass door. There is a seating area surrounded by different herbs and vegetables growing in pots. You also notice shades that can be used to prevent overheating. Turning around, you are led back inside and into the kitchen and dining area. The kitchen units are made of a dark, textured material containing hemp fibers, a waste material. All appliances have excellent energy ratings. There is a small aquaponic system for growing tomatoes. You notice that most furniture and smaller everyday items have labels as well - they are made by local designers, artists, and artisans who create their products using sustainable materials and methods. You wonder who decides what gets exhibited in this house: there is an interdisciplinary committee set up for it.

You have a coffee in the living room. As you head upstairs, they show you the small central core space where the mechanical ventilation system is installed. On the first floor, you notice the high quality of light in the bedrooms and study - they are provided by daylight tubes. The shower basin has a built-in heat exchanger so that hot water doesn't all go to waste. They later show you the ground-source heat pump in the basement, along with diagrams that explain its installation and operation. It seems to work very efficiently, especially in this climate. You end the tour in the back garden, where fruit and vegetables are grown organically with the help of volunteers who can then take produce home. There are children from a local school taking part in what seems to be a workshop for making

insect hotels. There is a greywater filtration system by the house's side: three open tanks filled with water and aquatic plants. The filtered water gets reused to water plants and flush toilets. There is a rainwater collection as well that is used for watering the plants in the garden. On your way out, you see that the Northside of the roof is covered with greenery, and the mobile app explains what the heat island effect is in cities and how something like this can help reduce it.

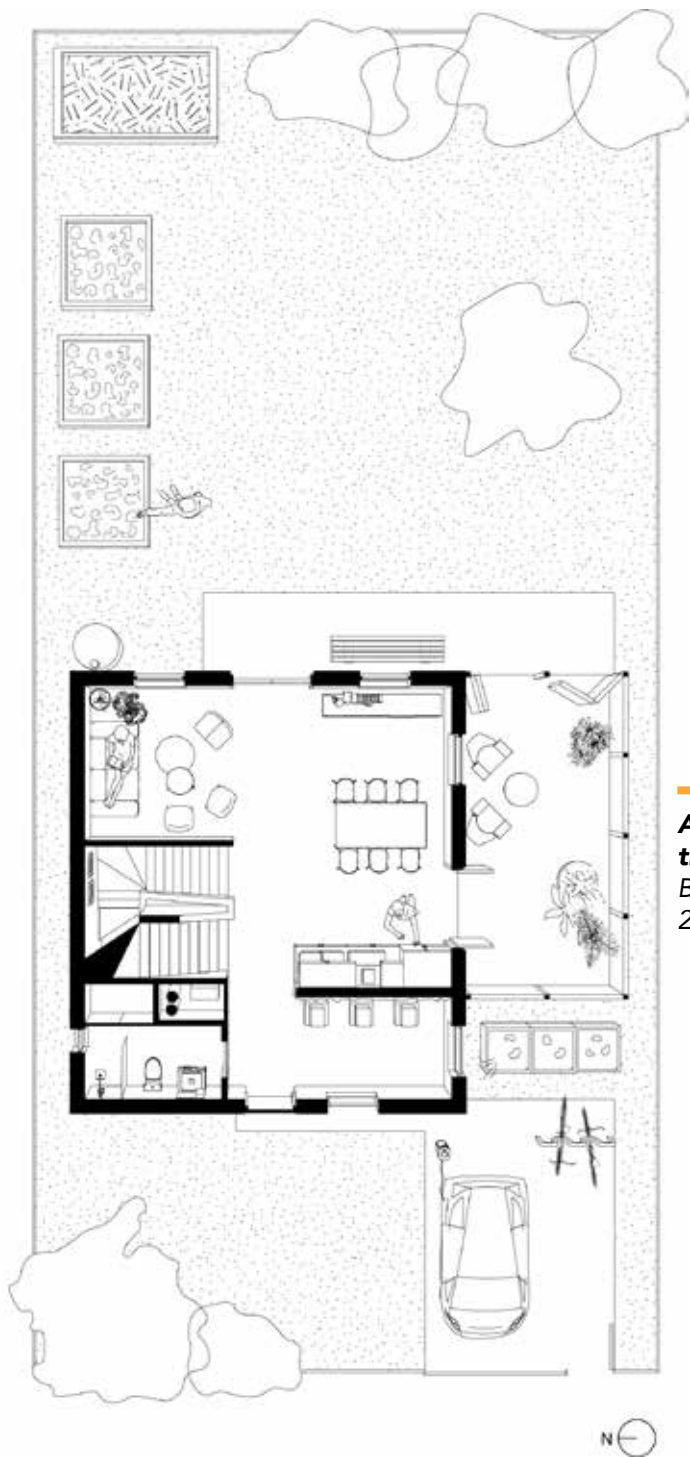
The viability of a setup like this relies on several things:

- It assumes that companies would be happy to sponsor it as part of their marketing strategy to increase their sales.
- That advertising and educational initiatives combined with a hands-on interactive experience and word of mouth will be convincing enough for people to start seriously engaging with the thought of implementing sustainable changes in their own homes.
- There is the question of whether private individuals can afford these changes: most of them, like heat pumps or solar panels, require a large initial investment.
- Therefore, EU and governmental subsidies would have to increase to achieve more significant social impact and to ensure that it is not only the well-off who can afford these designs and technologies. Therefore a combination of bottom-up approaches such as this one and some top-down initiatives would be optimal.

However, if all would go to plan, you might even return to the house in a few years. Perhaps because you hear about a temporary exhibition created by a local artist that is set up in the garden in honour of Earth Day, or because some of the designs and technologies have been updated. The collection has expanded since your last visit. And even if you find yourself in a different city by that time, it might just be the case that they have a house very similar to this one, only with the design adjusted to specific local circumstances.

**A house down
the street: before**
Blanka Borbély,
2020





**A house down
the street: after**
Blanka Borbély,
2020



How not to be greenwashed?

Four questions to ask when everything sounds too good

by Veronica Antonucci

In autumn this year, I was asked by a major fashion company whether I would produce accessories from clothes that could not be sold as part of an upcycling campaign. My first impulse was to decline this offer. I am a fashion designer, and I am successful with my brand because I process waste from the industry into jewellery and recycle my own waste. I also produce locally, and the waste comes from a perimeter of 100km away from my studio. Furthermore, I have been boycotting this brand for as long as I can remember because I have always wondered how a t-shirt may cost 4.90 EUR. How the hell do I throw my principles overboard and work with this company? What would my customers think? Am I risking a loss of image?

However, the system cannot be changed if there is no dialogue, and I was very curious about the company's plans. So I agreed to meet the marketing people of this company to find out more. In their well-styled showroom, we were informed about the project and the brand's ambitious goals to be sustainable by 2030. Words like vegan leather, conscious, sustainable fluttered towards me and lulled me. Yes, there was even a hint of sympathy. But wait a minute, was I just about to be greenwashed?

— *What is conscious?*

Terms like “sustainable” or “conscious” are not protected. It is always a question of interpretation. It may be that certain clothes are made of organic cotton or recycled polyester. Nevertheless, they are produced under the most adverse conditions, shipped worldwide, and packed in plastic. The positive impact on the ecosystem and the working conditions of the seamstresses will therefore be minimal. Remember that the word “conscious” often carries dirty secrets.

— *What is vegan leather?*

Faux leather or vegan leather is an alternative to animal leather and is supposed to reduce animal suffering. However, most vegan leather is made of plastic-based polyvinyl chloride (PVC) and polyurethane (PU). In particular, PVC poses the problem that toxic dioxins are produced during incineration (only 20% of discarded clothing is recycled and the rest is incinerated). Greenpeace describes PVC as the “*single most environmentally damaging type of plastic.*” We must also be aware that plastic does not degrade, so we create something that our planet will never absorb. So take a good look to see if there are alternatives made from pineapple leaves, cork, apple peels, other fruit waste, and recycled plastic.

— *More expensive equals better?*

Unfortunately no, during my training at the fashion school, we compared clothes from fast fashion brands and high fashion brands. We had to realise that the sewing quality sometimes only differed slightly. Likewise, high-fashion brands often use mixed fabrics that pollute our ecosystem. It is also a fact that some high fashion brands produce in the same factories as fast fashion brands.

— What exactly does organic cotton mean?

Organic cotton is grown without synthetic toxic pesticides, which is good for the farmers and the water, soil, and air. Sounds excellent, but natural pesticides are also harmful. Only 0.1% of the world's cotton production is produced in this way. 1 kg organic cotton needs 7000 liters of water (conventional cotton needs 29.000 liters of water) but produces 46% less CO₂ than traditional cotton. However, according to WWF, in the biggest cotton producer countries (India, US, Pakistan, China), 2.4% of the farmable land is already used for growing cotton. Opting for a less effective method such as organic cotton would require 25% more land. In concrete terms, this means deforestation. Is that sustainable? The cotton is also dyed, and the question is whether organic is in it where it says on the label, because it may well be that the T-shirt is made of organic cotton but not dyed with organic colour. I know it is difficult to make the right decision when buying clothes, and we just float like disoriented drops of water in an ocean of ignorance because we are not provided with honest information. The important thing is that you are smarter than fast fashion houses think. Because no, you don't let yourself be green-washed. As Kant said, "*Sapere Aude!*" Dare to be wise!

Fairy Circles

by Csilla Hódi

How to think mushrooms?

–

What if we would connect already existing spaces of mushroom knowledge*?

–

*knowledge that is often
scientifically decypherable,
commercially hidden and
generally stuck among solid
disciplinary borders*

–

What if we would create encounters for these knowledge practices in community contexts?

–

How would that take shape?

–

It could be a **nomadic mushroom lab** that creates open learning spaces in place-based community contexts, facilitating encounters with mushrooms and the embodied knowledge of working with mushrooms from different fields.



Mushrooms
Csilla Hódi, 2020

Fairy circles or fairy rings are naturally occurring circular formations of some mushrooms, generated by the primarily spherical growth of fungal tissues.

They reappear for several years around the same centre point - the oldest one is said to be 700 years old.

They can be read as signifiers of nutritious areas that allow the invisibly spreading mushroom roots to pop-up fruit-bodies of spore dissemination when the climatic conditions require the connection to distant places. Their image has been described by tales of more-than-human creatures all around the world and various iterations of the transformative power of these circular spaces existed.

Fairies dancing in a ring near a large mushroom and a hill with a doorway. 17th-century English chapbook



Fair-y circles [sic] is a growing, research-based learning network - inspired by mushrooms - in quest of how thinking with non-human creatures could transform human sensitivity. Its main medium is mushroom mycelium and it happens primarily through the interventions of a nomadic



mushroom laboratory in collaboration with local partners and their communities in Central and Eastern Europe.

While 1) it performs as a free school of mushroom knowledge that supports local and circular forms of food and medicine making / agroecological practices / ecological design technologies 2) it works with the sensitivity and imagination of communities transforming their 'mushroom blindness' and unsustainable relationships to the 'natural'.

Conditions for connection

As mushrooms embody a growing web of resources in relation to their companion species, the nomadic laboratory accumulates knowledge and tracks an open-access network.

It connects already existing practices and agents of engaging with living systems with an openness for cross-fertilization and arranges their knowledge in horizontality.

This connection accommodates qualities of different understandings of mushroom mycelium. The knowledge of mushrooms coming from natural science, farming practices, applied mycology, ethnomycology and place or activity-based oral histories.

The collaborating partners are working in different scopes: balancing practices of critical theory and pedagogy, cultural and community organization, ecofeminist and posthumanist artistic approaches.

The emerging network generates learning spaces that are the most relevant for each partner and their localities: for example in forms of civil mycologist learning groups, artist-led explorations of mycelium as material and metaphor, experimental mushroom growing space architecture, mycoremediation actions, encounters of mushroom thinking.

All finding a place in a live archive of contemporary ethnomycology.

The human knowledge of mushrooms on mushrooms

is intensely expanding at the moment in the fields of basic and applied sciences.

Parallel to this, self-taught practitioners form loose communities (locally and online internationally) where valuable knowledge is produced about applications of mushrooms and from where marketable solutions are capitalized to patented know-how.

A more complex approach is also present though for example in eco-critical art and theory that works for the renegotiation of what mushrooms can mean for humans and possibly imagine the liberation of these entities from being mere resources in service for human wellbeing.

Knowledge related to fungi and the access to it is a yet not fully colonized field, it seems, there's still a chance for struggles of diversity and ownership on practices, strains and technologies.

Fair-y circles approaches

the process of learning and unlearning 'nature' with the capacities of artistic research and questions the production places and usages of 'knowledge'.

The project seeks hybrid forms of knowledge production: communicating scientific knowledge embedded in local practices, structured in a form of artistic research.

As a radical pedagogy project, it empowers communities to restructure their relations to places, nature and naturalized resources. The interventions ensure quality encounters of professionals and local communities challenging the tendencies of monopolization of resources, separation of theoretical and practical knowledge, the devaluation of embodied and experiential learning ways.

In a greater perspective

Fair-y Circles works for the self-organization of civil mycologists to invigorate the movements of food sovereignty, environmental restoration and community resilience development. Given its collective facility, it functions as a socio-economic experiment to enhance the imagination of systems (food, knowledge, natural resources) based on solidarity economy and practically offering a space for community-based art and agroecological actions. The organized interventions are aiming at offering practical knowledge of working with mushrooms (for local food and medicine production, habitat restoration or eco-architecture) and mentoring for community and project development. With the attempt to confuse urban and rural, it incorporates qualities of the rural into the urban and tries to support the emancipation of the rural colonized by urban-centric value-production.

'RE-bag'

A simple DIY solution that will help you revisit your waste

by Viktoria Popova

Don't have the materials? Ask your grandma! Go to your second-hand store, call your local brand – maybe they have some leftover materials you could offer a new life to? Don't have the skills? Get some inspiration!

I made ditching plastic bags my mission back in 2008 when I moved to Germany. Coming from the former Soviet Union, I was inspired by the students in my dorm, who used an eco-bag instead of a plastic one. Each of them had what you call a 'tote bag': a funky reusable shopping bag. When I finally got my own bag, which proudly carried my university's name, I was so excited to discover I didn't have to buy plastic bags anymore when I went shopping. There was something very satisfying about using my new eco bag.

Soon there was time to go home for a semester break. In Russia, there is a joke that there is a bag full of bags inside in every Russian house. And it is true. Similar was my parents' house: close to the garbage bin, and there was this bag. Literally, every shop gives you as many as you need, and some fancier shops even employ people who pack your groceries in the plastic bags at the counter for free. It always felt very normal and was even considered a sign of wealth: everyone immediately knew you could afford to buy stuff.

My mom looked surprised when I gave her a nice looking tote bag picturing an old German town I went to visit during one of my study trips. First, when we went shopping together, she continued her usual routine: stuffing things into a plastic monster. The next time when I revisited her, I saw her using the tote bag I gave her. This time, I already brought more bags and gave them away to my friends as a present. They all were very excited and later reported that they felt more comfortable not using unnecessary plastic. Plastic bags are everywhere – outside our homes, on the side of the street, in the ocean. Plastic waste soon became a topic of my research. And the scope of the problem was much broader: it included plastic bottles, containers, straws, wrapping, and other harmful things for our Earth's environment. It dramatically affects wildlife, its habitat, and humans. A plastic bag's average time to degrade is at least 450 years, not to mention they never fully decompose. Starting as fossil fuels, they end up as deadly waste in landfills and the ocean. Fish eat thousands of tons of plastic a year, transferring it up the food chain so that it becomes our own dinner.

Despite the magnitude of the problem, I believe that every one of us can do something about it and inspire others.

Ecollaboration

A project for local farmers and for community building

by Csenge Csík

There are more and more reasons to map out how local farmers could be more present with their business in their areas. If locally produced goods are in costumers' demand, less product-transportation would be needed, leading to more sustainable food distribution as the selection would turn to seasonable products. Through this transformation, the general knowledge of agricultural goods in different areas would grow as the offer would always be related to seasons. Moreover, approaching the local farmers for their product can also help build a community and gather events when these farmers sell their ware and provide information about the production. These events could bring people closer as they can be part of the local supporters: first just buying from farmers in the area, but secondly, maybe their new knowledge can be helpful. Also, these events could be a good platform for networking for these farmers.

On the other hand, there are national and international corporations in the food market that have worked with other measurements: mass production and fulfilling the customers' demand to reach a higher profit. These companies have stable organizational systems to achieve their goals and not focusing on local opportunities. As these big firms dominate the food market, the local farmers have less platform and chances to spread their goods and

share their knowledge with possible customers to encourage them to change their food consumption habits and patterns.

With the opportunity of these community events, new cooperation between micro and mega businesses and healthier local communities could prove its importance in a more sustainable way of living. The locals could also feel active in this new process as they can support the farmers in the region and change the big grocery stores' selection through their new demand for (local) goods. At these events, the big firm could also participate in collaboration with the local producers. They can profit from these events as marketing opportunities and a networking option to get to know their small competitors in the area and map future possibilities for working together. They can also advertise these events and can participate in shaping the programme.

Such a collaboration between locals and big companies can lead to different distribution in production and still give space for the existing multinational companies and local farmers. Ideally, it would lead to a change in selecting the big groceries offer in different regions according to the local season and production. Moreover, new community gardens could build as a result of knowledge sharing about local fruits and vegetables and the support of the big companies – providing seed – and the local farmers – helping with supervision and providing a platform for selling.

This transformation of food distribution and consumption would be more feasible for the longer-term as transportation of goods leads into difficulties. This was seen in 2020 as spreading production worldwide became limited due to global events, and the cost of delivery is high when it comes to the footprint of human society.

Becoming One

by Ashley Petti

Growing up in a traditional family, I didn't think much about mindfulness and meditation practices. I assumed that meditation and mindfulness were exclusively for those with spiritual upbringings or who came from a wealthy background with arguably too much time on their hands. As I have done plenty of unlearning and relearning, I have realized that this is not the case. These ancient practices have a long, significant, and humble history originating from Buddhists in the Eastern World thousands of years ago, and they brought much enrichment to my life.

Mindfulness and meditation are some of the cheapest practices yet the richest attributes you can add to your routine. You can do it anywhere, at any time— all you need is yourself and your mind. Mindfulness is the ability to be aware of what is happening around you and within your mind at any given moment without letting your thoughts consume you. For many, the idea of actively listening to your mind sounds like a terrifying exercise to partake in. If this skill is practiced consistently, it will dramatically transform the experience of everyday life. Everyone is worthy and capable of achieving this euphoric state of mind known as mindfulness, and meditation is a wonderful place to begin to achieve it. Incorporating a mindfulness and meditation system into all workplaces and educational facilities would advance our collective societal functions, and this

short essay aims to explore this exercise of mind. The widespread availability of meditation and mindfulness practices would give people dedicated time to develop stronger relationships with their peers, coworkers, the natural world, and most importantly themselves.

Implementing and normalizing meditation breaks within the education system from a young age would be a giant step for current and future generations in finding inner peace- thus leading to a happier, more efficient, and understanding world. All it takes is a few intentional minutes to practice breathing and being present to immensely strengthen and regulate our emotions, productivity, efficiency, memory, and emotional intelligence. By recognizing and developing these vital skills from a young age, they will come naturally to us throughout our lives.

Such a scheme's implementation process would be the following: each grade will have an introductory class to introduce them to the history, methods, and benefits of mindfulness. Ranging from prekindergarten to middle school, students will be required to participate in a guided meditation for ten minutes before recess. It will allow them to unwind and reconnect before playtime, ideally leading to a more enjoyable recess with a higher sense of presence. Students will also have the option to extend their meditation for the duration of recess. Each building throughout all education levels will have a spacious room solely for mindfulness where students can go to meditate during recess or when needing a "meditation break" during class time. If the student is feeling overwhelmed or unfocused during class, they will be able to leave for up to 15 minutes to the dedicated meditation room. Instead of announcing their dismissal to the class, they would discreetly leave a standardized card on their desk, so the instructor is aware of where they are. Once the student has arrived at the meditation room, they will sign in with the yogi supervisor to monitor the students and document any concerning activ-

ities. Students will attend a class trip roughly every three months to deepen their connection with nature. They will visit local parks, nature reserves, and ecosystems to learn about the interconnection between the area's inhabitants. Seeing the interconnection between all living things is valuable in creating an understanding that everything alive has a larger purpose, no matter how big or small it is. It will help the youth recognize their importance within coexisting with nature by realizing how precious and complex the natural world is.

It is common to experience stress while at work, whether it is caused by face-paced tasks, complex decision making, aggravation from coworkers, or doing physical labor. All occupations can benefit from having meditation implemented in their day. Since there are endless types of jobs out there, this mindfulness implementation would vary based on the company's scale or institution. Management would be responsible for scheduling monthly workshops for their departments and staff to attend. Depending on the entity's logistics and availability, they can arrange for as many additional workshops as desired.

Bringing mindfulness into the workplace would help decrease stress levels, increase productivity and workflow, and lead to higher satisfaction rates. If people see positive results towards achieving their goals at work, they will be happier at work and more likely to use mindfulness tools to boost other aspects of their lives. Most of us spend a good portion of our lives at work; it makes sense to build an atmosphere that is more enjoyable to be around.

By using mindfulness as a tool to help understand our emotions and strengthen our emotional intelligence, society would collectively be happier. There is a link between health, happiness, and success. The healthier you are, the happier you are. The more healthy and happy you are, the more likely you will be successful, whatever that success may look like to you. If you are successfully navi-

gating your life, including understanding your emotions, relationships, careers, and goals, there is a higher likelihood that you will be more willing to do what you can to preserve your life as you know it and be protective of any destructive forces that are interruptive.

However, we must not overlook the current state of the world. Unfortunately, the reality is that our futures are at stake due to the multitude of effects caused by the environmental crisis. Our greed and neglect towards the natural world is something we cannot overlook any further, even more so due to the expectation that problems will continue to increase due to our on-growing population and neglect. Having a world that is mindful of its existence would lead to the preservation of our planet. Positive emotions flood our brain with dopamine and serotonin, known as happy chemicals. These chemicals help us organize new information (understand), keep that information in the brain for a more extended amount of time (sustain), and help us retrieve information faster later on (efficiency). By focusing on these qualities and building their presence within our thinking patterns, we naturally will strengthen our understanding and values of sustainability and efficiency regarding our relationship with our home, Earth. As a global society, we all deserve a life and future that is fulfilling, sustainable, optimistic, and intentional—mindfulness and meditation can take us there.

A sustainability issue

Finnish municipalities are carelessly demolishing their 60's and 70's building base

by Sanni Hujanen

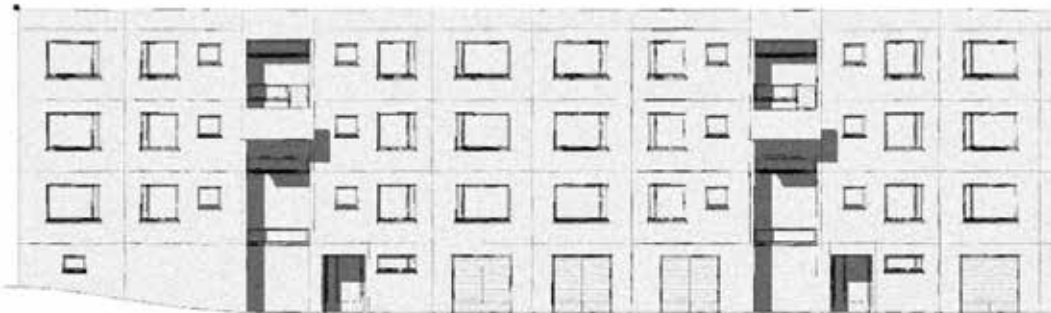
An evergreen column waves in between the block of flats that approximately accommodates 1500 people in Mellunmäki neighbourhood in East-Helsinki. The 3-floor flats scale is pleasant and town-like, but by turning your head, you can see that the subway station is right next to the buildings. Although quite brutal, these 1970s concrete sandwich element buildings were both top modern with all the comforts and affordable by that time. New in the city, families and single person households brought to the suburbs by growing urbanization lived there quite happily and not giving too much thought about the future. The relatively young age houses are quite the opposite of the current building trend of dense high-rise buildings, and that might be one reason why they will all be soon wrecked down and replaced by new ones. As the example states, we're now living through a demolition boom of the 50-year-old buildings, which is a sustainability issue.



Länsmäki and Mellunmäki neighbourhoods, Helsinki
Picture; Jori Samonen, modified by Sanni Hujanen

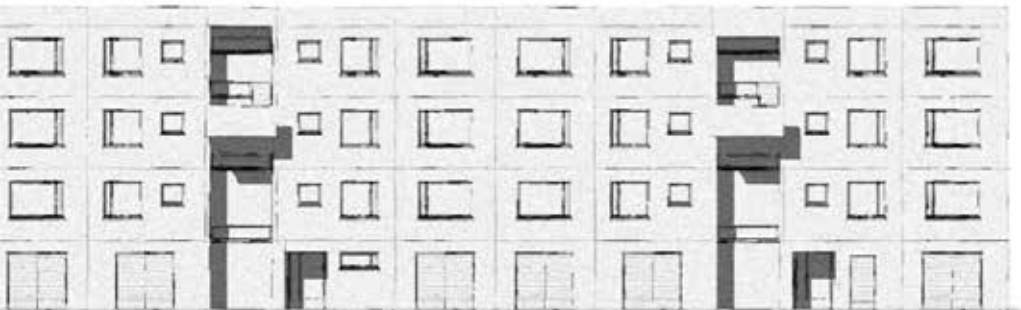
In the turning point of the '60s and '70s, one particularly voluminous urbanization wave wiped over post-WW2 Europe that had just overcome the reconstruction era in the '60s and '70s. The need for apartments was urgent and quick solutions were required. Prefabricated concrete elements took giant leaps in the development and served as an exact cure for the condition. So began the blooming era of constructing new "forest towns," now better known as suburbs or satellites such as Mellunmäki. Apartment buildings were mass-produced by great speed, quantity over quality, and box-like solutions were standardized to make it even faster. That specific building type has had a poor reputation ever since. Even architects of the time weren't too happy about the conveyor-belt production that left no space for creativity.

As we're constantly gaining more knowledge about sustainability and being more conscious about the climate catastrophe that we are facing, demolishing these livable, possible to renovate, 50-year-old houses and replacing them with new, would be a gigantic waste of resources and energy.



Concrete, or to be more specific, one of its primary ingredients, cement, is extremely polluting, and the construction industry causes about 30% of Finland's CO2 emissions. Concrete is also almost impossible to recycle, although the concrete industry's lobbyists are trying to convince otherwise. Most of the demolished concrete goes on filling, for example, road bases, even though it could be done with rock chippings without 530kg CO2 emission per 1.5k, making that an unsuccessful example of recycling materials. It can be assimilated to burning waste for energy production, which is a terrible action compared to material recycling for new use and renewable energy production.

To bring knowledge about the possibilities and architecture of the 70's buildings to a broader audience, architects and other construction professionals have to take part in the ongoing conversation of the buildings' prospects. We should convince people, especially the people living in those neighborhoods, that the box-like "personality-less" buildings are historically and architecturally essential and quite convenient by floor plans. Certainly more spacious and functional than many built in the 21st century.



A typical late 60's building
Sanni Hujanen

A possible way for awareness-raising could be to provide a refurbishment encouraging pamphlet to the housing co-operatives via the Finnish real estate manager federation and an exhibition series in the architectural museum and region museums. The goal of the actions is to stop the demolition boom of relatively young livable buildings and start a refurbishment movement improving the buildings' quality. The exhibition will focus on the historical aspects and the prospects of these buildings and include discussions with architects familiar with refurbishing or researching the buildings. The exhibition also aims to gain media attention as Finland's neo-liberal press has recently only been rooting for these buildings' demolition. The pamphlet targeted to housing co-operatives, which are very important to include in the discussion, will be a hand guide for renovating the buildings. Still, it's also strongly emphasizing the importance of constant maintenance as it would eventually be cheaper for shareholders.

The pamphlet will present a few different kinds of refurbishment models in two categories, conserving and transformational. The conserving model is generally cheaper and focuses on the characteristic malfunctions of the buildings (such as iron mounting being too close to the surface, the quality problems with the concrete from that time, asbestos, and common problem areas such as facade, balconies, and roof). It will present several options for refurbishment based on substances and the level of reparation demands. The transformative model focuses on the same common problems and offers additional building opportunities, either by adding floors or by building a separate building to the plot. The supplemental building will also help finance the refurbishment, as the housing co-operative will profit from selling the new square meters. It will also give other development ideas, e.g., adding a balcony to the one-bedroom apartments or adding an elevator. It will guide what to consider in planning, so the result will be in

balance with the original architecture. The guide will highlight the value of these already existing buildings. The most sustainable option is usually the existing one, and encourage housing co-operatives to refurbish, instead of demolishing. The pamphlet would be something that a housing co-operative could use or hand out when negotiating with construction companies and architects. The pamphlet will be given to deputy landlords, who will provide them to the housing board and published online.

Great cities have many consecutive layers, and 70's buildings are an essential part of that, although people tend to value things only when they're gone or wearing thin. Ironically, in 1960-70 a previous demolition boom was wrecking the cities. Finnish cities survived WW2 bombings with minor damages but independently and willingly started to crash historical buildings. Art nouveau and neo-classical buildings from 1890-1920 were vastly demolished because they were expensive to refurbish and didn't quite fit the ideal of the times. Soon after, they were replaced with modern 70's concrete element buildings. An extreme example is a hotel in Turku, although similar examples from apartment buildings are likely to exist. Hamburger Börs, an A-class hotel, built in 1909, were deconstructed in 1976 because it didn't fit the of the times aesthetics and something grander was desired. A new, bigger, and better (by the time's standards) building was soon constructed, and last year in 2019 again deconstructed because it didn't fit the time's ideals. A new building is under construction and, if history again repeats itself, demolished after 40 to 70 years if a change in the mindset of refurbishment is not changing.

**Hervanta, one of the biggest and
well known suburbs in Finland**

*Wikimedia.org, modified by Sanni
Hujanen*



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Student works: 'Sustainability, Resilience, Ecology'

Module 2 (M2)

Sustainability, Resilience, and Ecology define the world of the 21st century. The knowledge contained in these three fields is reshaping scientific enquiries, industries, organisational structures, transportation and the very fabric of our society. The paradigm of our world has begun to shift. But what do sustainability, resilience, and ecology entail? While sustainability, resilience, and ecology are frequently used as interchangeable terms covering the same idea, the three terms, in fact, represent historically and ideologically diverse concepts, guided by different principles, methods, measuring tools, and disciplinary foundations. The idea is more than environmental conservation, or new ways of managing our resources while maintaining the status quo of our economic system or altering manufacturing practices and re-organising lifestyles to leave less impact on the environment. It entails complex relationships of ethics, economy, and social justice, and wellbeing.

Design discipline started its engagement with systemic aspects of sustainability, as well as partly resilience and ecology, since the mid-20th century. A broad interest in Design for Sustainability is growing ever since; due to evident connection of mounting environmental and social issues with industrial production and globalised materialistic lifestyles - the very same factors that also placed design in a key position for innovation not only in business but also in governmental and social organisations.

Our challenge is to move beyond designing products, services and experiences aimed at individual's needs, and to develop capacities for comprehending, ordering and organising the systemic complexity and dynamism of our environments. In order to realise a robust and radical change, we need new tools for shaping social structures, norms and beliefs, and to be able to engage in investigation and reflection that guides us to design for nature and human value driven world.

Results

In this module, students explored the efforts being made in diverse industries and disciplines and on various scales and global locations to ensure healthy human ecology, resilient environment, rich biodiversity, and the sustained future of humanity. We heard from representatives of sustainable development and circular economy, from design practitioners who engage both the foundations for environmental sustainability and our inner resilience, and we looked at factors of economics, politics, and social justice. We heard about what are the barriers to attain sustainable futures, and what are the success stories. Students explored a range of complexities contained in the idea of "sustainability," "ecology," and "resilience" and learnt from lead thinkers who have devoted their practice to this field.

By the end of the module, students formed their own conceptions of these complex notions with the help of large-scale visualisations and mapping exercises. They practiced systems design to plan and evaluate design actions for a sustainable future. Students were challenged to think critically, to be objective, and to create a deep as well as a broad understanding of the terms “sustainability,” “ecology,” and “resilience.” They got an overall understanding of the principles of ecology in design, and how to investigate the aspects of sustainability in different contexts, how to examine the values and behaviours that will contribute to a sustainable future. They got an overview of how to enhance and maintain biophysical systems and improve biodiversity by design, and how to plan, implement, and evaluate design actions for a sustainable future.

M2

Moderators

Jonathan Trent (USA) *Designs on a resilient sustainable future*
Lead Scientist, OMEGA project at NASA Ames Research Center

Kata Molnar (HU/NL) *How to design a water-proof future?*
International Water Strategist

Ajay Rastogi (IN) *Place-based Learning for Sustainable Transformation*

Vrikshalaya Himalayan Centre, Director of the Foundation for Contemplation of Nature

**Sabina Enéa Téari (DE) Embodiment culture:
sustainability and embeddedness**

Researcher, Co-founder of Foresta Collective

Dan Lockton (UK/USA) Imaginaries

*Interaction Designer, Researcher, Assistant Professor in the
Future Everyday group, Eindhoven University of Technology*

**Sabrina Stiegler (DE) Contextual design and Circular
Economy**

*Senior Innovation Brand Partner & Lead of Sustainability,
Global Packaging, R&D, Beiersdorf*

**Ezio Manzini (IT) Alternative ways of designing, Design
for social innovation**

Design academic, Author, Founder of DESIS Network

**Gyorgyi Galik (HU/UK) Voluntary social change and
behaviour change relating to low-carbon transitions**

*Innovation Designer, Design Strategist, Environmental
Advocate, Lead Advisor of the Cities Programme at Design
Council UK*

Ross Harding (AUS) A New Normal

Creative Sustainability Consultant, Founder of Finding Infinity

The 20 percent person

by Veronica Antonucci, Csenge Csík, Viktoria Popova

With this project, we set to explore how to minimize waste by applying a '20% person' allegory, inspired by the Pareto principle [1], referred to as the '80/20 rule'. It states that approximately 80% of all effects come from roughly 20% of the causes.

*"Earth provides enough to satisfy every man's need, but not every man's greed."
— Mahatma Gandhi*

We wondered when and why we as humans started to waste. Our research helped us to reflect on the principles of waste as an act that can be explored from the perspective of 'inner,' 'outer' and 'social' sustainability. Our theory is that if we underutilize our inner resources, like time and energy, we tend to waste other goods, both as individuals and society. The resulting concept illustrates many examples that can help reimagine ourselves as a 20% person who can maximize the positive value by focusing on the most important things. This approach, both philosophical and practical, can be applied to any aspect of our being and the environment. We hope it can be an inspiration for those who design for sustainability and social innovation or those who want to maximize their potential to live more sustainably by being less rather than more.

When did we start to waste?

Ancient people reused and repaired as much as they could. Their waste was minimal and merely included ash from fires, wood, bones, fruits, and vegetables, mostly decomposed, fed to animals, or used as fertilizer. Inorganic waste was made into fill for building projects. Scrap iron was used for the cementation of copper (a recycling practice still used today). Later, ash from coal fires was used as a soil conditioner, and the "fines" were mixed with clay to make bricks.

Waste started to become a threat when urban populations began to boom, and unsanitary urban conditions led to the spread of diseases like the Black Death 1340-1350 or the Great Plague of London in 1665-1666. The more and the wider the variety of products people created, the more there was a waste. New industrial waste like heavy metals, lead, mercury, cadmium and PCBs, liquids, smoke, radiation led to unprecedented health issues. Environmental risks started to pick up, caused by the

unrestricted dumping of domestic, industrial, hospital, and agricultural waste. We all know the consequences: air pollution, increased CO₂ emissions, contamination of water sources, fires, loss of landscape/aesthetic degradation, soil erosion, waste overflow, deforestation and loss of vegetation cover, global warming, soil contamination, groundwater pollution, or depletion, reduced ecological/hydrological connectivity... you name it! The list is never-ending.

Why do we waste?

Waste is part of life. Let's think of nature, of all the trees that drop their leaves on the ground in autumn. For example, a birch tree loses a whole 28 kilograms, which become food for many animals. If the tree did not lose its leaves, it would not survive. Waste is an act of survival, which in turn preserves life. The times when a man merely wasted hair and other products of his body (which we will not go into here, although this can be pretty interesting for science) are long gone. Today, we waste products that create waste, some of which are very difficult for our planet to break down. But we waste much more than that: we let go of our time, our resources, our knowledge. Why do we waste at all?

From a historical point of view, sacrifices were already waste. This waste served a higher purpose in protecting the community. If we think of Maslow's pyramid, we see that first and foremost, the basic physiological needs must be met: food, water, air, homeostasis, shelter, clothing, and reproduction. Our ancestors, as hunters and gatherers, were probably busy with these all day long. Most likely, they exchanged goods to ensure the survival of their groups. With the introduction of money, we reached a new dimension: the value of goods. Previously, it was defined by quality or time of production, but suddenly value became linked to money. Thus, those who had money had the power to decide what was valuable and what was not. Industrialisa-

tion took everything another step further. We were able to mass-produce products, more people had access to money and education, and there we had the mess: wasting became a manifestation of power, success, and wealth. We can waste because we can waste: we have too much of everything.

80% of the time we use 20% of our goods

80% of our goods are only used 20% of the time. Think of our clothes, books, electronic devices, or kitchen machines. Less than 20% of e-waste is formally recycled, with 80% either ending up in landfill or being informally recycled – much of it by hand in developing countries, exposing workers to hazardous and carcinogenic substances such as mercury, lead, and cadmium [2]. Or think of clothing: 15% of consumer-used clothes are recycled [3], which means that much of the waste we generate is not utilised. How can we change this? There are several possibilities. First, it is about a purchase decision. Do we need what we want to buy, or is it to alleviate a feeling of emptiness? Can we borrow equipment from our neighbours? Can I lend my clothes or goods to others? Is there an open workshop in my city that allows me to borrow equipment for my project? Naturally, not everyone aspires to a super minimalist lifestyle. However, we should start asking ourselves questions because we are now used to buying everything. The advantage of sharing is that you make new contacts, contacts that might be beneficial, help you grow, or finally get to know your neighbours.

80% of consumers are interested in 20% of offerings

Using the Pareto principle's simple explanation, "20% of your time produces 80% of your results," can also be useful from the production side. With this concept, businesses can be still growing and reach their profit goals and take part

in a more sustainable future producing way less waste: not making unnecessary objects that probably end as not used up items on one of the dunghills.

Let's think about the Pareto Principle based on Perry Marshall's business strategy to formulate the 20/80 idea for consuming. It can lead us to a solution for a profit-oriented and focused business: identifying the top 20% of the most successful products helps in finding the consumers' demand and still make a significant profit as 80% of customers interested in 20% of the products and 80% of the sales come from the 20% of the offerings. Even though there could be differences in industries and company-profiles, this simple strategy can lead to more sustainable production.

20% of food wasted at consumption accounts for 80% carbon footprint

20% of food waste comes from consumption, which, if captured correctly, can lead to a significant reduction in greenhouse gas emissions. Every time you throw something away, it does not only release greenhouse gases into the atmosphere during the disposal, but we also waste the energy and water used during its production, packaging, and transportation. Waste becomes more carbon-intensive at the consumption phase, contributing to 37% of the total carbon footprint within the food supply chain [4]. Researchers believe that throwing away 3 kg of edible food results in greenhouse gases equivalent to around 23 kg of carbon dioxide (CO₂) [5]. If we stop wasting food as consumers, we can reduce the total food wastage by about 20%. And if we stop wasting cereals, vegetables, and meat throughout the whole value chain, we can reduce the carbon footprint of food waste by 80% [6]. When food goes to the landfill, it produces methane (CH₄) [7], which is even more potent at trapping heat in the atmosphere than car-

bon dioxide. 1 kg of methane equals 25 kg of CO₂ [8] as it causes 25 times more warming over 100 years than CO₂.

Organic waste can be captured, converted, and used as biogas and fertilizer [9] to reduce greenhouse gas emissions and pollution risk. Biogas is a renewable source that can displace fossil fuels for heating and electricity generation, while fertilizer can improve soil health. Biogas production is carbon-neutral, and replacing fossil fuels, can further reduce emissions. Even though biogas is used more efficiently if produced at larger scales [10], it can be made at home or in a business from food waste, yard and grass trimmings, and some organic solid wastes. A typical family might cook for an hour per day on biogas from home waste sources [11]. Transform your life by transforming your waste today [12]!





20% of input can improve your wellbeing by 80%

"We are our choices," said Jean-Paul Sartre. Sometimes it is easy to blame others when we feel bad or stuck in hopeless situations. However, we alone are responsible for our lives, and we alone can make decisions about our lifestyle. It is essential to look at your own life from time to time. Do I have enough time for myself? What kind of friendships do I have? Am I happy, and what makes me happy? We should not only work smarter at our workplace, but we also need to be smarter in our private lives. How can we change our mindset? Probably 20% of our friendships are those that nourish and fulfill us to 80%. Let's focus on this 20% and learn to say no to toxic relationships. It is ok to stand up for yourself and your needs.

20% would change, 80% would follow

“Your individual acts may be statistically and morally insignificant, but when you multiply them millions and billions of times – as they are performed by an entire species – they are a collective act of ecological destruction,” writes Timothy Morton in his book *“Being Ecological”* [15]. However, his book is anything but an attempt to overwhelm you with facts about global warming (or *“mass extinction,”* as he puts it) to make you feel guilty and miserable. Being ecological is often perceived as if you have to change something: your mindset, actions, etc. As if the future is so far from reality that you have to make a giant leap to reach it.

Many of us have a pet, which means that we can already very well interact with ‘non-humans,’ which is vital for eco-consciousness. By recognizing their rights to live and be happy, we exercise our ecological thinking. Therefore, instead of convincing ourselves or others that we need to become so much different, we could recognize that we are already ecological.

-  *Talk about it when you feel bad. Did you know that 80% of new mothers experienced the “baby blues” [13]? We don’t like to talk about it, but it will make a change.*
-  *Date yourself! Mark your calendar when you do something for yourself, a massage, read a book, learn something new. The little time you spend on this will give you energy and balance.*
-  *Meditate. Mindfulness meditation can help relieve depression, anxiety, and even physical pain. It also allows your brain to function better [14]. There are now excellent apps that remind you to take a few minutes and guide you through short sequences.*
-  *Your body is your house, and it needs care. You can increase your well-being by 80% with 20% input.*

20% of quality time results in 80% more knowledge

As ADES students, we see how much can be earned with dedicated and active learning. The transdisciplinary engagement with lecturers and fellow students resulted in an embedded knowledge providing a wider perspective on individual and community levels: being the person who used 20% of their time to gain new understanding opened doors of perception for a broader, informed thinking.

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**20% of input can
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by 80%**



80% of consumers are interested in 20% of offerings



20% of quality time results in 80% more knowledge



20% would change, 80% would follow

The 20 percent person illustrations

Veronica Antonucci, Csenge Csík, Viktoria Popova, 2020

Mind the Water

by Blanka Borbély, Regina Héjja and Sanni Hujanen

The concept behind 'Mind the Water' is to demonstrate the potential of developing our "inner sustainability and resilience" by engaging in mindfulness exercises focusing on water. In the face of the dangers that climate change poses, we often feel helpless, our minds "frozen" in inertia. We believe that we can help. We aim to show you how to develop or rediscover a meaningful relationship with nature through water, build an appreciation towards it, and provide an opportunity to contribute to global water preservation efforts.

"Ultimately, reconnecting people with nature is a non-sense phrase, for people and nature are not different things, and cannot be taken apart. The problem is, we haven't yet figured that out."

— Robert Michael Pyle

The concept is a simulation of setting up a networked venture to engage the public in supporting water preservation efforts. The next paragraphs present an introduction to the basic experiences that can guide people towards developing a mindful appreciation of water and nature. These experiences are believed to be useful in raising interest towards strengthening inner sustainability and resilience and shaping attitude towards sustainability and climate change related issues into a positive, proactive one. The aim is to bring attention to the beauty and importance of water and, through that, to build appreciation-driven action replacing guilt-driven feelings that often accompany us when addressing the climate and environmental crises.

‘Mind the water’ concept is based on:

- a journey map of an imaginative character and their relationship with water
- relevant scientific facts about about mindfulness
- exciting facts about water and various contexts in relation to water
- mindfulness exercise

And why water? It is an elemental force that helps life flourish. It takes many forms, from dangerous to soothing, from liquid to solid. It can divide and connect. It is a part of us just as much as it is a part of our planet. First, we will demonstrate the significant stages and goals of the experience journey through Lynn’s eyes: our persona, representing a collective experience. Then we will explore how to overcome the helpless mode when it comes to climate change and nature appreciation through water-related mindfulness. And we will tell you more about water itself, what it is and how it influences every aspect of our lives. And finally, in order to gain personal experience, we have a whole array of mindfulness and water-related exercises for you. We wish you a pleasant journey!

2. Lynn's current experiences

- occasional swims in a swimming pool
- install filters for the water tap
- reads news about water-related dangers (draughts, floods, pollution, etc.)
- mostly sunbathes as the water has trash in it

1. Lynn's past experiences

- playing next to a stream
- swimming in lakes
- drinking tap water
- playing in the snow, skiing, ice skating
- holidays by the sea

'Later, I'm building a snowman.'

'See this follow it'

'What has caused this much pollution?'

'The coral reef has so many colours!'

'Seeing the news these days is so overwhelming.'

'How will coastal cities protect themselves?'

3. Lynn hears about 'Mind the Water'

- sees one of the ads on social media
- reads about the programme on the website
- talks about it with a friend/partner
- wonders if it would help them build inner resilience and peace of mind

'Maybe this can help me feel less anxious and more in harmony with nature.'

Lynn's journey

Blanka Borbély, Regina Héjja
and Sanni Hujanen, 2020

Lynn's journey

'frog? I'll
in the stream!'

**Hey, I'm Lynn!
I'm 25, and I live in Amsterdam.**

I'm feeling a bit overwhelmed with the thought of climate change these days, but I would love an opportunity to reconnect with nature.



6. Lynn's future relationship with water and nature

- spreads the word, becomes part of a community
- takes up more water-based sports
- feels inspired to do and learn more
- gets involved in an ocean-cleaning programme
- keeps on practicing nature appreciation and mindfulness and expands it to other natural elements and beings

**'I'm filled with energy
and motivation!'**

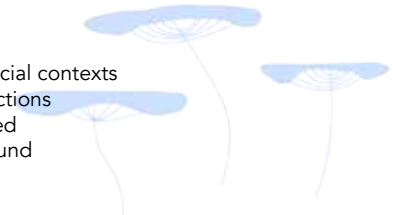
**'I haven't felt this calm and
focused in a long time.'**

5. Lynn's practices mindful appreciation

- uses pre-recorded mindfulness exercises in everyday situations: swimming, walking in the rain, washing dishes, floating on water, etc.
- learns more about the many aspects of water
- carries her own water bottle
- recycles grey water and collects rainwater at home
- goes on excursions to help build a meaningful connection with nature

4. Redefining Lynn's relationship with water

- participates in the intro session
- learns about the importance of water in ecological and social contexts
- spends time on silent guided exercises without any distractions
- stays more in the present, feels focused, refreshed, inspired
- notices and appreciates the natural cycles of water all around



Lynn's journey

Above, you will find the journey map of Lynn. Lynn's experiences are a collection of activities, thoughts, and feelings from different participants: the map represents an overall, general experience. As we walk you through it, you can also use this time to think about your own experiences with water in the past, present, and future (actions, thoughts, feelings, things you would like to say). Our aim with this drawing is to present what experiences inspired our idea and which issues we hope to resolve. Journey maps are often called "user journey maps" and are viewed as a tool to visualize the experience of using a given service through the participant's perspective. Given some practical implications that it presents, this part might also be interesting to people with business-oriented mindsets.

Lynn is a young adult in their late 20s, and they are a well-educated, socially sensitive person living in a first-world country. Growing up, they went camping with their family near a stream where they played in and around the water, went on seaside holidays, drank water from the tap, played in the snow, jumped in puddles, and in general, had never even given water a second thought. They enjoyed its presence in all its different forms. Today, because Lynn generally keeps up with the world's happenings, they inevitably hear about the long-term dangers related to climate change. About droughts, forest fires and floods, pollution, and the dying of the coral reefs. Whenever they hear about climate change issues and the prospects of our environment, they feel powerless and intimidated. Like many others in their position, they try not to think about the long-term future so much and hope the issue will resolve itself somehow. And as for the presence of water in their life: Lynn doesn't think a lot about how it affects their every day still. Water is just there when they need it.

And yet, even though they try and not think about climate change, and even though they lead a busy life - given Lynn's age and life expectancy, they can't help but be a bit concerned about the state of the world in 20-30-50 years. It is the world in which their children and grandchildren will be growing up, the world in which many predict 'water wars' and 'climate refugees.' If there were a less overwhelming way to learn about the situation itself other than the often disheartening news and social media and how they could take constructive action, they would be very open to doing so to feel less helpless. They miss the simple joys of childhood carelessness.

When one day they see an ad on social media about an interactive programme dealing with inner sustainability, water, and the celebration of nature, all framed positively, they are intrigued and decide to give it a go.

A look at "post-experience" Lynn

As the outcome of their participation, Lynn's mind becomes more at peace with themselves, water, nature, and all its interconnectedness. They learn to focus their minds through mindfulness exercises and learn more about water's character and how it shapes our lives: physically and mentally. They might start noticing the presence or absence of water more: in the city, in their homes, in the countryside. It will amaze them how water stillness can put their minds at ease and how looking at the great waves of the ocean can put them on edge. They will always remember to turn off the tap and start carrying around their water bottle. It will be a slow but steady transformation.

After this experience, Lynn takes with themselves an attitude that celebrates water and nature. Chances are, they will feel inspired to proactively take action to reconnect with water, and engage with water-related issues with an open, accepting mind.

Hopefully, they take this mindset with them into their everyday lives and even into their jobs - and they will keep looking for opportunities to act more sustainably. Not because they feel they have to - but because they want to. They now feel a genuine connection to their environment as shaped by water, natural and human-made. They see themselves as being a part of nature: they engage with water, and water engages with them in a myriad of ways.

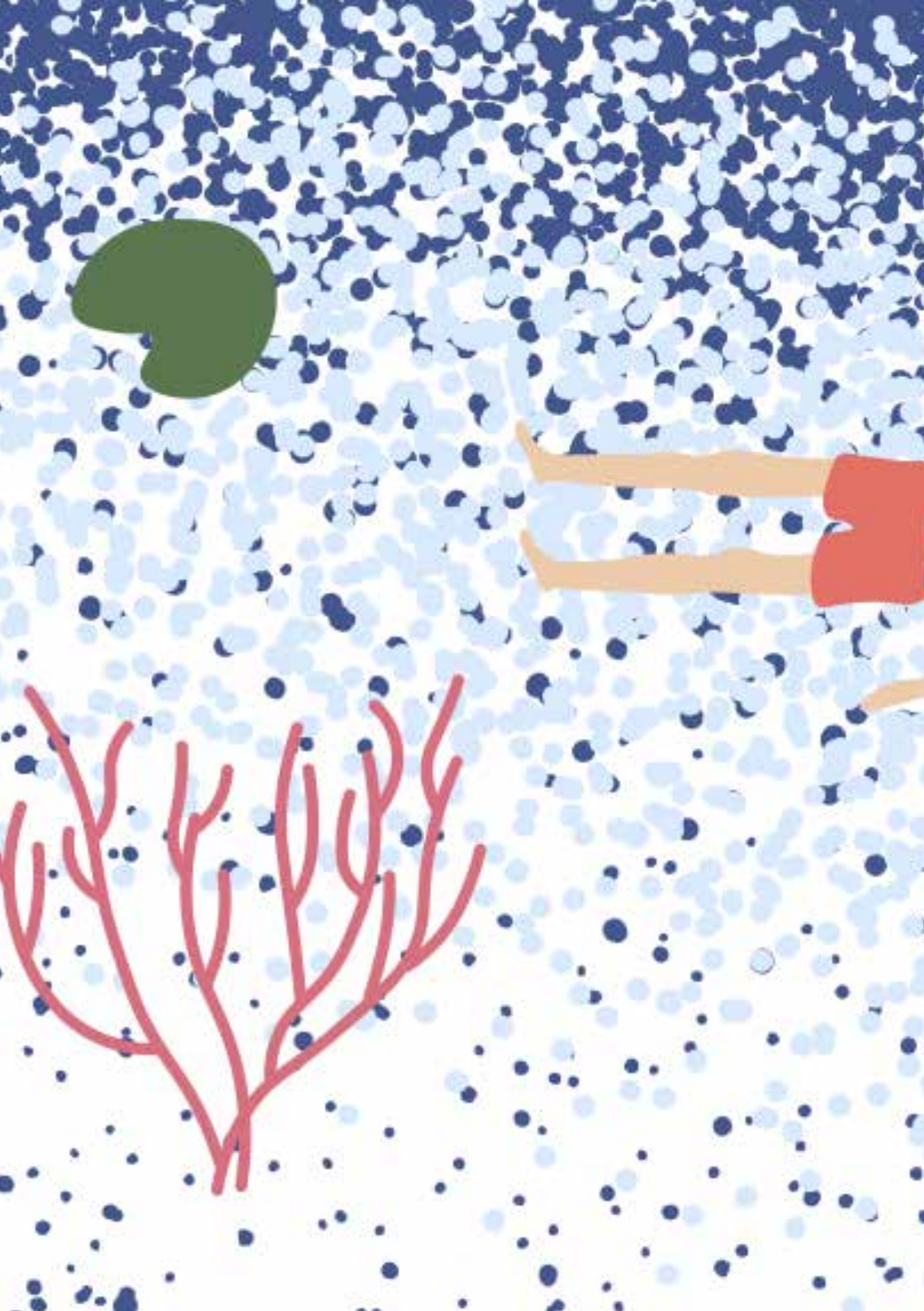
Our venture to support water preservation efforts

In our opinion, there are a lot of 'Lynns' out there. Many people in this generation know that sustainability is essential but are frightened to engage with the topic. It is a natural reaction, but it's not the only one.



We see this as a necessity and an excellent opportunity to promote nature experiences that resonate with people and eventually create demand for such programmes. It could also positively impact people's general attitude towards water, nature, and sustainability.







(Re)thinking water

So how does this relate to our relationship with water and our changing climate? The consequences of climate change are, to various degrees, inevitable and undoubtedly dangerous to us. Because fleeing is not an option, we are left with two possible responses in our reptilian danger reply: freeze or fight. Freezing is way more common in this case, which means that we disengage with the topic of water-related issues in the face of climate change. Remember Lynn? The same happened to them: they felt more and more overwhelmed and scared, and as they couldn't flee and didn't know how to fight this problem, they froze. Realising this, we wondered: How can we help Lynn, and therefore others, to "unfreeze"? Is there a way to become more open and receptive to changing climate and form meaningful connections with water without anxiety?

While we cannot fully overrule the feelings being formed in our reptilian brain, neuroplasticity allows us to look at these subjects from different perspectives and develop new "routes" to the problems and perceived dangers in our minds. Instead of going into our autopilot mode, which can produce anxiety and fear, we could try to be more mindful and receptive of what is going on in ourselves and around us. To be open to scary things. Not approaching them would be impossible: but to accept that they are there and be at peace with them. To observe how they make us feel emotionally and physiologically. To not automatically push away our negative emotions and uncomfortable thoughts, but accept that they are there. Keeping a distance from our thoughts and recognising that they are no more than thoughts.

We will try merely being in the present, on purpose, paying attention to water and ourselves in connection to it without judgment. It takes practice. Developing this mindset can help us accept our fears and calmly move past them. It will transform our minds to form new connections and become more receptive, proactive, and appreciative of the beauty and importance of water and our natural world as a whole.



Water 101: Lecture 1: Some basics about water

Many people may not know or realize that water is, in fact, present in every aspect of our daily lives. It makes up 60-70% of our body mass, and it is vital for our survival. We use it to cultivate our agricultural lands, and produce food, bathe, heat, transport products, and make our goods. Waters can be beautiful natural sites, can form natural borders and connect places simultaneously, can be roots of political conflicts or cooperations, elements of art installations and buildings, or they can also take shape in destructive natural catastrophes such as tsunamis, thunderstorms, or floods. The list of ways water is present in our lives is a seemingly endless one [1.]

So, where does water come from? From a historical perspective, it is interesting to know that the Earth's water origin is around 4.6 billion years old [2]. As for the hydrologic cycles, it is hard to say where water 'comes from.' It is continuously moving and transforming. Generally, it goes like this: saltwater evaporates from the oceans and then condensates into the clouds' shape. In this form, it is transported to (above) lands by the wind, where it eventually becomes precipitation. Water can contact the ground in various conditions, such as rain, sleet, snow, or hail. After this, water on land becomes surface water or groundwater [3]. It is quite surprising that out of all water on Earth, Oceans represent 96% of its total mass, while lakes, rivers, glaciers, aquifers, water vapour together account for only 4%. And water itself covers about 71% of Earth's surface. In light of all this, it is especially shocking to learn that only 0,007 % of the water on Earth is available freshwater [4]. If something, this makes one think about our attitude towards water usage!

Everyone knows we need to drink water and, if possible, try not to use too much of it. Still, we suspect that people rarely take a moment to think: if I look around and think about my life, where is water present in my activities, my hobbies, my job, my body, my home? If people would think about water this way more, it would probably be appreciated and celebrated more in our societies.



Water 101: Lecture 2: Some (not so fun) facts

Even though this exercise's ultimate goal is to give people an open-minded, calm, action-driven mindset related to issues of our environment, it is inevitable to be confronted with some sad facts about water on our planet. With this, we hope to provide some perspective and boost the appreciation of water among our audience.

In developed countries, it is taken for granted that freshwater comes from the tap, and plastic bottles of water are available for a few dimes at every shop. We don't think about it much. Many may not have known that water-use has grown at a rate more than twice as fast as the population increase in the last century. It is sad to think that at the same time, 1.1 billion people lack access to freshwater today, and, not surprisingly, marginalized communities are most affected by this water scarcity [5]. The various water problems (such as safe wastewater treatment and reuse, equal opportunities for sanitation and hygiene, ruined water-related ecosystems, etc.) can explain why the United Nations has dedicated a sustainable development goal in their 2030 Agenda to the topic of water and sanitation (SDG 6). Water related issues naturally impact society; water is essential for society's health and wellbeing. Access to safe and freshwater everywhere could contribute to ending poverty and hunger while combating social inequalities and protecting human rights [6].

There are several ways to connect with water: for example, walking on a shore and observing its beauty in nature, swimming in it, drinking a glass of it every morning, or just floating in it during an occasional bath. We hope that by the next time you engage in one of these activities, you might stop for a second and think: what does this particular experience with water make me think and feel right now?

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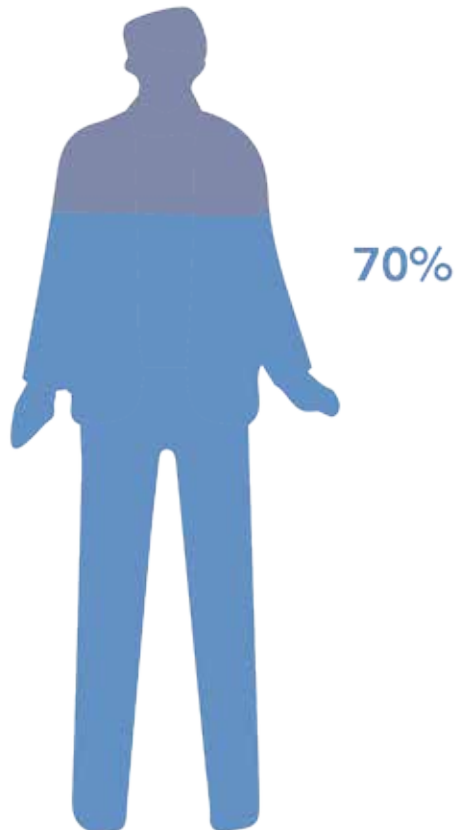
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(Re) connecting with water: The connection of human and water

Let's look briefly at Lynn's path once again. Lynn, among 55 % of people on the Earth, lives in a city. At the time Lynn was born, the number was approximately 40%. At the beginning of the '70s, it was only 36%, and most likely, Lynn's parents were ordering their trumpet jeans from a post catalog as the nearest clothing shop with a sense of fashion was somewhere in the faraway city.

The rate of people living in urban areas is continually growing, and it is estimated that in 2050 two thirds of the human population will live in cities [1]. The accelerating phenomenon is a megatrend called urbanization, and many see that as the reason why homo sapiens, the modern human, has lost its former symbiosis with nature. Some claim that urbanization is not to be blamed for the lost bond as they are pointing their fingers towards industrialization [2]. In fact, the two are tightly connected as industrialization and automation are one reason people began to move away from the countryside, leaving their old farm job, to the city to work in a factory in the first place. Ever since industrialization has started, and up to this day, the post-industrialization era, people have been distancing themselves from the production chains. Today, vegetables are picked from a shelf in a shop, milk is nicely packed in a cardboard box, and protein comes in the form of a meat (or meatless) ball. Most Homo Sapiens don't even see the real enabler for food production and all other resources; nature, and of course, a significant element of that: water [3].

Lynn's earlier experiences with water show us that taking nature as given is separating us from it. But what is peculiar here? We, humans, cannot be separated from nature as we are not different things. We are part of it. But let's get a bit more into the human-nature connection dilemma. Our epoch is called - that began from industrial-

ization - "the Anthropocene,"; an era of humans impacting Earth's geology and ecosystems, including but not limited to anthropogenic climate change. Can you see the connections here? Ever since we've begun to physically and spiritually move further from nature, we've also started taking advantage of it at the level above its carrying capacity. We've reached a point of almost destroying nature - the most important thing we've ever had.

The Kesebir siblings, scientists Selin and Pelin, have researched the human connection with nature and its importance by analyzing the shift in culture, cultural references, and usage of nature related words in languages (e.g., dictionaries, song lyrics, poems, and novels). Their findings show that losing connection to nature is cause for concern because they imply not only foregone benefits from engagement with nature but also because cultural products are agents of socialization that can evoke curiosity, respect, and concern for the natural world [4].

Disconnect, Reconnect

Naturally, one can't help but wonder why reconnection with nature is so important? Psychologist J. M Zelenzki researched the exposure to nature and its connection to increasingly sustainable behaviour. He found that *"Emotional affinity for nature is associated with environmentally protective behaviors."* In one experiment, participants who viewed a brief video of natural spaces engaged in more sustainable behaviors than did participants who viewed a video of human-built areas [5]."



Let's reflect on our relationship to nature, focusing on water. Keep in mind that society lacks a widespread sense of intimacy with the living world in most developed countries, and nature-based recreation commonly results in superficial contact. For example, many tourists, hikers, and participants in countryside pursuits merely skim the surface of nature itself, reaping a shallow and weak relationship, resulting in weak sustainability. Then again, the skimmers are at least aware of nature around them - as the majority of people seem to care even less. But if one's life holds only a little (or no) place for the wilderness, how can one even care? People who care can make choices to conserve, but people who don't know can't even care [6]. Here is a thought-provoking quote from Robert Michael Pyle, "what is the extinction of a condor or an albatross to a child who has never known a wren?"

Sources and more information:

[1]: World Bank; retrieved in December 2020
from: <https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS>

[2]: Pyle, R. M. (2003). Nature matrix: reconnecting people and nature. *Oryx*, 37(02), 206-214.

[3]: Pyle, R. M. (2003). Nature matrix: reconnecting people and nature. *Oryx*, 37(02), 206-214.

[4]: Kesebir, S., & Kesebir, P. (2017). A Growing Disconnection From Nature Is Evident in Cultural Products. *Perspectives on psychological science : a journal of the Association for Psychological Science*, 12(2), 258-269.

[5]: Zelenski, J. M., Dopko, R. L., & Capaldi, C. A. (2015). Cooperation is in our nature: Nature exposure may promote cooperative and environmentally sustainable behavior. *Journal of Environmental Psychology*, 42, 24-31.

[6]: Kesebir, S., & Kesebir, P. (2017). A Growing Disconnection From Nature Is Evident in Cultural Products. *Perspectives on psychological science : a journal of the Association for Psychological Science*, 12(2), 258-269.

[7]: Pyle, R. M. (2003). Nature matrix: reconnecting people and nature. *Oryx*, 37(02), 206-214.



Water and space

An unfocused mind is like an orchestra without a conductor. Nature, however, in its essence, is in no need of a conductor. Its harmony and disharmony form a delicate balance. This balance has been disturbed by human intervention: careless human actions can bring instability.

However, considerate, focused, and attentive interventions can restore balance. Using the analogy of Peter Zumthor, a renowned architect who often compares architecture to music, space, in general, can also be understood as a composition of melodies, harmonies and rhythms, and disharmony noise, fragments, and clusters of sounds[1]. They form a complex assembly, just like our environment and us in it. Through our interactions with nature, we have the power to shape it for the better or, the worse. We have the opportunity to consciously develop meaningful relationships with the light of the sun, water, and the air. They all shape the earth, their presence self-evident and necessary. Working with these elements and not against them is the foundation of sustaining the ecosystem we belong to.

How do we form relationships with our environment?

What is it that moves us about places? Everywhere we go, we are met with holistic experiences. Be it a natural environment or a human-built one; each place embodies an atmosphere through a combination of things: smells, colours, shapes, objects, sounds, the living beings around us [2]. It is impossible not to interact with our environments: our inactions, just as our actions have consequences.



Each place is unique and has meaning to us. We assign these through our senses and experiences, past and present. Places bring up memories, feelings, and thoughts in us, almost instantly and often without us even noticing. Our first impression of a place can lead to immediate appreciation or rejection. Remember: our brains approach the “good” and reject the “bad.” In that respect, water can bring up mixed feelings: it is a powerful, dangerous force that is also nurturing and can bring calm and joy [3]. It can divide one place from another in the form of rivers, seas, and oceans, but it can also connect us through a supply of fresh water and provide an opportunity to transport us and goods. Clean water allows for life to flourish: it can bring life to any landscape. In its many forms, it’s an incredibly versatile element: ice, snow, rain, rivers, waterfalls, ponds, lakes, seas create completely different spatial experiences.

Water is also deliberately used in human-made environments, such as buildings and the public sphere, partially as a necessity and for its atmospheric qualities and ability to evoke different moods. It can be dynamic, flowing, rushing, rhythmic, or calm and still. Its transparency, reflectivity, colour, movement, and sound add richness to spaces. And our memories connected to water can be profoundly personal but can also be recollections of social experiences.

Spatial designers have long taken advantage of water’s ability to create different atmospheres. Well-designed urban waterfronts allow us to meet up with others, go for walks or jogs, or sit by the river and watch as ships go by. Swimming pools and lakes let us partake in numerous water-based recreational activities, while thermal baths or even the baths in our homes can help us reduce stress, flush out toxins, relieve pain, and improve our skin [4]. Monuments, memorial buildings, and religious buildings might use water as a symbol for the circle of life, cleansing, and spirituality, and breweries use it to make delicious beverages.

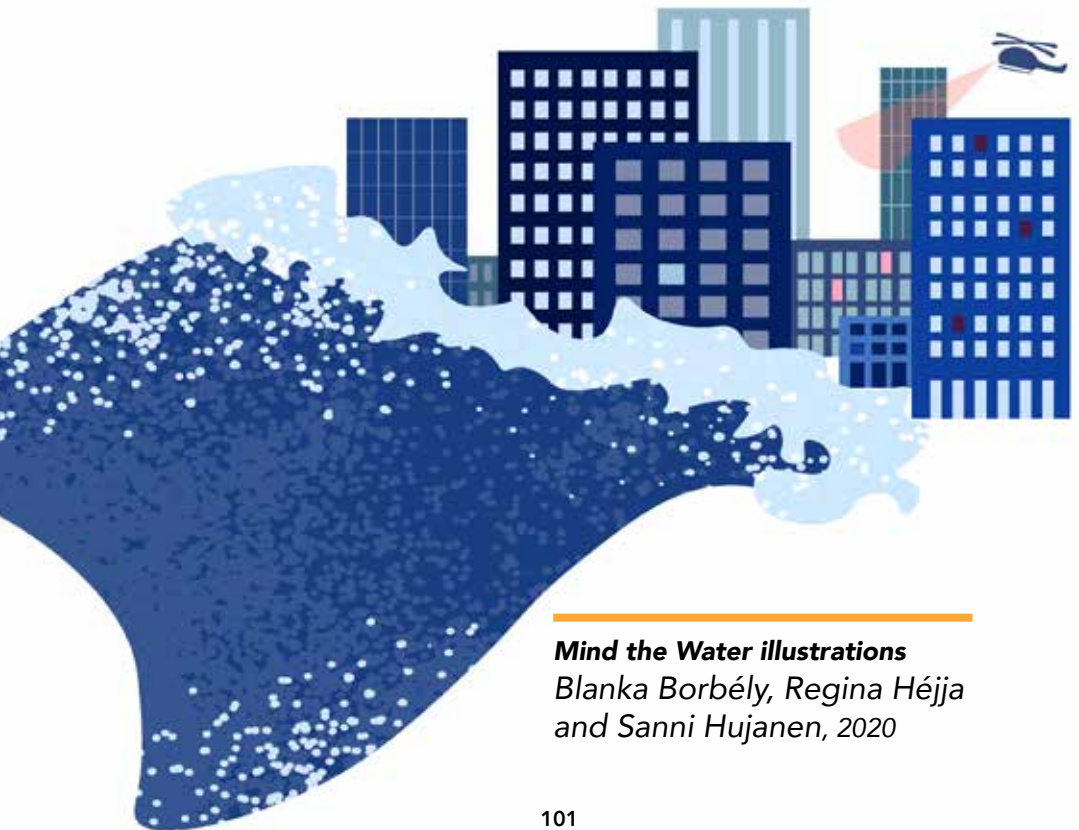
Public squares and parks use it for entertainment and recreation. Something we would like to take advantage of in this programme are the contemplative aspects of water that can be awakened by, for instance, its gentle, rhythmic flow: the light reflecting off the moving ripples, the sound of the waves, and the smell of humid air, for instance, can already create a holistic, three-dimensional spatial experience.

[1]: P. Zumthor (2009). *Thinking Architecture - A collection of Essays*. Published by Basel: Birkhäuser

[2]: P. Zumthor (2006). *Atmospheres: Architectural environments, surrounding objects*. Published by Basel: Birkhäuser

[3]: Phillip James Tabb (2019). "New Waterscapes; Planning, Building and Designing with Water" in *Elemental Architecture Temperaments of Sustainability*; Routledge Publishing

[4]: A. Phon (2012). *10 Reasons Why You Should Drink More Water*; retrieved in December 2020 from: <https://www.mindbodygreen.com/0-4287/10-Reasons-Why-You-Should-Drink-More-Water.html>



Mind the Water illustrations
Blanka Borbély, Regina Héjja
and Sanni Hujanen, 2020

Fountains of Life

by Ashley Petti

In 2018, I was astonished by the beauty of Florence, Italy, and its historic marble fountains that provide citizens with drinking water. Growing up in the United States, drinking from public fountains was foreign and exciting to me. Refilling my water bottle from the statues gave me a precious moment with water and art that I haven't experienced before. I was even further inspired when I found out that these fountains can be found throughout Europe. Between being raised in New York and exploring a large portion of America during a cross-country move to Los Angeles, I have yet to see any public water fountains from which you can drink. I didn't see any public drinking sources, let alone ones that are beautiful sculptures.

In my pursuits of designing fountains for cities across the United States, I aim to reduce plastic waste, enhance cities, and romanticize the experience amongst human life and water. I believe that having access to clean drinking water is a human right and should not be considered a privilege. Fountains provide convenience to free drinking water and promote reusing bottles, reducing waste. Additionally, it offers accessibility to those who are struggling financially and creates gratitude for water.

I believe Los Angeles is the perfect place to start this project due to its significant presence of environmental advocates and houseless communities. Viewing rehydration as

an experience allows us to tap into our naturalistic behavior and reconnect with the natural world ever so slightly. By placing a higher value on the water, we create a growing appreciation and encourage mindfulness during other aspects of water consumption.

The unique designs of my fountains are directly inspired by nature itself. I hope to create a revitalized appreciation of nature by using familiar references such as houseplants and the native flora of Southern California. As the project grows, I will continue approaching each fountain to represent the rare essence of that specific city's natural environment and culture. Each fountain will have an engraving that spreads awareness of water consumption, species endangerment, and other environmentally focused facts. Fountains have a history of memorializing and honoring certain people, events, and places. Turning plants into statuesque fountains holds the natural world on a pedestal showing its importance and symbolizes our codependent relationship.



Fountains of Life
Ashley Petti, 2021





Fountains of Life
Ashley Petti, 2021

Students, Facilitators

Student M1, M2

Veronica Antonucci

Jewellery designer, Switzerland

Switzerland based Veronica Antonucci completed her Bachelor's degree in Social Work at the Lucerne University of Applied Sciences and Arts in 2009. After working for several years in addiction therapy, child protection, and at the Swiss Paraplegic Centre, she devoted herself to her passion: design. Veronica studied fashion design but noticed that the products' manufacturing circumstances did not correspond to her values. In June 2019, she started her own business and started a project in which acrylic glass waste from the industry was processed into jewelry. She then began to recycle her waste to create a zero-waste product. Her interest is in craftsmanship combined with technology, biomaterials, and the recycling of waste materials. She had showcased her work at Milan Design Week and Dutch Design Week in 2019, and Fashion shows in 2020.

<https://www.vanto.ch/>

Student M1, M2

Blanka Borbély

Architect, Hungary/Netherlands

Blanka is a recent MSc Architecture graduate with more than two years of professional experience. She obtained her MSc degree at the TU Delft and BSc Architecture diploma at the Robert Gordon University in Scotland. She was recently a Junior Architect at BARCODE Architects in Rotterdam, where she had the opportunity to work on the concept and design phases of large-scale urban and architectural projects. She has additional experience working in offices in Amsterdam, Copenhagen, and Budapest. She also has acquired skills as a Research Assistant while working at the TU Delft Faculty of Architecture in 2019.



Student M1, M2

Csenge Csik

Event and conference manager, Hungary/Switzerland

Originally from Hungary, Csenge is currently based in Zürich and works in the educational travel industry. She holds a Master's degree in Psychology, Work, and Organizational Psychology from the University of Maastricht. She has experience in event and conference management as well as general management in the tourism industry. She is keen to deepen her studies with design. She sees this field as presenting unique possibilities to re-structure workarounds in various industries to make their existence sustainable. She sees design as a bridge to communicate and present projects to give sufficient options to our life for the longer term, a bridge between essential principles, which helps deliver ways to introduce common values for our environment and our economy. Continuing in her management position, being responsible for organizing events and general management of teams, she is keen to use the knowledge from ADES to reform her workaround and get a better perspective on how to deliver a more sustainable mindset to her environment.



Student M2

Regina Héjja

business consultant, Hungary

Regina is a business consultant focusing on the energy industry, currently based in Budapest. She recently graduated from Bocconi University with a Master's degree in Management after completing a BSc in Business Administration at the LMU in Munich. Regina also spent a semester in New Zealand during her studies. She accumulated her previous professional experiences in environmental consulting, operations, and communications in the private healthcare industry. She has started focusing on and learning more and more about sustainability and green management during her studies. Her goal is to have a positive impact on the world through her work and endeavours.



Student M1

Csilla Hódi

Artist, Hungary

Csilla is an artist, organizer, and educator who thinks in encounters, situations, and processes. With a history of collective modes of working in the art field, with an emancipatory and critical approach, she is interested in the conditions of joyful and careful work and the artist's agency locally and actually. Csilla has had mushroom mycelium in her center of attention for five years. She has been investigating the potential and performativity of artistic practice and research in renegotiating natural and cultural relations, especially the production of knowledge on mushrooms. She has a Master's degree in Visual communication design, specializing in photography, obtained in 2012 from MOME, Budapest. She is currently completing a 2nd Master's in Arts in June 2021: an MA in choreography at the Stockholm University of the Arts in the New Performative Practices program. She is on a learning journey with mushrooms and community-based agroecology at the moment. She is starting-up a mobile mushroom laboratory as a science-communication and community-supporting collective facility. It is envisioned as a place for contemporary ethnomycological practices and research on knowledge around the ecology of care and more-than-human solidarities.

<https://www.csillahodi.info/>



Student M1, M2

Sanni Hujanen

Architect, Finland

Sanni Hujanen is a 24-year-old architect from Finland, holding a Bachelor's diploma in Construction Architecture. Her work experience is mainly from the field of apartment planning, but she aims to pursue a career in sustainable and user-centered urban design. She is currently applying to master's programmes in that field. In addition to ecological sustainability, she is very interested in social sustainability, feminism, and politics and hopes to utilize these interests in design processes. She is keen on developing ideas on how to engage in the IPCC's 1.5 °C goals on all stages of work in the field of architecture and design. What has inspired her lately is the circular economy, forests, food production, self-sufficiency, and Japanese Wabi and Sabi thinking.



Student M1, M2

Ashley Petti
Artist, USA

Ashley graduated in 2020 with a BFA with a concentration in sculpture, primarily ceramics. She has developed an understanding of a broad range of skills such as color theory, illustration, three-dimensional design, consumer behavior, logistics, and economics. Throughout her work, Ashley considers human relationships with other species and how the neglect of living harmoniously with nature in today's current society leads humans and millions of other species into extinction. She believes that a passion for art, design, sustainability, and environmentalism will allow her to advance her design skills to create a positive long term effect on both the planet and those that inhabit it.

<https://www.ashleypetti.com/>



Student M1, M2

Viktorija Popova

Sustainable impact investments manager, Russia/Belgium

Viktorija comes from Siberia, Russia. She holds a Diploma degree in International Relations from Tyumen State University. In 2008, she moved to Germany to join an interdisciplinary Master's program in European Studies at the University of Hamburg. After several internships in international development, including the International Trade Center (UNCTAD/WTO) and GIZ, she joined an impact investing company in Frankfurt. There, she managed capacity building projects for impact funds that invest in microfinance and green growth in Southeast Europe. Currently, Viktorija leads a team that helps create additional value alongside investments in sustainable business solutions in rural inclusion, food, and agriculture. Viktorija is passionate about design, sustainable living, and audio culture. She is currently based in Antwerp, Belgium.

<https://viktoriapopova.cargo.site/>



Facilitator

Karina Vissonova, PhD

*Design philosopher, Hungary/Denmark/Latvia
ADES Founding director*

Karina is a design researcher, educator, creative thinker, author and an innovation strategist with an extensive experience working within R&D, product development and innovation. Karina attained her doctorate in Design with a focus on Philosophy of Design and Sustainability at The Royal Danish Academy of Fine Arts in 2016. Karina has worked on strategic development for various green innovation projects and initiatives, as a strategist, board member, and guest lecturer, primarily in the Nordic region. She developed and founded ADES - one of the pioneering schools dedicated to advancing design for sustainability.

<https://www.vissonova.com/>



Facilitator

Judit Boros

*Design strategist & researcher, Hungary
ADES course lead*

Judit is a design strategist and researcher interested in the intersection of the designed and the natural world. She has started her Ph.D. research in 2017 at the Environmental Sciences and Policy Department of the Central European University. She investigates how design can contribute to sustaining and enhancing urban ecosystems. Her research includes both the theoretical and practical aspects of applying transition design to urban sustainability challenges. With a background in product design engineering and service design, she has a systems-based approach to design that she applies to work on cross-disciplinary projects and educational activities for knowledge sharing. Before the 'sustainability turn,' she worked as a design consultant in various domains stretching from experimental designs for biotech projects to product/service/business development for large service providers (telecommunications and financial sector). Now she is keen to utilize her practice and experiences in working for a turn in design practices to place ecology and the non-human to the forefront of design and planning activities and ultimately infuse 'human-centeredness' with 'nature-basedness.'

<https://juditboros.com/>



CIRCLES of SPACES → ARCHITECTURES → FACILITIES & ...



how mushrooms die
how to
how to

SOURCE of mycelium forest

STONE FUNGUS
CHAMPIGNON



? years ago Italy



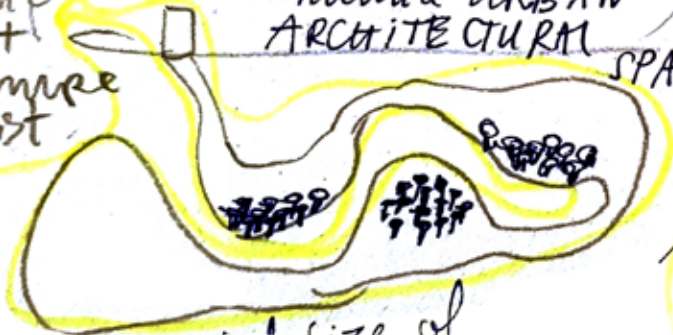
families farmers workers



SOURCE of mycelium agricultural + urban organic waste + manure compost

urban metabolism secondary use of dark and humid URBAN ARCHITECTURAL SPACES

Paris 17 century Budapest Hungary



varied size of enterprises



production
LOGISTICS → LABOUR → SKILLS SHARING
range? which mushrooms are ~~the~~ open for work?

knowledge is distributed?
all circles of metabolism
supported

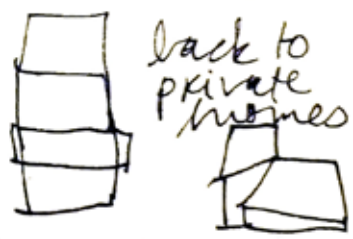
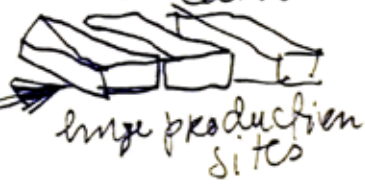
ZOOM: more typical/historical actual modes of working with mushrooms



place/people/knowledge communities
(communal green house)
SHITAKE

BIODESIGN / FABRICATION

manual picking
lot of automation



SCIENCE OF MYCOLOGY
diffused/selected in laboratories

AMATEUR mycologists
from mid 1950's
+ hobby mycologists

This publication contains graduation projects from ADES pilot remote study programme in Advanced Design for Sustainability, October - December 2020. The student works here reflect the challenges of introducing environmentally-friendly individual actions and industrial practices. The students propose to lighten the steps of becoming more “sustainable” in everyday life, – by engaging minds, hearts and acting as a community.

institute of
advanced
design
studies

