

Intro

What was the starting point of the project?

Alloment gardens

Interest in materials and object, I was looking for a crafty approach, Invested in the materials worlds surrounding us

Worked on project about allotment gardens, Interested how the people relate to their garden through objects, How they are used to shape and care for then garden, How this entangled process or world-making happens

How could we implement this thoughts into the architectural practice

What is the problem you see?

Plastiglomerate

This is where my problem lies, I miss this caring for the matter we work with in the practice, Although the outcomes are always material

Not only in architecture, It seems like we have disconnected us from the material realities we live in, We follow a failed narrative of progress where only more advanced technology can fulfil our needs and desires

Technology and thus architecture increases this disconnect, blending out other entities affected by our doings

Reconnect the practice with the matter, reorient towards all life, and think of what architecture might still learn from gardening, by more inclusive beyond artificial binaries like subject object or human non/human

Research Questions

How can architectural assemblages be constituted from a wide range of bodies, that allow them to become aware of the affective environments they act within?

In which ways can these aggregates form new chances of collaboration within ontological regimes in-between bodies, increasing their response-ability?

How will these assemblages in return question the boundary between built object and living system

What was your Methodology?

Began with readings of theoretical text and philosophical questions, looking into several such as ethology or ontology, required reconsiderations for myself, leaving behind binaries that have dominated our ways of thinking, searching for approach that makes no hierarchical difference between human or non/human, looking for a new terminology

Map of Field Study

Parallel field study in the upper Rhine plains, where I am from, Karlsruhe, allowing me to reflect on these questions through actual situations, practices, where various entities are entangled into material engagements, changing their environment and them in return

Three Pictures

Here are some examples, I visited potteries in the Alsace region, old ruins of castles that grew out of the stone of the area, or a trout breeding terracing down a valley

Big model

Nevertheless one place fascinated me the most, abandoned paper factory,

Three maps

The factory is located in the black forest in the valley of the river Murg, between Gernsbach and Forbach and I strongly tied my research towards this specific place, this area of the factory and around it

Gathered Materials

For the purpose of the research I also started gathering materials, like documents or archival, plans to work with in the following process

I used many different methods from the research on into the design like collaging, acetone printing, photography, building models, but also writing a fiction story about the area

Processes

This lead me also to the discovery of connections of processes between entities, these were a main inspiration for the design and the entire project, towards the space as a space of processes to be revealed

Theoretical toolbox

From these visits and experiments a certain conceptual toolbox started to emerge, that offered me new answers of what can be perceived as life, provides new modes of description and reveals the hidden signs and rhythms that constitute all beings in our surroundings

Cosmos Bodies Memories

They are also the chapters in the story, along some of the content I will now introduce you to these concepts, along the story of me going into the landscape, strolling through the forest with Martin and visiting my own project site

Cosmos

The first concept asks for the question what architecture actually begins with and how can it be placed in a steady continuum with nature, but also more generally life

Cosmos is an overarching element, and underlying force, a constant field of potential, from which everything emerges, meaning that life itself is nothing more than the channeling of certain cosmic potential and forces

This renders inanimate entities lively, revealing that there is no such thing as passive matter

What does that mean?

The landscape here can help us understand, applying cosmic timescales, how it emerged through glacial happening through a time span of millions of years, the river here being a lively reminder of this happening, still carrying away sediment and boulders, actively carving out the canyon here in the valley

There is thus no real distinction between life and non-life, as existence itself situates everything on an equal plane, a steady flat continuum

Meaning how the river was actively engaged in the livelihoods of all entities in this valley, channeling its forces, such as the forestry workers of the murgschifferschaft, being the main economic force in the region for hundreds of years, carrying the logs out of the forest, surfing the stream down towards the Rhine,

But also paper production, as the river and its granite canyon here allows for ideal conditions for fir trees to grow, the main resource for the production

There is no escape from this place of existence, as we can also see jumping forward in time, farmers fertilised their fields with mud waste of the paper production, which contained high levels of PFAS components, now threatening to poison the groundwater in the entire area

Bodies

Bodies usually means the morphological whole of something, although some entities complicate this definition drastically

One example being the fungus, often confused with its fruiting body, but its body is a network of thin hyper strains in the ground to go into inseparable connections with host trees, these thin strains allow the fungus to think, react, digest, sense, without any of the what we think necessary organs

We need to rethink what we define as the body of something, also beyond any distinction between subject and object, replacing the notions of form, type, class with the notion of information

A body is defined by what it is affected by and what it can affect, it is thus inseparably tied to its subject environment and how it relates to is

In the book I have a discussion with Martin about this, and how a mill is related in a sense to a fish, both have to be considered alive bodies as they internalise the cosmic force of the river, one propelling itself forward the other passing on the affect through a rotating motion, in its own niche, its own subjectivity, for Martin the fish doesn't understand his world and the mill doesn't even have one

Memories

The last concept memories describes in which ways knowledge, signs or information is surpassed between entities

Different knowledge systems have to be taken into account, first of all the genetic memory system, the genetic code, the fish egg layed in the gravel of the river

The Murg was for a long time the main mating grounds for Salmon in the region of the upper Rhine, which stopped due to changed water flows until no Salmon was

spotted in the region for 200 years, stopping the fish to surpassing its genetic memories

The second the epigenetic memory system describes how certain memories enter our bodies, as they are stored in our surroundings, as forces, flows, intensities, in relation to its mating grounds this for the fish is a smell, linked to the geomagnetic field of the earth, telling it where to go, it is a memory outside of the fishes body although inseparably bound to it

The third the epiphylogenetic system is produced through an artificial a technological materialisation, extending a body for a specific purpose, placing a bodily function outside to be surpassed through space and time, a universal archive of a function

This memory system is often considered the promethean moment, where a split between human and other occurs, but they do not only affect us humans

Like the dams in the river, built for a purely human purpose, denying the fish entry

But this system is or can be strongly tied to symbiotic ways of becoming, the fish staircase is such an example, it is the inscription of the bodily affects of a fish, allowing them to re enter the river after their absence, and since 2008 a population is now able to lay their eggs again just up the river of the factory

The Sticks and Stones

While I was on site, Tried to present these concepts in an intervention, that we can now look here, and think about what can be seen as a living system, a channeling of cosmic affects, through bodies affecting one another, by the artificial means of a technological object, the thread

End Theory

The three concepts come together in this place, this is what my project is about, this place, this site, how it constitutes and what we can take from these stories for architecture, it is simply where the salmon walks up the staircase

The Route

These thoughts lead to, what the factory actually is, how it relates to river, thinking of the factory as a lively system, an organism, urging us to think the body of the factory new, from what is the factory affected by where does it start

The dam in the factory is not part of this one, we need to extend the body up the river, where water is stored, and there factory begins, this connects to village with train station

New path is created, a new entrance to this place, establishing alternative path for hikers and visitors, following a different height profile, through the tunnel and the aqueduct, second water flow for the factory, steady momentum, to be released at the water energy plant on the site

Aggregates

Along route aggregates, underline cosmic play, the bodily extensions itself, how memories materialise here along the path

We pass an exhibition of stalactites in a dark and moist tunnel where water and concrete form this natural happening, or a newly erected structured on the aqueduct, where water allows for mosses and lichen to grow and once a year changes to highlight the annual fish pilgrimage, or the water filtration plant, that is now feed by a small stream entering the Murg, becoming a bath, a filter, and a fish breeding

Siteplan

The route leads us to a new arrival on the site along the canal from the back, coming through the camp site

To our left the canal now reaches back into the river to stop an overflow of water, and disappears under the concrete

Siteplan II

Here I used this thought of cutting, coming also from the collaging, to reveal this hidden waterway, create a void in-between two buildings, forming a new tower as a first landmark to arrive at

Water Tower Model I

Here we can walk up to the top, around a void in the middle where rainwater can enter, the building is rainwater filtration unit in the light shaft we find the different layer for filtration, guiding us from the depth to the top,

Water Tower Model II

Each layer here is formed by different entities, each having a different affect on the water but is also affected differently, it not only shows us the plot and the river, but the usually invisible filtration process of water in the soil a slow intensive happening, being one of the most important for the place to become as it is, it is thus a form of an observatory, to evoke interest once more

Siteplan III

This internalisation of water in different ways went from fascination into the design, it forms a first element of the plot and how to weave it together, using water for

electricity but also heating and cooling system, binding the buildings and the site together

Moments

The network starts with certain moments I found on site and enhanced these with the help of water, it emerges from these singular moments, important strategy of mine

Water Sections

Again it is this method of cutting, collaging, that lead to dissection of the plot, leading to the thought of the plot as a threshold, between slope and the river, a re-distribution of water, allowing for affects to unfold in different ways for many entities, as it is filtered, frozen, foggy, moist, stored or heated in the buildings

Fungi Picture

These networks of course also point back to the thought of the network as a body, thinking about the fungus and its hyphae strains underneath the soil, in terms of programme this also became an important figure to think with

The Site

Siteplan IV

The body as a network of bodies also informed the programme, with various functions that complement each other as a system

I categorised my programme in three types, that are always very related, I aimed to established a garden of discard, where from the debris new life emerges in the ruin garden, a laboratory of knowledge, where organisms can teach new modes of living in two public laboratories, or the archive of organisms, and a home for many, with a small informal camp site, a bath or a hikers accommodation

Importance of the ruin garden, former hall is deconstructed, opening up the plot for more bodies to enter, but also light to increase the degree of comfort on the plot for

all, breaking down the narrow linearity of the plot, opening up the thresholds, creating space for a garden

Collage Greenhouse

At the upper end in front of one of the laboratories we find the greenhouse, where plants medicinal are fostered, securing the knowledge about the healing affects of these species, but also serving as an anchor for the public with a cafe

Collage Arcades

The former walls become arcades, creating the character of a hurts conclusius, still allowing for spontaneous vegetation from the forest to enter, a play with the notions of interior and exterior

Collage Entrance Bath

Walking down the garden, we still reminders of the old factory, its columns and machines, the garden is used to retain water, altering the micro climate, small ponds can form in winter and evaporate throughout the summer

We then enter the bath, placed in the former building where the wooden logs were cooked to release their cellulose, behind this building we previously entered the plot form the route

Plans

We pass a zone with reused lockers as changing rooms and toilet cabins, to reach the swimming hall, the building is only changed in so far to allow for the water from the river to be used for bathing by minimal means, trying to enhance this virtual potential and making it freely accessible

A seasonal bath, where the water is constantly flowing, the upper floor allows for light to enter

Here the water is cold in summer and warm in winter and the building is not insulated, the water is heated by the compost house in the back of it, where decomposing matter generates heat through an intensive interaction in between bodies, creating a thermal bath character,

The bath thus reminds of the famous cur towns of Baden Baden and Bad Wildbad, also in the reuse of old tanks in the upper floor for kneipping, a typical cur bath that heals inflammations

Bath is about affective internalisation of cosmic forces and healing potentials, making them publicly available and free to enjoy throughout the year

The water from here on is then reused again in the water system, cooling or heating other buildings on the plot

Electric Documents

The bath can remind us how important it thus is to think about the transaffective unit we can form, what happens between us and the water is the crucial point, how certain signs and memories are surpassed between us

These documents from the plot show the electric circuits behind the production process, they strongly reminded me also of mycelium, signifying again how bodies constantly form transaffective systems, like us and the water also

It represent how technologies allow bodies to extend, to store the memory of certain functions passing them on through time, information can thus be transcribed, here in electric signals, just like the fungal language, to then be expressed in a new way again

They allow us to extend our bodies, increase our bodily capacities, forming a new whole, this transaffective unit with the machine

The Chimney

The chimney signifies this though, not only forming a landmark that is visible from afar, but it is now used as a periscope, where a mirror reflects light into the shaft, where we can have a new sight into the landscape through the reflection of the light on a water surface

The chimney now allows for the extension of our body to the top, it reaches a new function, it can now surpass new kinds of memories than before

The Building

So what does that mean for architecture as a technology, again bodies consist of parts that are bodies themselves, each body part having a specific function or purpose, transmitting certain memories, crucial for the overall system or body

Periscope reminds us these can be altered, opening up to new possibilities and potentials

Siteplan V

This is the last strategy that is key to the project, former hall and other building are deconstructed, large amount of different memories are now freed, can be spread throughout the plot, reaching new places and functions

Harvest Map

I used gathering and harvesting memories as a method, to see what is to be found on site and how to use it differently, like the grids in the water tower, the lockers in the bath, or the kneipping tanks

Final building

One building brings forth all aspects the most detailed, the metabolic laboratory and hiking accommodation

As you found it

Massive building mass, large volume, like a wall to the river

Floorplans

I continued with my approach of cutting and opening, forming a new threshold to the river, starting with the gap to the tower, change the way how the building relates to river

Ground floor metabolic laboratory, three volumes in-between outside spaces, the facade elements are rested, folded inwards to creating these four different courtyards or openings, the lower floor is now changing through the season, again denying a fixed categorisation into interior or exterior, as it constantly changes throughout the year,

Two yards are closed to the river, two are open, the closed are limited by the compost in the back, this laboratory asks for a new conception of what we think of as a lab, could also be a recycling facility, but it can always change for the public, from day to evening, reaching from the gardens into the space

Upper Floor, existing structure of building was ideal with the beams and columns, by opening up cutting in the roof, these patios are created, gardens can emerge as the centre of flexible living units, that can also be used as different kinds of holiday flats for example,

Model I

On the back, the river facade is now very lively, as large trusses from the ruin garden allow for a new relation to the river, connecting the floors, enhancing the building as a system, collaged together by different body parts

What means the building as a living system? The end of the construction is only beginning of further change, where exterior and interior constantly constitute each other, less about the parts but the transaffective possibilities it forms

Sections

We can see how the former basement is now slowly becoming a garden, filled with some of the debris of the ruin garden, but more importantly feed by the annual finished compost that also heats the building, a slow becoming of a garden, as the building metabolises the plot itself, holes in the patios can trigger this becoming by letting water enter

The trusses now from terraces in the river, connect the two floors, through a waste system, where discard of the upper floor is directly fed into the compost, which is meant to be also used for human manure, using our discard as a beginning for something, an inseparable connection we often seem to ignore, how to work with the discard than make it disappear, a lesson we can still learn from gardening

System Section

The building as a process, where parts of the plot are metabolised, rubble is composted, creating heat and methane gas for the building in return, parallelly the building is connected to the river, using its water for cooling and the production process, storing it on the plot for times of drought

Construction

A similar strategy also applies for the construction, the insulation for the upper floor is using the paper trash and old grids from the site, trotted with fungal substrate the waste is metabolised by the organism, through pressing and heat the organism die off, now forming a hardly inflammable insulation layer, blurring our boundary between interior/exterior, technology or nature, it is an architectural construction as a becoming-with

PFAS Plan

What is the larger idea? Is there a temporal strategy?

The site now holds functions that relate it back to its surroundings differently, after its time as an extractive machine producing paper we can now use the building to store matter, positively affect the micro climate, store knowledge in different ways, being publicly accessible, but also reverse the process of extraction with the help of the river out of the forest, as it is where the salmon walks UP the staircase

The fertile soils from the composts can help to heal the damaged parts where the bark beetles has left its marks, the production process can digest and metabolise first the plot, but also some of the soils from the poisoned fields in the plains, with the help of ancient organisms

In the more distant future, but also a precedent for all the paper factories in the valley, the factories can now also help to extract lithium from electronic waste products, and putting it to a new use, helping us to restore our problematic relationship towards constantly new merging technologies

Read Excerpt

‘In the laboratories here, we explore new ways of collaborative living. These facilities are also open to the public instead of hidden behind high fences. [...] We aim to present people with the question of how engaging with matter by scientific means at the same time automatically comes with a certain production of culture.¹ [...] After the age of paper faded, the space here became abandoned for many years. As we switched from using paper to using mainly electronic devices, places like this were simply obsolete and many people in the valley lost their jobs. For the region, this was a dramatic change. Additionally, the increase in electronic devices caused more and more environmental issues, as they were simply dumped on waste sites. At the same time, the government started extracting Lithium here in the Rhine Plain, which already caused several earthquakes as you may have heard.² **Lithium is a key component for the production of batteries in our cars or our phones. Here we recycle this electronic waste.**’
[...]

‘The electronic waste is collected and ground in these mills down there. Vapes, phones, car batteries, everything you can imagine. [...] In these bioreactors, the bacteria split open the dust particles and extract the alkali metals such as Lithium or Cobalt from the waste. These are remarkable organisms, they survive without any sunlight or oxygen. Feeding on metal ores deep in the ground, these ancient archaea survive in the Hadean underworld. Far older than

¹ Karen Barad, *Meeting the universe halfway* (Duke University Press, 2007), 40 .

² Johannes Wagner, “Nachhaltigkeit Im Blick,” KIT, December 15, 2020, https://www.kit.edu/kat/pi_2020_118_nachhaltigkeit-im-blick-lithium-aus-dem-oberrheingraben-fur-batterien.php.

any plant cell, they make us question our ways of being, lively reminders of the beginning of evolution, previous to glucose-wasting cognition.³ [...]
[...]
'Our mission here is to break this cycle of consumption and discard in a new way. [...]

Through the immense increase in the use of electronic technologies, we reached a certain level of dependency on these devices that have proven to be potentially harmful. As we replaced paper with phones, our minds adapted and we extended them more and more into these artefacts.⁴ [...] The ways of social media became increasingly important means of communication. [...] and the can have negative impacts on many levels, but also on our brains, as media semiotics enter our bodies. As we extend our being into these technical objects, we in return can suffer from distorted levels of dopamine flows in our bodies, that in the long term can cause depression and various other psychological diseases. It is the new techno-dependant sufferings of our times.'

[...] Luckily Lithium has more properties than being a great electric storage. What we are investigating here is that Lithium [...] has been used as a component in anti-depressant medication or against bipolar disorder.⁵ This is how we aim to create a disturbance.

[...] in these laboratories we produce medication from the discard, with the recycled lithium as the main component .
[...] We can always acquire new knowledge from these other forms of life. We need to look around us and search for the microscopic alliances, rather than ahead.⁶ Some of these collaborative means of life are not necessarily new.
[...] We've always been weaving our stories with the ones of others [...] ⁷ These infinite worlds extend into each other, becoming together is the base mode of existence, an underlying heterogenous contingency binding us all together.'

[...]

The sun starts to set and its low warm sun rays enter the room and hit through the glass of one of the bioreactors. The light enters the green solution and triggers the archaea bacteria. A microscopic dance starts to unfurl, organic and inorganic matter mingle in a metabolic dance. [...] a world, synthesising itself.

Matter in transition as discard, as digestion, as nature, as medicine, as minds, as culture.⁸ The infinite cosmological cannibalism.⁹ Each portion of matter presents itself to us as a garden full of flowers and a pond full of fish, and each of their drops reveals again a pond and a garden. Molecular entities denying all binaries, organic/inorganic, dead/alive, mind/body, matter/meaning. Revealing the symbiotic art of becoming, at the same time prehistoric and contemporary.¹⁰

Conclusion

I tried of find a new way for architecture that invest itself into the matter it works with, and by doing so opens up new way of becoming, bringing forth new possibilities to engage with architecture as a technicity that affects its surroundings and is affected by them

³ Thomas Feuerstein, *Prometheus delivered* (2018), 144-183.

⁴ "Stiegler's Memory: Tertiary Retention and Temporal Objects," 3AM Magazine, January 23, 2020, <https://www.3ammagazine.com/3am/stieglers-memory-tertiary-retention-and-temporal-objects/>.

⁵ Ute Lewitzka & Robert Haußmann, *Lithium - ein Update* (InFo Neurologie, 2022), 44-53.

⁶ Anna L. Tsing, *The mushroom at the end of the world* (Princeton University Press, 2015), 22.

⁷ Donna J. Haraway, *Staying with the trouble* (Duke University Press, 2006), 59-61 .

⁸ Thomas Feuerstein, *Prometheus delivered* (ERES-Stiftung, 2018), 144-183.

⁹ Wietske Maas & Matteo Pasquinelli, *Manifesto for Urban Cannibalism* (2012), 2.

¹⁰ Gilles Deleuze, *The Fold: Leibniz and the Baroque* (Athlone Press, 1993), 9.

The long term outcome is rather unsure, develops a method that starts with what is to be found on site, how to reuse it in ways that opens up new more inclusive possibilities

It is an architecture in opposition to a narrow view of technology as means to fixed outcomes, clear predictions into the future, rather it aims to free us from the restraints that technologies increasingly put on us, asking for a more intuitive approach

This surely requires more attention towards practice like repair and care through time, to become aware of the discard our practice but also our lives in general produce and how we can use it

Something that might stem from this fascination towards gardens where these practices are still much more valued.

In our uncertain times it is necessary to form these fields for experiment, but that also means in order for these to reach good outcomes, an enhancement for all life, they require the active participation of many actors and I think it is about time that we start initiating these processes.