

Where the Salmon walks up the Staircase



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„Without the Cosmos or plurality of ways to assemble [...] every element would be perpetually stuck in its assemblage, and the universe would halt in a frozen snapshot“

Arjen Kleinherebrink,
Territory and Ritornello.

COSMOS

After being stuck in a seemingly endless traffic jam I can finally take the exit 49 of the highway. I lower my window to let some air in and a refreshing breeze dances around my head. Sunlight enters the windshield and I turn up the radio. It is as if I'm embarking on a journey, like a road trip. I'm getting increasingly excited as I leave the monotony of the highway behind me. Now I'm on my final trajectory, into the Black Forest with its curvy roads and dark valleys.

I turn left. Mountains begin to rise higher into the horizon while I pass the large factory complexes of Mercedes in the area. With each passing curve, more industrial buildings start to appear. A sense of escape envelopes me, as it often does when I venture out into the forest here. Years ago I would come to this area much more frequent with my friends, as we went here on the weekends to go camping in these parts of the forest. It was always a very liberating feeling to stroll down the riverbed to look for the ideal place for a camp. Leaves floating down the currents next to us. We would explore the thicket for the next two days and swim in the river. Our favourite place was a small pond in the river where the steam slowed down, due to a deeper riverbed sculpted through the forces of the river itself. Nestled in the canyon we were baking dough on a stick, scrambled eggs and black coffee over open fire in the morning. Thrilling and cosy, as if the forest was our home, a dwelling open to everyone.

Caution was still necessary. The water levels in the river could rise very quickly. We always had to look for a slight hill to camp on, so the camp wouldn't be washed away in the morning. During the night, we often became a little scared of being caught by the forestry department. Even more intense was the constant level of weird noises you could hear in the forest at night. Is it a boar? After sunset we behaved like wild cats or deer, always alert and cautious. It is this underlying tremble in the forest of

uncertainty, something hidden from you, that can make you feel very little. Whenever you felt you have everything figured out, a night in the forest kind of teaches you that you do not.

I turn right. The roads are like a scene of a car commercial with an alpine feel to them. To my right, an intimidating wall of blank rock rises. It is cast into a web of metal wires, making sure it will stay in place and not fall onto the road. I accelerate to finally leave the potential danger of a rock crushing me behind. Further ahead some scattered houses emerge, smoke rising from their chimneys. Roof tiles reflect the sunlight, in shiny patterns. As I approach, a city starts to appear between the mountains. Gernsbach. One of the few larger towns in the black forest. It still belongs to the larger outskirts of Karlsruhe, where most people commute to work or to other major cities in the Rhine plain, connected by the highway traversing Switzerland, France and Germany, like a pulsing vein. As I approach the city I now have a full view of how it sprawls up from the valley up to the mountain tops. A river, the Murg, flows down the valley on the left, following the curvy road and finally cutting the city in front of me into two parts. Or does not the road follow the river? I'm not entirely sure.

I decide to park the car in the city and wander around in the paths of the vineyards. On top of the hill, an old castle marks a prominent viewpoint over the valley. The sun tickles my face while the cold wind swirls around my legs. I sit down on a bench and marvel at the panoramic view over the valley. I remember how we often went hiking here with my parents on a folk tale trail, which we children were always very reluctant to go to. I was always very excited about the myths and tales of the forest, passed through generations. The black forest was surrounded by the fog of myth for centuries. It is a place of tales and stories. It was also here that the brothers Grimm collected many of the tales people told each other, binding them together into the most important collection of stories or tales in Germany.

Some of them have now even made it into blockbuster movies. For a very long time, the black forest was quite impermeable in most parts and thus just scarcely inhabited by humans. The dark thicket kept people from entering, through its physical density, but also the sheer thought of demons or witches roaming through the forest. It's a strange thought. I know that none of this exists of course, yet remembering the experiences during our camping adventures, I somehow can relate to the people hundreds of years ago.

The black forest for long was a natural border. A steep parkour of dark valleys, foggy moors and cold and stormy peaks of mountaintops. Tree after tree stands their guard, denying entrance to intruders. Nevertheless, pilgrims sought out to settle here. For their arrival, the rivers were very important. Large settlements were found along the edges of the black forest, almost exclusively on rivers. When arriving from the plains of the Rhine in the west, the rivers formed the gateways to the innards of the forest, just as they are today with the roads following their curvy patterns deeper and deeper into the thicket. The river here not only provided resources or food but also the physical features of comfort, needed for a place to settle. After the Celts also the Romans have left their traces here, some of which are still visible today.¹ Sitting here and looking over the city and the landscape it seems like all this history of the first settlers is still inscribed into this place. Like a reminiscence to the first pilgrims entering this area and their struggles in changing the environment to make it their place of dwelling. This deep connection between the landscape, the city and the people populating this space has prevailed. The way the river has changed the landscape here doesn't seem to have any reason but its own. Like cosmic reasoning, an inner logic with no purpose lies underneath all these ways of being.

The history of the Murg Valley, as I see it in front of me now, starts back many million years ago. Although it is crucial to consider that a landscape itself doesn't have a beginning or an end. The landscape itself is constantly on the move. The valley here

was part of a larger glacial area. The ice stretched down high from the mountaintops of the Hornisgrinde, towards the plains, carving out the stone in the area, like a sculptor of this territory.² A constant, crawling rhythm, carrying way particles with it. There is no inanimate, just a continual distribution. The time it takes for landscapes such as this one to occur is enormous. Processes of such scale in space and time tend to withdraw our human modes of perception and thinking. Nevertheless, it is processes like these that left the world in front of us as we know it now. Imperceptible for us the landscapes have their own temporality, only perceivable in cosmic time scales, rendering a landscape active not static, a constant unfolding and crystallisation.

The glacier becomes active, a dynamic being leaving its traces, its carvings and scratches, on the landscape that I look at now. Its sheer masses of ice moving forward on their eternal trajectory, accompanied by many material entities, on a journey through time and space. As the ice ages came to an end, the frozen masses started to melt. Atomic particles mingle in a dance towards fluidity. From this infinite waltz, rivers emerged. Glacial descendants bearing witness to long-gone eras. Water is force and entity at the same time, where there is no real individual. Only constitutive exchange, determined by the actions in-between, calling any present into question.³ A timely threshold, that seems abstract, but it can be perceived. When travelling up the Murg, there is evidence, and the ground underneath your feet changes. Now here in Gernsbach, the stone I am sitting on is sedimentary. It is red sandstone, a very common building material in the area. The town hall is an impressive example of the use of this stone, which was also very frequently used for the plinths for houses throughout the Rhine Plain.

Cities such as Strasbourg, Freiburg or Karlsruhe share a distinct southern characteristic, as many buildings are equipped with masonry elements from this warm red stone. However, as you venture further into the valley beyond the city

² "Die Karseen Im Schwarzwald." Schwarzwald Informationen. Accessed December 12, 2022. <https://www.schwarzwald-informationen.de/karseen-und-hochmoore-im-schwarzwald.html?id=275>.

¹ Wagner, H. (2011). Römische Besiedlung im Schwarzwald—von der Auffindung des Udenkbaren. *Archäologische Nachrichten aus Baden*, 82, 10–26.

³ Karen Barad, *Meeting the universe halfway* (Duke University Press, 2007).

of Gernsbach, the stone's colour and composition changes. The red tone transforms into a colder, light grey. Granite emerges from the depths and appears on the surface. A much harder conglomeration of minerals, but more importantly much older. This is the trace of the river's eternal doings. Throughout time the river carried away the layer of red sandstone, mineral particles washing down the riverbed until it reaches this city around where the type changes. Further up the river, above Gernsbach, the valley is characterised by large grey boulders in the bed and steep canyon-like parts with characteristic cliffs. An ancient layer of rock appearing from the underworld, following the course of the river in a thin path where the water has revealed its existence. Down here, where the river has yet to do its slow carvings, the river appears calmer, with mellow, sandy banks sliding into the water as they cover the underlying rock.⁴

As my feet start to cool down, I decide to get up from the bench and walk down the vineyards towards the city centre. The vine around me seems to thrive on the warm sandstone slope in front of me, it does less so on the shadowy granite canyons nearby. It was the Romans that brought this plant as part of their culture hundreds of years ago.⁵ The whole upper Rhine plain is full of vineries nowadays, as they have become a crucial part of the landscape and economy of the region. The area today is renowned for some of the best white vines in Germany.

Gernsbach is the last city where the river allows vines to sprout on its sediments until this place will share the fate of the rest of the valley above and the sediments will erode to the inevitable force of time. Up the river, the valley has become too narrow and shadowy for any vine to grow. A vibrant working of many entities, in persistent entanglement, constituting the place as it is in front of me now. A moment, a small portion of time, as the result of a history that goes back millions of years. Vine, Romans, the Murg and a long-gone glacier and its sediments. Nature and culture are entangled in a state that defies their dis-

4. Geyer, O. F., Gwinner, M. P., Geyer, M., Nitsch, E., & Simon, T. (2011). *Geologie von Baden-Württemberg*.

5. Wagner, H. (2011). *Römische Besiedlung im Schwarzwald—von der Auffindung des Unkenbaren*.

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

7. Scheifele, M., Katz, C., & Wolf, E. (1988). *Die Murgschifferschaft: Geschichte des Flosshandels, des Waldes und der Holzindustrie im Murgtal*. Casimir Katz Verlag.

8. Scheifele, M., Katz, C., & Wolf, E. (1988). *Die Murgschifferschaft: Geschichte des Flosshandels, des Waldes und der Holzindustrie im Murgtal*. Casimir Katz Verlag.

inction and inherently problematises the terms themselves. It is less a matter of the one influencing the other, but of inseparable co-existence on an equal plane, the dynamic relation of becoming between them.⁶

A charming scenery of little houses arises in front of me. Their style indicates that most of them were built in the 19th century, with the typical red stone plinths and beautifully carved ornaments, the town hall marking a manifestation of the art of masonry. Gernsbach owes its existence to the things people were able to get out of the forest. And in this very case, the meaning of getting something out of the forest can be taken literally. The main source of income for the city for a very long was mainly the “Murgschifferschaft”, or Murg shipping company which held a monopolistic grip on the economy of the region. The town hall again pays tribute to these times, as it was formerly built for the head of this enterprise.⁷

The Black Forest mainly consists of silver fir or larch trees. Their dark needles, seemingly black from afar, have lent the forest its name. Compared to other types, these trees grow fast, large and very straight with few branches. Due to these features, they are until today a much-needed, reliable resource for various uses. During the time of the “Murgschifferschaft”, between the 15th and 18th century, they were mainly needed for building in swampy areas, such as the Netherlands, where many of the pillar foundations came from the Black Forest. But also the construction of large vessels, like the ones with which the Dutch went out to conquer the seas, required this type of long and straight logs for the masts.⁸

Due to the enormous number of these trees growing in this area, the Black Forest was a perfect place to gather this resource. However, the dense and steep landscape posed a challenge of how to get the large logs out of the forest and to their final destination. The people in the Black Forest thus made good use of their understanding of the surrounding landscape. After the trees were cut down in the upper parts of the mountains, the

workers assembled them into enormous slide-like structures, which translate to “giants” (Riese), with which the trees came rumbling down the slopes. During this very dangerous work, casualties were high. Once the logs arrived at a smaller stream, they were joined together into small rafts. These streams that fed the Murg often carried only very little water. Consequently, the workers developed an intricate system to be able to deliver the logs on the water also in times of drought. The water of these small streams was collected in dams and could then be released in a wave that the floaters would surf down the streams towards the Murg. Once they arrived, the smaller floats are tied together into larger carriers, which were then floating further down the Murg towards the Rhine, where again several floats were bundled together. These big floats then travelled down the big stream towards the Netherlands. With a length of up to 400 meters, these floats were just as long as our longest containerships today. This resource delivery business brought great economic power to this valley.⁹

The specific constitution of this place, this combination of natural precedents, and the abundance of entities intertwined with cosmic forces became an economic advantage for the people to be here in this place. The people here were, and are, reliant on this landscape. Not only the trees brought wealth to this place but the Murg itself. It not only allowed for access to the forest but also for the delivery of goods towards the Rhine. Taking this into consideration I hope to highlight again that there is no meaningful boundary between nature and culture. The people here are entangled with their surroundings, in the making of these worlds.¹⁰ The landscape influences their way of being just as much as they change the landscape when cutting down the trees in the area. As material entities both, humans and landscape, are within the same reality, they share an equal plane of existence, not an Aristotelian ladder. Both emerge through time from a potential that existed much longer than this landscape. Every-

⁹ Scheifele, M., Katz, C., & Wolf, E. (1988). *Die Murgschifferschaft: Geschichte des Flosshandels, des Waldes und der Holzindustrie im Murgtal*. Casimir Katz Verlag.

¹⁰ Anna L. Tsing. *The mushroom at the end of the world* (Princeton University Press, 2015).

¹¹ Kodalak, G. (2018). Spinoza, Heterarchical Ontology, and Affective Architecture. *Spinoza's Philosophy of Ratio*, 89-107.

¹² Anna L. Tsing, *The mushroom at the end of the world* (Princeton University Press, 2015).

¹³ Kodalak, G. (2018). Spinoza, Heterarchical Ontology, and Affective Architecture. *Spinoza's Philosophy of Ratio*, 89-107.

¹⁴ Scheifele, M., Katz, C., & Wolf, E. (1988). *Die Murgschifferschaft: Geschichte des Flosshandels, des Waldes und der Holzindustrie im Murgtal*. Casimir Katz Verlag.

hing that exists must be seen as a convergence from trembling power, lying underneath as cosmic or environmental forces.¹¹ These allow for every way of being, as they are channeled by entities. This is where life emerges, beyond any distinction between organic or inorganic matter. However this does not imply any transcendental order, but an unfolding of affective relations. It means that existence itself is the mode of being entangled with the world. Just as the landscape is entangled with us. Existence itself emerges on a plane that itself is constituted by parts, that is cosmos, that is the equal ontic footing entities share in reality as their world making projects emerge.¹² Just as the pilgrims here channelled wood down the forest, surfing down the streams, life itself must be seen as a channelling, a channelling of underlying chances or potentials.¹³

As I get back on the road, my head starts to feel dizzy. The air feels dense and thick. It started to rain and the water runs down my windshield, leaving blurry imprints of the red backlights of the cars ahead of me. It becomes hard to distinguish between the cars as I drive up the valley. I turn on the radio again and some chart song comes on. Not my favourite. I switch the channel and listen to the news. A report about the forest fires in the south of France comes up. Meanwhile, I still keep thinking about the ways that nature and culture become one and the same as they overcome the artificial dichotomy and reveal their intrinsic connection.

At the start of the 19th century, the demand for wood for the newest “cultural” manifestations had shown dramatic impacts on the landscape. After hundreds of years of living from the forest, the forestry in the Black Forest cut down most of the fir trees, leaving the landscape with only a fourth of its usual amounts. The impacts were devastating for the forest as a habitat and for the people with their main source of income gone.¹⁴ This and the modernisation of the valley through new technological means lead to the end of the “Murgschifferschaft” at the beginning of the 20th century. In the valley of the Murg many paper fac-

ories had appeared, still reliant on the landscape and the forest, with the abundance of cellulose found here, but making new use of its materials. Cosmos prevails as new eco-technological entanglements emerge.

For many years the paper factories in this valley were the main employers of the area. But just as technological advances led to the disappearance of the “Murgschifferschaft”, most of the paper factories have gone bankrupt as we moved on from paper to other forms of media. Yet the factories have left many traces in the valley, some can even be found further away down the river in the plains of the Rhine.

Recently more and more scientists are warning of chemical components called PFAS, as they found proof these components cause cancer.¹⁵ Our prevailing modes of thinking have caused us to believe that in some way, the human mode of being seems to be on another plane, that we are not really part of nature anymore as we have moved on to our “cultured” ways of being. In 2018 farmers bought a fertiliser mud from a company just south of Gernsbach. The mud they obtained was a waste product, a grey muddy substance, discarded from the remaining paper industry in the valley. The mud was brought out on the fields for its fertilising effects. However, it contained very high levels of the mentioned PFAS, which lead to a big-scale contamination of these fields, a vast area. Furthermore, the chemicals have reached groundwater levels. It is a large-scale contamination. What is left is a landscape of discard, poisoned and also useless for any human purpose as the PFAS levels are so high that growing crops on these fields is now forbidden before a process of decontamination has taken place.¹⁶

People live in a landscape at different moments in time and still connections start to appear. It is the negligence of the shared plane of existence of life, technology, nature, cosmos, that seems to have caused a disturbance for many lifeforms, just as the forest was cut down because the demand for the wood of the forest became too high and the people were lacking a way of life that

was in rhythm with the ones around them. The things we produce will always come back to us, one way or the other.

The federal government of the state has already confirmed a new technological trajectory. As the modes of technology have changed again it is now time to gather the new resources that are needed for these advancements. As we change more and more towards an electrified way of living, our tools require Lithium for their batteries. A metal that can be found deep in the ground, emerged in a vast timespan. In order to gather this economically highly valuable resource there are current efforts to drill deep down in the earth, into these ancient mineral layers, preceding our existence by millions of years. Despite the reports and warnings of an increase in earthquakes through this method, the government wants to follow up on the plan.¹⁷ It seems like a certain ignorance towards the intrinsic relation between landscape and technology has prevailed, we see environments as a resource and not as shared convergence of the cosmic potentials, that might potentially cause great harm as it backlashes to us. We need to find ways to link our lives back to the environments we inhabit, beyond their exploitation for resources, harming all inhabitants of these landscapes. There is no escape from this cosmic continuity as there is no escape from existence itself.

15.

Scheifele, M., Katz, C., & Wolf, E. (1988). *Die Murgschifferschaft: Geschichte des Flosshandels, des Waldes und der Holzindustrie im Murgtal*. Casimir Katz Verlag.

17.

Gerber, Manuel, and Niels Weibel. “Zwischen Erdbebengefahr Und Goldgräberstimmung.” *Tagesschau*, 2022.

16.

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„[E]ach portion of matter may be conceived as a garden full of plants, and as a pond full of fish. But every branch of each plant, every member of each animal, and every drop of their liquid parts is in itself likewise a similar garden or pond.“

Gilles Deleuze,
The Fold: Leibniz and the Baroque.

BODIES

I arrive in Weisenbach and decide to leave the car behind from here. I feel like using my legs from now on, sensing the ground underneath my feet, slowing down my pace and getting a new perspective than the one of a windshield.

The weather changes again and sun rays cut through the thick clouds as I walk away further from the small town and move deeper into the forest. Here, the shadows reign over every inch of the ground. While many plants can't survive in this dark realm, in some places pockets of life thrive in the darkness. Ferns unfurl their feathery leaves in every direction, weaving a tapestry on the floor. Foul logs align the path of gravel. Ghosts of the thicket, like forgotten tombstones of a realm beyond our own. When taking a closer look, the stem expands into becoming a territory by itself. Small pieces of a fractal-like universe. Patches of moss cover the log. I break off a piece of the bark. Small critters flee into the tunnels they dug out in the softwood, and as I stand there I cannot help to feel a strange sense of kinship with these citizens of the dark.

In the dark of the forest, the ghostly trees take on a new life. Other creatures feed off their remnants, making their homes in these structures of decay. The dark and wet conditions cause the log to break apart more. It splits into splinters, unpredictable descendants until it becomes impossible to tell what they had once been. As the log disintegrates more and more it also provides nourishment to the forest. A never-ending process, matter changing its state in manifold ways, a cycle of life and death. Metamorphosis, a forest in becoming.

In the midst of this vibrant play, there is another actor to be found, a true pioneer in the woods. Reaching out of the rotting wood, small shiny moist mushrooms unfold to small parasols, pointing to the canopy. I almost did not recognise them in the

dense thicket. It is at this moment I think back to some extensive walks along the Rhine, foraging mushrooms with friends and family. Just like then, the mushrooms suddenly seem to appear out of nowhere. They often cluster together around a few trees. I pick one of the mushrooms up and inspect it closely. At the bottom of its stem, it is embedded into a white silky cocoon of threads.

We often mistake mushrooms for the body of fungus itself, yet they are nothing more than a fruiting body above the surface, like an apple and its flower at the same time. Like a lookout, a periscope with which it can opportunistically spread its spores with the chance of a breeze into the surroundings. The actual body of the fungus takes place within the soil, hidden from our sight. The white silky cocoon at the bottom of the mushroom's stem is a reminder of this subterranean happening. The body of the mushroom is formed by a vast network of thin white strains, hyphae. They enter inseparable connections with the realm of the underworld in the forest. Roots and stones become their companions in exploration to connect the forest itself. These networks are called mycelium, they form the body of the fungus. Yet as it intermingles with other entities in the underground, the body of the fungus becomes indistinguishable as it enters into the pores of rocks, cracking them open, extracting their minerals or as wood dissolves into the fungus. The fungus doesn't eat by shoving food into it, like we do, it dissolves into its food.¹⁸ It is remarkable how little the physical appearance of these entities tells us about what or how they are. What matters for the fungus? The fungus is better perceived as an underlying happening of the forest, a hidden motor. You cannot know what a fungus is if you do not know its surroundings, and acknowledge its subjectivity.¹⁹

What the forest can teach us here is that there is an inseparable bond between entities and their surroundings. There is no such thing as being in isolation. Being itself is dependent on the space it entangles itself with. Thus a description of any form of being

^{18.} Sheldrake, M. (2021). *Entangled life: How fungi make our worlds, change our minds & shape our futures*. Random House Trade Paperbacks.

^{19.} Bryant, L. R. (2014). *Onto-cartography*. Edinburgh University Press.

first needs to take into account the surroundings of that being or form of life. We mostly describe beings based on their form, and their body as a morphological whole. Yet the mode of definition seems to be easily exhausted.²⁰ These descriptions of an exterior have led us to categorise our surroundings, setting boundaries between types of all kinds of things. Species and classifications cannot account for an actual understanding of beings as they are, especially considering inorganic matter as lively. It is crucial to overcome the distinction between organic and inorganic, which leads to the wrong conclusion of a non-existent boundary between life and non-life, as everything becomes animate or lively nevertheless in different gradients.²¹ Strolling through the thicket of the woods can present a useful method of reflection or diffraction, as a forest is always entangled with no separate predetermined individuals as such.²² The forest itself needs to be perceived as a body, consisting of bodies, just like our bodies follow the same logic. We can play this game endlessly, with every body we find. Thus the body of some thing or being cannot tell us much about what that thing actually is, as long as we define a body by its form or its type. Bodies rather should be conceived as permanent happenings, constituting themselves while at the same time being constantly involved in the process of a constitution of others.²³ The inseparable connection of bodies in surroundings with other bodies, also once formed the beginning of the Black Forest as such. More dramatically it was the beginning of all forests and the beginning of fauna on land as such, as millions of years ago algae forged a collaborative relationship with fungus as they clinched onto the rocks on the shores. It was a collaborative becoming. It is this collaborative way of becoming we need to consider as it renders everything alive.²⁴

Worldiness in the Forest

A shadow creeps up on me from behind and I realise that I got lost in thought. I turn around and an old man in a grey wool coat looks at me curiously. He asks me if I am foraging mushrooms, because if so he would recommend not eating the one I am hol-

20. Kousoulas, S. (2020). *Flights of a spider: a play of architectural limits*. *Flights of a spider: a play of architectural limits*, 113-126.

21. Kodalak, G. (2021). *From Architecture Lifeless to Architecture Alive*. *Architectures of Life and Death*, edited by A. Radman & S. Kousoulas, 39-61.

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

23. Deleuze, G. (1997). *Spinoza and the three ethics*. *Essays critical and clinical*, 138-51. 24 Donna J. Haraway, *Staying with the trouble* (Duke University Press, 2006).

24. Donna J. Haraway, *Staying with the trouble* (Duke University Press, 2006).

25. Sharr, A. (2006). *Heidegger's hut*.

26. Deleuze, G. (1997). *Spinoza and the three ethics*. *Essays critical and clinical*, 138-51.

27. De Meyer, T. (2018). *A Leibnizian Fieldwork: Zebra Stripes and the Monadology*. *Parallax*, 24(4), 466-479.

ding in my hand. 'No don't worry, but thanks for the advice. I am just exploring the area. I want to go to the old paper factory around here. Do you know it?' He replies that he is not from the area, usually, he goes for a walk more in the south, close to Todtnauberger where he is living.²⁵ 'But there are many old factories in this valley that I know, it's as if this valley is a factory itself. I am heading in the same direction. You mind if I join you for the walk?' He seems a bit odd, so I accept. I throw the mushroom back into the woods and we start walking. His name is Martin. We continue the stroll and he asks me about my interest in the forest. I reply that I am fascinated by this place, the forest, as this entangled event of various beings and how these are constantly involved in the constitution of this environment. The forest can be perceived as an entity by itself that consists of an interplay between different organisms but also inanimate entities. I explain how I am currently more and more questioning the hierarchies between different things and beings. I am more intrigued by less reductionist modes of thinking that don't build up on artificial dichotomies as everything needs to be seen as bodies, entangled and affecting each other.²⁶ This is how nature appears in front of me. The forest is a never-ending complex unfurling of life in endless facets. Bodies mirrored in other bodies, as everything unfurls into life itself.²⁷

'Interesting,' he replies, 'I am also often thinking about the forest as a place or landscape. It takes my mind off things, here I have the feeling to remember what is crucial to life. The forest to me is a great metaphor for what being and thinking are about. People get distracted a lot nowadays, they do not cherish these moments of awareness towards existence, or what is actually important, enough. It seems quite interesting but also a bit strange how you perceive nature here. I think I agree that nature truly should be seen as an interconnected web. I have lived in the Black Forest for a long time and I feel like I am bound to this place. It is where I belong, it is what I care for. Care and concern for nature for me is the essence of how we as humans can

understand nature, it is how we are, although this is more and more obscured by the technological advancements of our time.²⁸ Human experience was always prior to our modern modes of understanding.²⁹

As we walk further my view wanders through the thicket of the forest. Sunlight enters through the canopy, diffracting in the mist hovering above the ground. I think about the statement of the old man. As it seems he thinks of nature as an interdependent entity by itself. However, accounting for a description of nature or the entities around us through purely human modes of experience also leads back to modern modes of understanding, that is, the perception of nature as a resource or nature on a different ontic footing. Although it seems like he links human existence with existence as such, it still seems to me as not taking into account the inseparable bond of bodies, beyond distinctions of human and non-human or nature and technology. Like a self-blossoming event that requires us humans for its own understanding.³⁰ Like a shifted dualism, without any possibility of actually overcoming it, with the potential of obscuring reality for much worse.

'Interesting yes, but the way you describe it, it seems like the wanderer taking a stroll through the forest as nature encircles him. How do you account for the wanderer knowing what nature is beyond her own experience? Is it not more the question of what the body of nature consists of, the bodies within bodies? I don't think that nature holds a special place for the wanderer in the forest. We are just a body within a body. I think the terms human and nature obscure this crucial aspect that lies at the heart of the question. Where is our human threshold exhausted and where are we becoming part of something much larger? Where do we dissolve? As we can relate ourselves to other bodies we cannot really account for anything like human experience as the experience itself becomes embodied and thus finally also non-human.³¹

The trees above us slightly shake their canopy in the rhythm

28. Sharr, A. (2007). *Heidegger for architects*. Routledge.

29. Cooper, D. E. (2005). *Heidegger on nature*. *Environmental Values*, 14(3), 339-351.

30. Cooper, D. E. (2005). *Heidegger on nature*. *Environmental Values*, 14(3), 339-351.

31. Grosz, Elizabeth, and Gökhan Kodalak. "Fundamental Connectedness." *Log*, 2021.
32. Deleuze, G. (1997). *Spinoza and the three ethics*. *Essays critical and clinical*, 138-51.

of a breeze. As the forest becomes less dense, more light enters and freckles of sunlight reach the ground. Martin looks to the ground as he seems thinking. He then asks if I really wouldn't make a difference between me and a lizard. If I actually believe in sharing the same position in reality with a reptile or even a plant? I reply that I would also consider sharing the same footing in the world with a stone, as to me everything is alive. Of course, there are graduations but no real differences in the way of being as such.³²

'Call me old fashioned but this seems very strange to me. Is it then that we should regard everything as equal entities, the stone, the lizard and us, the human? Is there, not a difference of how we are in the world, a world that for us is able to understand?'³³ I smile and ask him why for him it seems so impossible that we share the world with others in an equal way, them influencing us in similar ways as we influence them.

Martin stares at me curiously. 'Well to me the lizard cannot really have a world in the same way that we do. And a stone? How could a stone or a tree possibly have a world even? Since you talk about bodies, I would argue that these others are the bodies that make up our world, yet we do not shape theirs that they would account for being as such. Isn't this what makes a world, grasping it? And this is precisely where I see the difference between us humans and animals. Of course, an animal has a world, but it cannot understand it in any meaningful way, they are simply captivated by it.', Martin replies as his stick makes a crunching sound on the gravel on the trail. 'And a stone? They don't really seem to have any understanding, do they? So how are they supposed to have a world, I rather think they are simply wordless.'³⁴

While I think about his statement towards the worlds of others, I feel a little stone in my shoe pinching my toe. I try to ignore it but at some it becomes unbearable and we stop. I take off the shoe and shake out the stone while balancing on my other foot. I almost lose my balance and take a seat on a larger boulder next to us at the edge of the forest. 'But don't you think this is very

32. Deleuze, G. (1997). *Spinoza and the three ethics*. *Essays critical and clinical*, 138-51.

33. Buchanan, B. (2008). *Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze*. State University of New York Press.

34. Buchanan, B. (2008). *Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze*. State University of New York Press.

anthropocentric? Also, since you were criticising modern ways of being, this mode of thinking is what lies at the heart of that issue for me. We always try to reflect on the way of being of others by our means, comparing them to us, try to predict. Although we share the same reality, the same footing in the world, I don't see how these comparisons make any sense.³⁵

I explain further that the question of what the world of the stone is, in comparison to a human one is not really the question to ask. What we should rather do is leave behind any distinction between us, the human, the lizard or the stone behind us. It is this differentiation between fixed categories of beings that already lead to a bias in our mode of thinking. Surely, we'll never be able to fully leave that behind, but we should be aware not to make hasty and false assumptions. All entities, as they are ontic beings, can instead be perceived as bodies. Bodies that are defined by information passing between them, which constitutes their ways of being.³⁶ This doesn't require any predetermination of what they are in the first place. It furthermore questions a pre-individual as such, as it only can be constituted in relation to other entities, through affective interaction.³⁷ This even calls into question the sensitivity of matter as such.³⁸ Thus the categorisation between our categories between animate or inanimate also becomes obsolete. As the stone has the capacity to affect me by pinching my foot, a painful exchange of sensation to me, it becomes active by its own means. Just as active as me as I finally get it out of my shoe and throw the stone back into the forest. It is not the point of how our worlds might exist separately, or who understands the worlds of the others better, but where, when and how do they collide, where do they dissolve into each other? 'All this thicket, the critters, stones, foul logs, the trail which we are on, the granite rock under our feet, considering all of this, it not more of the best impression of an entangled worldliness, entangled becoming, than a metaphor for human modes of thinking?'³⁹

35.

Chandler, D. (2018). *On-topolitics in the Anthropocene: An introduction to mapping, sensing and hacking*. Routledge.

36.

Deleuze, G. (1997). *Spinoza and the three ethics. Essays critical and clinical*, 138-51.

37.

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

38.

Angerer, M. L. (2017). *Ecology of affect*. meson press.

39.

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

A meadow opens up in front of us as we leave the forest. In the distance, a small stream cascades down a narrow path towards the Murg, while the patch of tall grass moves with the breeze of the wind. It instantly feels warmer as the sunlight touches my skin, and the impression of warmth rises in my body. We decide to walk down towards the stream and take a rest on a bench as Martin mentions slight feelings of vertigo crawling up on him. After descending between the rocks, the water seems to stop its flow in a wider pond. It reminds me of the floaters of the "Murgschifferschaft" and it seems as if they left their trace in this space by building a small dam of boulders, to control its currents. Small flies travel, on their trajectories above the surface before being snatched by some fish propelling itself out of the water. A life in constant danger.

Down the stream we spot the remnants of an old mill, bending towards the surface of the water like a willow with its long branches. The wheel still runs in its slow but steady rhythm. I check the map on my phone and the stream leads directly to Langenbrand where the route to the factory in the Murg starts. 'Perfect, seems like we are going to be there soon.' I say to assure Martin who looks exhausted by our walk. 'It's the stream of the old mill, must be this old thing there that lends the stream its name.'

'Funny if you think about how the mill could never be here without the stream in the first place,' Martin replies as he leans back into the bench. 'We watch the rotation of the mill's wheel as it is being forced in its eternal movement by the force of the water. 'You see this is what I meant earlier with an object having a whole world on its thing, even the simplest thing like a mill.' I say to return to our conversation from before. 'But how would you consider this alive then?', Martin asks.

I reply by explaining that the mill has a world and is alive in the sense that it is affected by the river and in return able to affect something. It forms an affective whole in relation to the water where bodies constitute a new state of the other, a new way of being. I would argue that this channelling of inherent poten-

tials within is what we should consider alive. In this way this definition prevents reductionist ways of description, it takes into account differences between the entities, but without relying on concepts such as taxonomical system that allows exclude and can never appropriately account for the complex unfolding that can be found in reality. 'How would you describe let's say a fish, beyond using its form or species as a means of description? Because what does that tell you in the end really about what the fish actually is?' I ask.

Martin replies that it would be the behaviour of the fish that could probably tell the most about how the fish is. 'How does it act in its habitat, what does it do or respond to? It's looking at the fishes' being in its world.'⁴⁰

'Yes, precisely. Because the fish in that sense is inseparable from its surroundings. It constitutes itself as the signs and forces of its surroundings enter its body. It is its subjective environment that forms a unit in itself, think it a bit like a soap bubble.'⁴¹ In that sense the fish might not be that different of the mill and their bubbles burst. You see both from their worlds with the water as the difference in force in the water forms a field of intensity for the both. Like a virtual happening, which is real but maybe not actual. However, these intensive forces allow both, the fish and the mill, to actualise themselves.⁴² The fish, let's say a salmon, affected by the forces of the motion in the water internalises these potentials and responds with its propelling motion forward. If we consider this the mill is also rendered lively. It is also affected by the motion of the stream and internalises it, as it transcribes this affect into a rotating motion. This coded affection of the water is then surpassed from the mill to a stone grinding in a circular motion. Both entities hold the capacity to internalise the intensive forces of their environment, they extend their bodies into their environment as they co constitute each other. It thus becomes less about the fish or the mill per se, but about the trans affective whole they form in this particular moment and

surrounding.'⁴³ 'Surely an interesting way of thinking about all of this.' Martin replies as he looks at the reflections on the water's surface. 'Still, this dissolving of beings into each other seems very odd to me. But should we maybe move on? I don't want to arrive too late at the factory, I still have to get back to Todtnau-berg today.' We get up from our bench at the stream and move on down towards Langenbrand where the route to the factory begins.

43. Kousoulas, S. (2020). *Drift, Naturally: A Trans-affective Unfolding*. *Journal of Posthuman Studies*, 4(1), 76-85.

40. Buchanan, B. (2008). *Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze*. State University of New York Press.

41. Von Uexküll, J. (1992). *A stroll through the worlds of animals and men: A picture book of invisible worlds*.

42. Buchanan, B. (2008). *Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze*. State University of New York Press.



„Memory is not the property of bodies. Bodies, or what appear as “bodies” are the property of memory.“

Raymon Ruyer,
There is no Subconscious: Embryogenesis and Memory.

MEMORIES

Martin and I finally arrive at the small village of Langenbrand just south of the old paper factory after our long stroll through the forest. We head towards the station at the lower end of the town as the sound of the river increases can guide our way. As we pass the tennis courts, we finally arrive at the Murg, where a dam stores water for the factory below, like an extension to the factory, an integral part of its functioning, but neglected as a morphological part. The sound of water rushing down the concrete structure, making its way downstream dominates the scenery. Cut by the dam, the river forms two different sceneries, one being a large calm pond, dark in its depth, but calmly reflecting the sunlight on its surface, presenting a glimpse into the sky only shaded by the canopies of the adjacent trees. In contrast behind the dam, the water makes its way between larger boulders in turbulent motion, painting new silhouettes of wetness in dark grey on the stone, only until they vanish again. Beach-like banks appear on the side, small plants grow towards the light in constant danger of being washed away by larger flooding.

After our stroll alone in the forest I'm quite happy to see more people here enjoying this scenery. Families with their children on weekend trips, crossing the river on a playfully arranged path, made from the discard of old buildings. It looks like parts of the factory found their way upstream, to form a new crossing. Brick structures are embedded in the riverbed, connecting the two sides. The water runs through the structure in its manifold ways of expression. Some children are building small structures out of stone in the structures storing the water, only to release it back in a moment of joy into the river.

'Did you see?' Martin points to the other side of the river downstream to a shadowy spot underneath a tree that reaches into the water with its long branches. 'The red shimmer there, can it be? It looks like a trout or a salmon.' I scan the surface of the water

and also spot a bright red shine reflecting the light, moving in a steady motion, but not going any forward. 'I think you're right yes, it looks like a fish in its mating dress. I heard that salmon are able to travel upstream again nowadays until just north of here to Forbach. The Murg for long has been a birthplace for the salmon in the region, but unfortunately, the increasing construction of dams and the changed flows of the riverbed caused them to lose this access throughout the last two hundred years.' Martin looks again at the fish in the water and then back at me, with a surprised look on his face. 'I've never seen any fish in its mating dress here. We were told that there were once salmons in the rivers of the Black Forest, however to me that always sounded more like folk tales.'

Some of the children decide to play fetch and start swirling around our feet. We decide to pass to the other side of the structure. Martin points ahead, 'Let's head on to the factory, it's getting a bit too hectic for me here.' Ahead of us lies the entrance to an old tunnel, drilling through a steep hill that forms a tight curve in the river. It was revived as part of a new trail that extends from the factory to the village of Langenbrand, making new use of its old infrastructure. 'I'm still struck by that salmon.' I say. 'It's great they can now travel up these parts again. Imagine how hard it must be not to be able to travel back to the mating ground, where you were born, a place that is inscribed into your very flesh and genes. You grow up in this river, as your genetic code is passed into the gravel in the form of an egg. Then you reach your adult age as a salmon in the sea. Suddenly some intensive force, a geomagnetic field presenting itself to you in the form of a smell tells you it is time to get going. A new sensorial event you never experienced before. And you follow. You follow it up into the stream of a large river, the feeling of water changes, and the salt becomes weaker until it disappears completely. The oxygen levels rise and the temperature starts to decrease as little streams bring in more and more fresh water from the mountains, while this strange smell continues to increase. The

more you go up the stream the less fish accompany you on your route. By now, the genetic memory in your body has dyed your skin from a shimmering silver into an intense red. You look your most marvellous and your genes are fully expressing a monadic expression of your sexual desire. However, it is this very coded memory in your cells that at the same moment causes your organs to slowly die off. After leaving the Rhine you carry on into a smaller stream, it just seems right, as it points straight up into the forest.'

We enter the old tunnel. The rusty pipes on the bottom once carried water from the dam to the factory, over an aqueduct that lies at the end of this dark space. The water is kept at a certain height difference, creating an intensive moment, allowing the factory to internalise the force of the water in a spiralling gravitational movement, transcoding the force into electricity for production. 'Imagine coming up to this point as the fish. Your sole ambition is to finally arrive at the end of this odyssey, when you surpass your ontogenetic memory to your offspring, laying eggs in the gravel, from which again a new fish emerges, carrying its genetic code along for the next generation. All the intensive forces of your own genes start crashing down on you, meanwhile, more and more of your organs are failing. But then after leaving hundreds of kilometres of painful travels behind you, you arrive at an impassable obstacle, a concrete wall blocking the stream from the one riverbank to the other. Exhausted from your travels and with no means of crossing, you die. You become a victim of your own genetic memory, it has led you into a death-trap of a human construction that blocks the river for a purely human purpose.'

I look behind me in the dark tunnel as I haven't really heard any sound of Martin. He most carefully makes his way through but tries not to slip on the ground as water drops from the arched ceiling. 'Almost there!', he grunts. 'Surely you fish is not so smart after all.' The tunnel is cold and moist. Water seeps through the ceiling as it makes its way through the underground of the hill.

^{43.}
Kousoulas, S. (2020).
Drift, Naturally: A Trans-
affective Unfolding.
*Journal of Posthuman
Studies*, 4(1), 76-85.

The concrete structure cannot stop it really. It drains through the arch, dissolving into the structure of the material, and gathering calcite particles in it. On the interior of the tunnel, the gathered calcite starts crystallising into stalactite tubes, before the water drop falls to the floor. As if the cosmic forces drive the water to build its own structure, uncontrollable moisture, forming long columns. Some of them have almost reached the ground, making it not easy to pass. We duck through a small part at the end and make it out of the tunnel where the aqueduct points us to the other side again ahead of us.

'I'm quite happy we're out of there again Martin says as he wipes off the water from his forehead. On top of the aqueduct, a wooden structure evaporates humidity into the surroundings. Lichen and moss have appropriated the walls of hay that make the core of the structure. We head further down the trail that is continued to be accompanied by discarded elements of the factory, objects like columns painted in red colour, presenting the path that lies ahead of us. In the distance, a strange gathering of buildings appears.

The first we can see is a chimney pointing up into the sky, on top a large mirror seems to reflect the surroundings into the immense tube of brick. Behind it, another tall structure reaches up above the canopy of the trees. While walking towards the site, to our right big circular basins appear, with children swimming in them. 'That's a nice place, looks like the old water purification plant of the factory.' Martin says as he's on his toes to see what is happening.

The sight of the children playing in the water along the path is truly fascinating. The forces of the environment, the aquatic sensation of the water they swim in, enter their bodies, a gathering of personal experiences, transcending their genetic code. They blur the boundary between the ontogenetic memory the children inherited from their parents as new affective signs enter their bodies, forming a second type of memory. These memo-

ries differ from the genetic code in the sense that they are stored in the environment itself, they are not part of a body from its birth but internalised through our lives. Material memories, affective relations to other bodies, influence our first memory system, where on occasions these second type memories become inscribed into the genetic code, however, this is not a solely human phenomenon.⁴⁴ Here in the forest, trees are able to communicate through the exchange of chemical signs within hyphae networks in the ground.⁴⁵ The fungus and its network-like body become a second type of memory system for the tree, one that is not surpassed through its genetic code in the seed, an exteriorised memory. This is true for all bodies, as they are entangled in constant affective ties with other entities within their subjective environments. Memories are always embodied and embedded. ‘But you see that makes quite the difference, this mode of reflection, the conscious gathering of experiences that allows these children to swim, that varies from the salmon don’t you think? I think we have different modes of discovering and experiencing our worlds than like a fish, rock or lizard.’ Martin responds while I wasn’t even sure he had listened. ‘I think environments have their own means of expression, but we as humans have a distinct one. As we started using tools and technological structures, they surely became a part of our way of being, what made us human. A new mode of revealing nature to us. I am quite sceptical about this mode of being, it points us more and more towards a direction that blinds us to other ways of how we can perceive nature, it is increasingly us who decide how nature is to reveal itself to us. We move more and more away from the state that lets beings be.’⁴⁶

We decide to move on to finally arrive at the factory. I think about his statement and am surprised. ‘I think I would agree with you, that we, the human, have developed a sense of storing new memories in our surroundings that allow us to surpass these between generations. I also agree with you that technological structures are surely that, like a new externalisation of memory, ob-

jects being archival of their own function, they are a third kind of memory.⁴⁷ I would also vary not to fall into a technophile way of thinking, that blinds us, narrows our field of sight, ignoring the ways of others and leading to human modes of exploitation. But you see, I think by acknowledging the fact that our technological advancements are not only affecting us humans, but instead are again a meshwork of bodies affecting bodies within a cosmological framework, we can actually arrive at new modes of thinking in that sense. It is not necessarily that innovation is only interpreted by us, but has actually entails a co-evolution for an abundance of interpretants.⁴⁸ First, second and third type of memories are increasingly intertwined and that goes for all living beings as we can always only become together. Do you know why the salmon have returned to this river after almost two hundred years? It is precisely because of this reason. We left a prior mode of thinking behind, that technology solely shares a relation with us humans. The salmon has returned as we figured out a way to include its mode of being into our structures, by thinking of it as a body that is affected by the motion of water allowing the fish to propel itself forward. Our solution was to build staircases for the fish, implementing its affective body into the dams along the river. Like a monadic inscription of the salmon into the body of the technological structure.⁴⁹ I think there are ways for us to acknowledge other ways of being in our apparatuses, but only by leaving the human / non-human distinction and moving towards less reductionist and more situated modes of crafting and thus thinking, considering cosmos, bodies and memories as an inseparable triad.’

Martin and I enter the old paper factory through an opening in the wall. (Although I only got to know him some hours earlier in the forest, he already makes a good companion to stroll around with.) An extension to the building was torn down which left interesting imprints, remnants of turquoise tiles, like an abstract painting. We walk through a dark space, a wall of granite rock seams our path on the right. Torn down buildings,

^{47.} Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Duke University Press.

^{44.} Bryant, L. R. (2014). *Onto-cartography*. Edinburgh University Press.

^{45.} Sheldrake, M. (2021). *Entangled life: How fungi make our worlds, change our minds & shape our futures*. Random House Trade Paperbacks.

^{48.} Gorny, R. A., & Radman, A. (2022). From Epiphylogenesis to General Organology: Introduction to “The Epiphylogenetic Turn and Architecture: In (Tertiary) Memory of Bernard Stiegler”, *Footprint* 30. *Footprint*, 16(1 (#30)).

^{49.} De Meyer, T. (2018). A Leibnizian Fieldwork: Zebra Stripes and the Monadology. *Parallax*, 24(4), 466-479.

^{46.} Cooper, D. E. (2005). Heidegger on nature. *Environmental Values*, 14(3), 339-351.

piles of debris overgrown by a thicket of moss and lichen. The sounds of water pouring down the slope, scattered in numerous ways throughout the site, rushing down back into the river. A large hall in the middle of the plot has made space for a vast garden, a garden of discard, any distinction between inside and outside spaces seems to crumble. People in white coats are walking around, families enjoy a cold drink on the terrace of a cafe that seems to emerge out of the ruinous garden. ‘What a strange place,’ Martin says. Above our heads, we hear chatter and as we turn around we see elderly people in bathing robes walking out of a building above us ascending a slope to what seems to be a sauna. Shortly before we make our way to the large building on the other side of the plot, a woman in a white lab coat appears in front of us. Martin suddenly seems very curious and walks up to her with his stick in his hands. He greets the woman and asks why so many people are dressed in white laboratory coats.

‘This space was formerly an old paper factory, but years ago it went bankrupt like most of the others in the valley. Since then this place has evolved to hold a variety of functions. There are laboratories here, which is where I work. Then a small space to camp or a compost building to generate heat. There is a cur in that old building over there and a thermal bath from where you entered. Here in the front we also have a greenhouse for medicinal plants and there is an archive for a similar purpose.’

‘I wasn’t expecting this in the midst of the forest. But if I may, what exactly are you doing in these laboratories here? They’re enormous?’

‘If you like I can give you a little tour.’ Martin and I look at each other, nod and start following. ‘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 make use of interweaving functions, not only in the sense of technological aspects, such as heat dispersion but also in terms of social interaction. We aim to present people with the question of how engaging with matter by scientific means at the same

50.
Karen Barad, *Meeting the universe halfway* (Duke University Press, 2007), 40.

51.
Johannes Wagner, “Nachhaltigkeit Im Blick,” KIT, December 15, 2020, <https://www.kit.edu/kit/pi-2020118nachhaltigkeit-im-blick-lithium-aus-dem-oberrheingraben-fur-batterien.php>.

time automatically comes with a certain production of culture.⁵⁰ Here, we acknowledge this connection and weave these aspects also spatially closer together. But more specifically the laboratory of knowledge, as we call it, is primarily a recycling plant and a medication production. 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.⁵¹ Lithium is a key component for the production of batteries in our cars or our phones. Here we recycle this electronic waste.’

We enter the large tower through a side entrance and arrive in an impressive hall, large windows facing towards the slope, presenting a panorama of mossy rock. On the wall in front of us, a mural decorates the wall, a fresco of an electronic circuit. After entering through a small door on the left we arrive in a sacral-like space, almost ten floors high, with no floors, only paths of metal grid, creating patterns of overlap as Martin and I look up. It is remarkably silent, something I wouldn’t have expected from a recycling facility.

‘The electronic waste is collected and ground in these mills down there. Vapes, phones, car batteries, everything you can imagine. We then mix the waste powder with water and organisms in these tanks. 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 any plant cell, they make us question our ways of being, lively reminders of the beginning of evolu-

tion, previous to glucose-wasting cognition.⁵² You see human existence is only the small tip of an iceberg that reaches far down in the underground, deep into the soil and beyond, where rock deforms from crystallised grids into fluidity.’

The neon green colour of the solution inside the tanks taints the room with an otherworldly atmosphere, like tanks of northern lights. Although the organisms are far too small to see with the human eye, they seem to be there, somehow, like an inherent vibrancy of life. Strange feelings of kinship arise in me, as I knock on the glass.

‘Impressive. I always concluded that it is surely technology that increases this gap between us and nature. It changes our way of what nature means to us, it becomes nothing but resource. Also, the sciences have become more and more isolated, they now perceive nature as a purely objective entity that we need to understand by means of human perception to make use of it.’⁵³ It’s like there is no way out of it, every new invention throws us back into this narrow trajectory. Although you are working with these components as a resource it seems somewhat different to me, like you develop a more intricate relation with these beings.’ Martin comments. ‘What happens to the extracted materials? It is horrible to see how much of this waste is produced on a daily basis.’

The researcher guides us into the next room. Sunlight enters through the dusty windows and falls on a working desk in what seems to be a research laboratory. Different apparatuses diffract the light into a spectre of colours. Like an alchemist’s laboratory. ‘Our mission here is to break this cycle of consumption and discard in a new way. We are precisely working with the combination of the sciences and culture, counter to isolated means of working and thus thinking. We have collaborated with fungi and many other species for a long time, considering also for example the abundance of non-human beings that live within our bodies, so these intrinsic connections are not necessarily new. However, I’m drifting off. Through the immense increase

52.

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

53.

David E. Cooper, Heidegger on nature (Environmental Values 14.3, 2005), 339-351.

54.

“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/>.

55.

Ute Lewitzka & Robert Haußmann, Lithium – ein Update (Info Neurologie, 2022), 44–53.

56.

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

57.

Zahra Kazemian & Mohaddeseh Larypoor & Reza Marandi, Evaluation of myco-leaching

58.

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

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.⁵⁴ Throughout time all these websites and media we used, made us feel completely reliant on them. The ways of social media became increasingly the prevalent means of communication. Although we always knew these means of communication 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.’ ‘Ok so far I understand, but what does this have to do with the recycling then?’, I ask while looking at my reflection in a large column of glass.

‘Well, Lithium has more properties than being a great electric storage. What we are investigating here is that Lithium further has certain effects on the human body when consumed. It has been used as a component in anti-depressant medication or against bipolar disorder.’⁵⁵ This is how we create a disturbance. We grind the phones and other devices, extract the Lithium and then, here in these laboratories we produce medication from the discard. It is like a fight against the negative effects of technology on the human body and the environment. We can always acquire knowledge from these other forms of life. We need to look around us and search for the microscopic alliances, rather than ahead.⁵⁶ Some of these collaborative means of life are not necessarily new. The mould we use to produce penicillin, also here in the building across, also has the capacity to extract Lithium out of such products.⁵⁷ We’ve always been weaving our stories with the ones of others, and although we lost track of sight, collaboration is the base note of our way of being.⁵⁸ These infinite worlds extend into each other, becoming together is the

base mode of existence, an underlying heterogenous contingency binding us all together.’

Martin by now sits in the chair at the desk and has lit a cigar without asking. As the smoke vanishes with a breeze through the window, the researcher doesn’t seem to mind either and just smiles. ‘What an interesting project you are working on. For me this endless enthusiasm was always somehow scary to me, it made me very sceptical of the developments of our times. It can be a strange way of looking at the world. I think all these developments can change our way of perceiving nature as such, rendering it a reservoir of resources more than anything. Through all this technological development we might at some point at some point become blind to how others might present themselves to us in an abundance of ways, how to just let them be.’⁵⁹

I nod. ‘I am very unsure about the technological advancements as well sometimes, it makes me wonder about the technological fetishism various people seem to have declared the base for their lives, for our lives. Considering their harmful effects on the many levels it’s such a strange narration of progress, like the end of a Promethean promise. We shouldn’t just apply them for their primary causes, it is these technologies themselves that should rather make us question the binaries we so forcefully try to hold up.’⁶⁰ Like a lens through which we can finally perceive the intertwined modes of being that we found ourselves in, where aesthetics, politics, ethics, and knowledge emerges from within, from in-between.⁶¹

The researcher smiles and agrees. ‘Seems like the start to a longer discussion here. Well, I’m actually kind of done with my work for today, can I offer you two a beer?’ After our long hike through the forest Martin and I cannot help but feel the immediate sensation of a thirst crawling up on us. ‘Yes please!’ While we open up the bottles of the yeasty drink, something else seems to unfold in the laboratory. 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 starts

to unfurl, as organic and inorganic matter start their metabolic dance. Mineral grains enter the body of ancient organisms of the underworld, a world, synthesising itself.

Matter in transition as discard, as digestion, as nature, as medicine, as minds, as culture.⁶² The infinite cosmological cannibalism.⁶³ 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, animate/inanimate. Revealing the symbiotic art of becoming, at the same time prehistoric and contemporary.⁶⁴

59.

David E. Cooper, *Heidegger on nature* (*Environmental Values* 14.3, 2005), 339-351.

60.

Donna J. Haraway, *Manifestly Haraway: Cyborg Manifesto* (University of Minnesota Press, 2016),

67.

61.

Karen Barad, *Meeting the universe halfway* (Duke University Press, 2007), 33.

62.

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

63.

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

64.

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

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