HYPER

Now that we're here, where are we? Still on the same planet, for sure. But forces are shifting.

TOPIA

STATE Studio
www.state-studio.com

How did we get here? What stance should we take? What actions? And where are we heading?

52° 29' 24.482" N   13° 21' 34.603" E

HYPER
TOPIA

Table of Contents

Manifesto

Now that we're here, where are we? Still on the same planet, for sure. But forces are shifting. How did we get here? What stance should we take? What actions? And where are we heading?
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HYPERTOPIA doesn't claim to have answers. Instead, it presents itself as a platform for renegotiation – a deep drilling rig, if you will, in an ocean of idle opportunities and potential impossibilities.

HYPERTOPIA is neither an island nor a cloud-based never-never land. It is right where we are, in a state of suspense: a transit zone, a time-warp, a thinking space, a borderless territory of transdisciplinary inquiry into planetary futures, new forms of interspecies coexistence, and conscious collectiveness.

HYPERTOPIA hovers between science fact and artistic fiction, between the all too real and speculative future scenarios. Transcending time and disciplinary boundaries, it synthesizes science and art to assume collective responsibility.

HYPERTOPIA anticipates a purposeful post-crisis future to prepare proposals for a meaningful present. A positive force field driven by friction, it provides an arena for the exchange of ambivalent feelings.

HYPERTOPIA builds on the fact that our relationship status with this planet is more complicated than ever, but remains optimistic. Fostering intercultural as well as interspecies knowledge systems, it opens a repertory of routes and alternative actions.

HYPERTOPIA counters human hubris and respective hierarchies by shifting perspectives, along with patterns of behavior and thought. In support of system earth, it draws attention to all the intricate interrelations, many of which we are only just beginning to understand.

HYPERTOPIA holds us all in suspense, suspended in space, in a space for reflection, a state of reflection. It has artists acting as field researchers, who turn the exhibition space into an observatory of change.

HYPERTOPIA is taking the plunge; it is – and not least – a trip. A leap in time, for instance, that confronts us with forecasts of future traumas and potential treatments. A trip on slippery grounds? Yes, but one that also gives us things to hold on to.

HYPERTOPIA doesn't dream up a geoengineered, techno-utopian future, but aspires to new forms of cooperative living. Hopes are high, but the essential mission remains down to earth.

On Hypertopian terrain, it is common sense that art won't compensate for political decisions or actions; it can, however, contribute to a collective change of awareness and thus help usher in the paradigm shift that our planet so direly needs.

A testing ground for purposeful theories that only the future can affirm, HYPERTOPIA is aware of its own haziness. In its most solid-state, it takes the form of an earthbound exhibition. Beyond that, it's a semi-virtual happening, comprising a series of discursive formats and satellite events – and is as such, ubiquitous, up in the intellectual airspace, up there in the cloud.

In HYPERTOPIA, there is no horizon, but merely a perpetual interplay of soft layers of light.

Welcome to the world as we don't know it. Welcome to HYPERTOPIA.*

Editorial & Curatorial Note

It was summer 2019 when the voices of a new generation of environmental activists rang through the air, and finally brought to everyone's attention what has become a painful reality by now: The accelerating exploitation of the earth's ecosystems by human activity have led us into the midst of an existential planetary crisis. How we are responding to it will determine the fate of the planet and all its living beings for generations to come.

Alarming media reports and troubling scientific projections dominated the zeitgeist and registered a new image of society — a society that is concerned, looking for solutions, and asking questions, but above all, raising a generation that is facing unprecedented ecological, geological and socio-political challenges.

Driven by the urge to make sense of what is happening and the conviction that in order to move towards a more just and sustainable future for all beings, a new collective consciousness was needed, the idea of HYPERTOPIA was slowly formed: an interdisciplinary exhibition and program to open up a public space for co-creative discussion and collective imagination. To encourage our belief that a different world is possible, HYPERTOPIA was conceived as a meeting of perspectives of artists and scientists whose work presents powerful insights of and possible alternatives to the status quo.

As an open platform and breeding ground for new ideas, HYPERTOPIA aspired to integrate existing approaches into new contexts and add new nodes to a growing global network of actors and initiatives. The show's title, a neologism, refers to a supra localization between past, present and future, denoting a temporary sphere where innovative methodologies and new practices interact to help us detach from our fixed perspectives of knowledge.

In the first months of 2020, during the research and conceptualization of the exhibition and thematic program, the global health crisis halted the world around us to a standstill. Our initial questions, however, gained further urgency: How do we manage to open new spaces of possibility and niches of hope in times of systemic crises? What are the alternative scenarios for a cooperative and bio-diverse coexistence? Can there be a state of global justice within the narrow ecological confines? And most importantly, how can we leave behind the feeling of powerlessness and incite collective action and awareness?

Guided by questions like these, HYPERTOPIA became much more than initially conceived. The pandemic challenged us to come up with new solutions since with on-site work conditions and travel restrictions, all production and curation was taken to the digital realm. It is not by chance that artist Ani Liu renamed her work Untitled (A Ghost in the Zoom Machine) since it was only through video calls to Berlin that made it possible for it to be reproduced.

Eventually, HYPERTOPIA opened on the 23rd of October — exactly one week before the second lockdown and new restrictions came into effect. This untimely closure inspired alternative formats of mediation and discourse and motivated us to invest more time and effort in alternative formats of discourse — The entire program was moved online or adapted to self-guided explorations and trips through Berlin.

As our journey continued the challenges became our partner, circumstances turned into sources of growth and learning: Let empathy and trust be your companion, embrace change, catalyze it and always dare to leave the comfort zone. It will always be worth the wait.

This all sits well with the idea of HYPERTOPIA, a project that is now endowed with a lasting legacy to let its ideas resonate: No better way than the millennials-old tradition of ink on paper. You are holding the result in your hands. The publication is divided into two parts. The first is a printed equivalent of the exhibition at STATE Studio. The second part is split into five sections reflecting core topics addressed by the artworks in the show.

The show may be over, but the ideas, movements and discourse will hopefully live on.

Christina Hooge, Christian Rauch, Johanna Wallenborn and Anna Sinofzik

About STATE

STATE is a Berlin-based initiative that builds cultural programs at the intersection of science, art, and society to help forward ideas for a sustainable future. With exhibitions, residencies, and events, STATE invites its audience to curated deep-dives into current topics that shape our tomorrow.

Since our founding in 2014, we have been working with a lively, international network of partners comprised of research institutes, foundations, public institutions, NGOs and companies. As an exhibition laboratory, gallery and event space that opened in 2018, STATE Studio in Berlin-Schöneberg is the hub for our activities to collectively explore the creative friction between cutting-edge science, artistic expressions, and societal discourse.

ART

HYPERTOPIA's curatorial concept combines the notion of collective consciousness with that of the conscious collective, in order to bring awareness to the interdependence of actions, actors, disciplines and different times.
As a journey between past, present and future, the exhibition featured artistic positions, propositions and explorative projects. This allowed for the different narratives to manifest themselves like a network in space that simultaneously confronts and mends – strains and releases. Visitors encountered visions of instrumentalized ecosystems in a biosynthetic future. Data activism met fictional narratives from non-humans. Human bodies were dissected and reassembled in search of the essence of our being.

Driven by a deep sense of confidence, the program investigated how the perceived state of emergency can become a transformative factor that encourages sustainable action between humans, nature, and technology.
To cultivate a breeding ground for an organic network of ideas, it presented thought experiments that counter the ecological, geological and socio-political challenges of our time with a new, collective optimism.

The change in the world cannot be pinpointed. Even the shaking of its order, which feels as though it has only increased in recent times, is not restricted to specific areas or zones, and certainly not to any nation. The systemic crisis, whose causal relationships we are only just beginning to understand, is omni-present – and yet it remains out of our reach. Transcendent and translucent, the term HYPERTOPIA may appear to be heaven condensed into a word but is actually derived from this supra-localization. The implicated swirling ubiquity is a fundamental characteristic of this crisis – but so is our hope to make the best of it all.

WORKS

HIMALI SINGH SOIN:

Himali Singh Soin's video piece *we are opposite like that* pairs poetry with archival material and a mythical soundscape to recount the fear of an imminent glacial epoch that was omnipresent in Victorian England. Inspired by ancient field recordings, an original score for string quartet reinterprets the sound of ice plates crashing into each other, the drone of a boat, and the polar winds. Including melodic fragments of Victorian composer Edward Elgar's The Snow (1895), the elaborate sound design creates a chamber of resonances that reflects a potential, post-human future. Commissioned by the Frieze Artist Award 2019, the video forms part of an ongoing series of interdisciplinary works on the mythologies for the poles, told from the non-human perspective of an elder that has witnessed deep time: the ice. Beckoning the ghosts hidden in landscapes, the series invites us to listen in on the resonances of polar pasts and potential futures.

we are opposite like that

A foundling, an immen... ...ld of unfamiliar rocks

AURORA ILLUSTRATIONS, 1882-1883
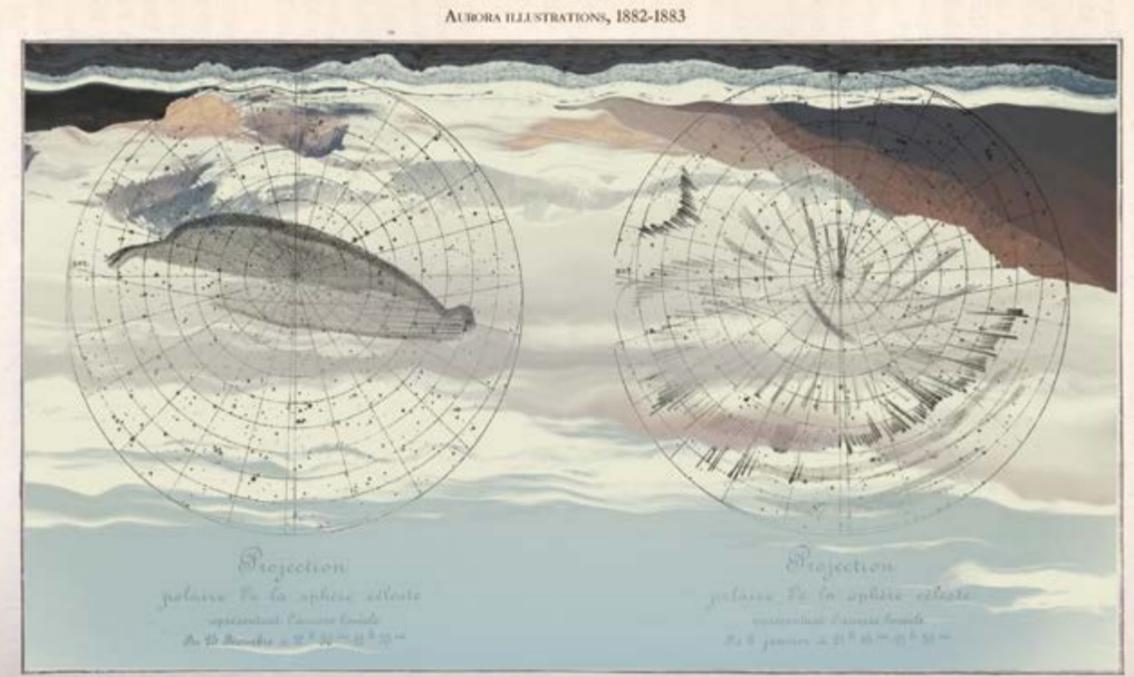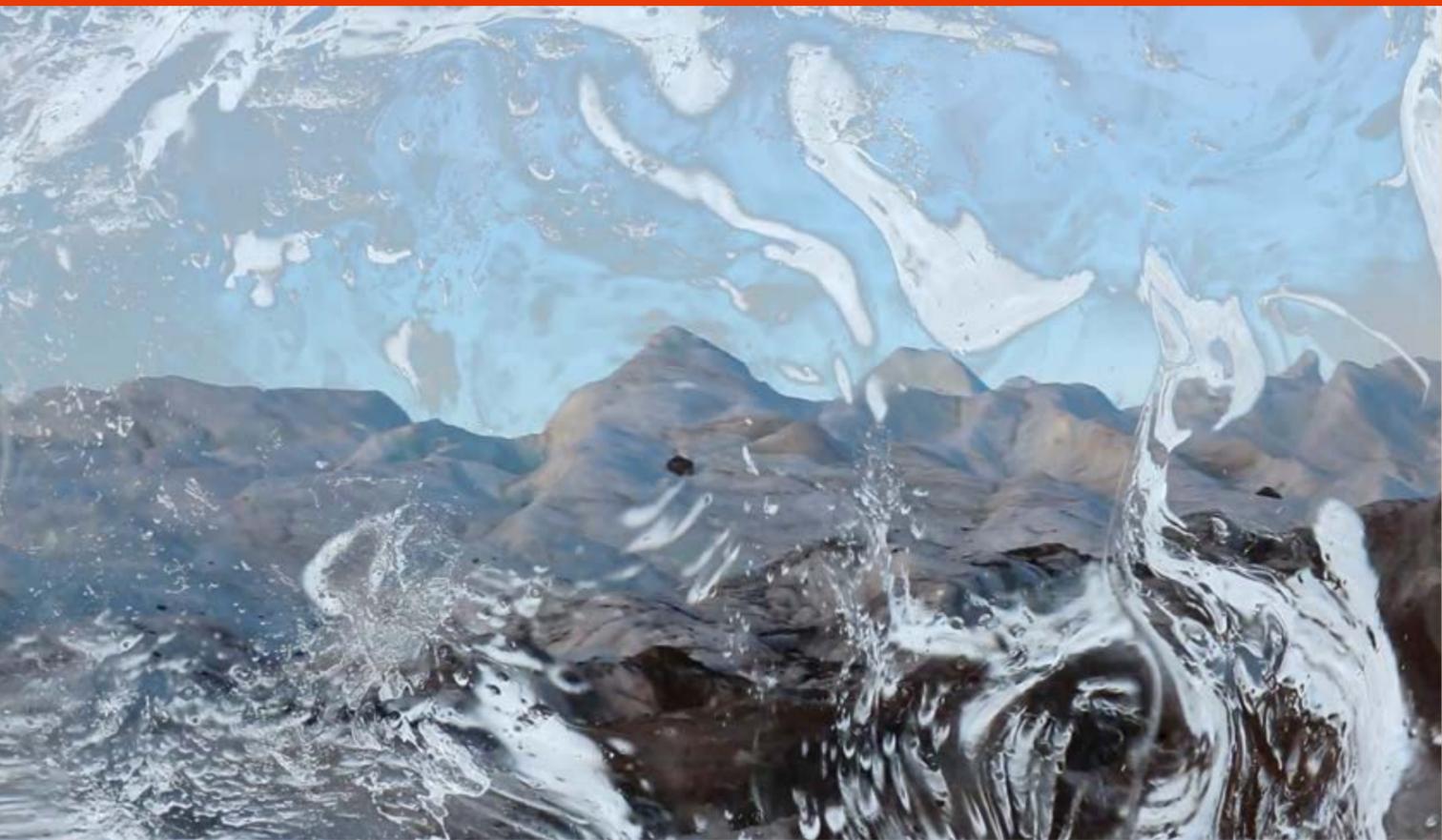
Its inaccessibility leads to a proliferation of ways to time-travel and teleport:

↑ → *we are opposite like that,* Himali Singh
Soin (film still)

→ *we are opposite like that,* Himali Singh Soin
(film still)

ALEXANDRA DAISY GINSBERG:

While conservationists struggle to protect existing 'natural' species and reverse the effects of the Anthropocene, synthetic biologists are busy engineering new organisms. *Designing for the Sixth Extinction* investigates synthetic biology's potential impact on biodiversity and conservation. The project imagines a possible future, in which novel companion species are designed to support endangered natural species and ecosystems. Alexandra Daisy Ginsberg proposes different types, including a slug that leaves a trail of alkali to neutralize acidic soil, and a porcupine with sticky rubber spines that would help disperse seeds of threatened plants. Modeled on fungus, bacteria, invertebrates and mammals, these species are released into the wild, raising a set of ethical questions: What would the 'wilds' look like in a synthetic biological future? Can we 'preserve' by looking forward? If nature is totally industrialized for the benefit of society, will nature still exist for us to save?

Designing for the Sixth Extinction

→ *Designing for the Sixth Extinction* by
Alexandra Daisy Ginsberg, installed at STATE
Studio, 2020, Photo: Eike Walkenhorst

↑ → Details from *Designing for the Sixth Extinction*, 2013-15 © Alexandra Daisy Ginsberg

↑ *Designing for the Sixth Extinction* by Alexandra Daisy Ginsberg, installed at STATE Studio, 2020, Photo: Eike Walkenhorst (on loan from the ZKM, Center for Art and Media Karlsruhe)

→ Details from *Designing for the Sixth Extinction*, 2013–15 © Alexandra Daisy Ginsberg

SALVATORE IACONESI and ORIANA PERSICO:

As the first material outcome of a greater project called *Datapoiesis*, *Obiettivo* is designed as a warning light system for public spaces. Fed with data sourced from international organizations, it reacts to the number of people living in extreme poverty. The red light emitted by the object is an alarm; *Obiettivo* is a "totemic object", designed to raise awareness and make us more sensitive towards one of our planet's most threatening and complex issues. Built to be installed in public space, the prototype aspires to become a pole for urban neo-rituals, to promote shared action, a new mode of collective responsibility, supported by technologies and science. *Datapoiesis*, *Obiettivo*'s collaborative umbrella project, focuses on the production of data-based art and design that fosters new relationships within our globalized world.

Obiettivo

26–27

↓ → *Obiettivo* by Salvatore Iaconesi and
Oriana Persico, installed at STATE Studio, 2020,
Photo: Eike Walkenhorst

↓ → *Obiettivo* by Salvatore Iaconesi and
Oriana Persico, installed at STATE Studio, 2020,
Photo: Eike Walkenhorst

ANI LIU: Untitled (A Search for Ghosts in the Zoom Machine)

The idea of being human is an unstable construct. Recent technological innovations allow us to redesign ourselves profoundly – from networked prosthetics and artificial intelligence to the genetic code of life itself. Can our behaviors be reduced to algorithms? Can our bodies be upgraded with nonorganic integrations? Can sentience itself be manufactured in a lab? The original series *Untitled (A Search for Ghosts in the Meat Machine)* comprises nine sculptures that examine personhood from anatomical, psychological, genetic, biochemical, behavioral, algorithmic, personal narrative and memory. Each sculpture is as tall as the artist, and each glass vitrine holds her liquid volume. But besides these basic dimensions, every piece is configured individually to represent one specific organ, body part, or intellectual capability generally considered to distinguish us as a species. For HYPERTOPIA, Liu continued her emotional confrontation with the quantification of the human body by creating one custom vitrine.

↑ *Untitled (A Search for Ghosts in the Zoom Machine)* by Ani Liu, installed at STATE Studio, 2020, Photo: Anne Freitag

→ *Untitled (A Search for Ghosts in the Zoom Machine)* by Ani Liu, installed at STATE Studio, 2020, Photo: Eike Walkenhorst

→ *Untitled (A Search for Ghosts in the Zoom Machine)* by Ani Liu, installed at STATE Studio, 2020, Photo: Eike Walkenhorst

→ *Untitled (A Search for Ghosts in the Zoom Machine)* by Ani Liu, installed at STATE Studio, 2020, Photo: Anne Freitag

↑ *Untitled (A Search for Ghosts in the Zoom Machine)* by Ani Liu, installed at STATE Studio, 2020, Photo: Eike Walkenhorst

← *Untitled (A Search for Ghosts in the Zoom Machine)* by Ani Liu, installed at STATE Studio, 2020, Photo: Anne Freitag

DOMINIQUE KOCH:

A dense artistic research project, *Holobiont Society* delves into a complex set of issues related to hierarchies, power structures, and concepts of coexistence — such as the eponymous, ecological unit of the holobiont. Initially defined by Dr. Lynn Margulis in her 1991 book *Symbiosis as a Source of Evolutionary Innovation*, the concept collection of prokaryotes, all of which contribute in some way to the function of the whole. In Koch's film, the holobiont is visualized by scientific images of corals, bacteria and other symbiotic organisms. The video's elaborate sound design synergizes with interview fragments from the biologist, feminist and acclaimed writer Donna Haraway and the sociologist-philosopher Maurizio Lazzarato. Interweaving image, sound and text in a multilayered assemblage, *Holobiont Society* challenges current mechanisms of domination and categorization, to be in favor of fresh modes of thinking and being in the world.

Holobiont Society

→ *Holobiont Society*, Dominique Koch (film still)

↓ *Holobiont Society* by Dominique Koch, installed at STATE Studio, 2020, Photo: Otto Felber
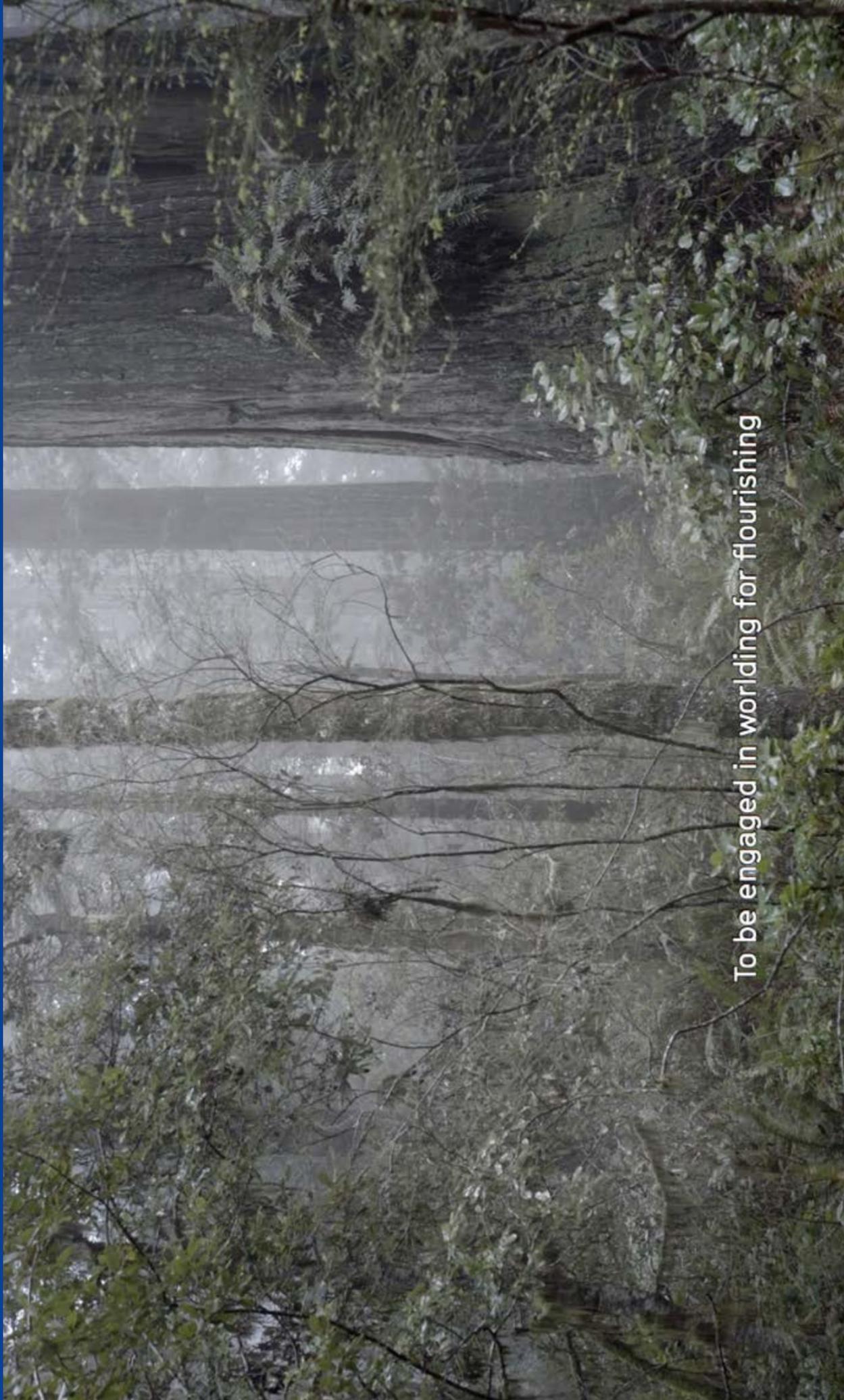
To be engaged in worlding for flourishing

↑ ↓ *Holobiont Societas*, Dominique Koch (film still)
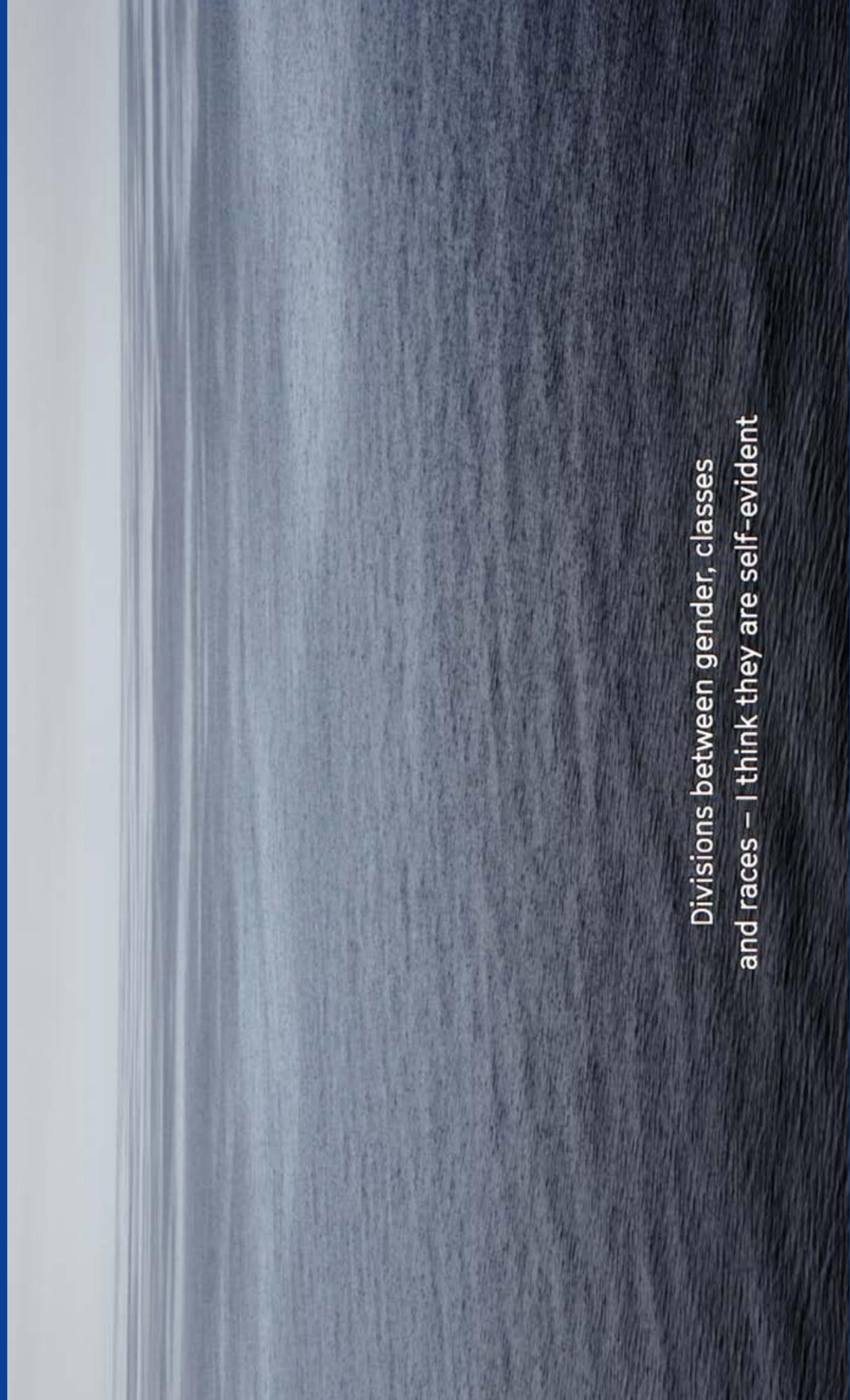
Divisions between gender, classes
and races – I think they are self-evident
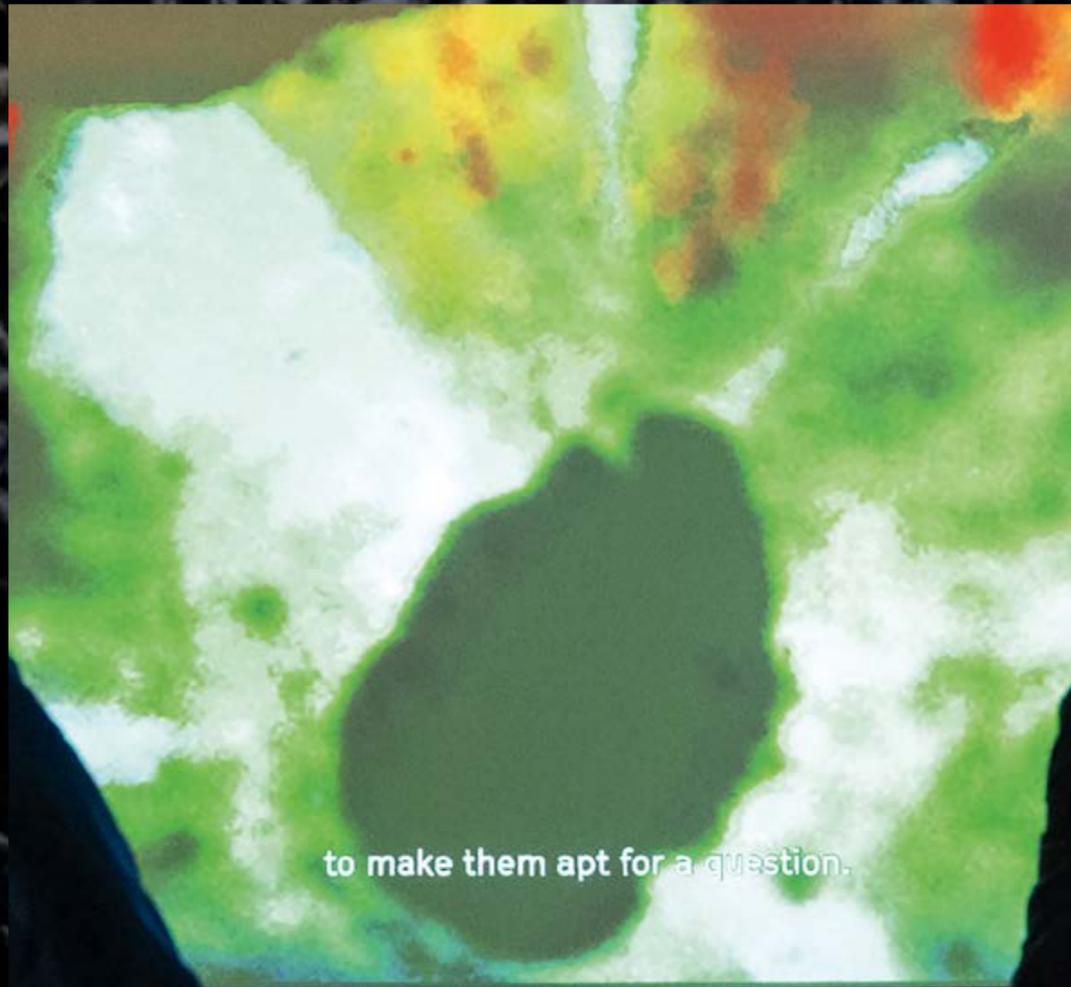
to make them apt for a question.

JANA MARIA DOHMANN:

Weaving Social Texture is a research project that seeks to inspire interaction from the visitor and requires collective participation. Over the course of her show, the participatory installation will grow into a collective web of decisions, all of which are driven by individual, or mutually coordinated choices. A basic set up, pre-installed by the artist, serves as a starting ground for the collective and essentially improvised work. Further reference is provided by a set of scores that frame the action, which add a few fundamental guidelines for the visitors to follow. Everything else is derived from the moment, free decisions, acts and deeds — that is, from participatory taping, knotting, and interweaving. The explorative situation is supported by a fragmentary reference library, holding ready a subjective anthology of ecological, philosophical, and cultural knowledge. The resulting sculptural structure investigates the potential of collectivity and social negotiation — and thus raises a question on which the future of our planet depends.

Weaving Social Texture

↑ *Weaving Social Texture* by Jana
Maria Dohmann, installed at STATE Studio,
2020, Photo: Anne Freitag

→ *Weaving Social Texture* by Jana
Maria Dohmann, installed at STATE Studio,
2020, Photo: Eike Walkenhorst

← *Weaving Social Texture* by Jana
Maria Dohmann, installed at STATE Studio,
2020, Photos: Eike Walkenhorst

→ *Weaving Social Texture* by Jana
Maria Dohmann, installed at STATE Studio,
2020, Photo: Anne Freitag

UNRECOGNISED BORDERS OF TRANSIENT BEINGS:

CURIOUS MINDS (Deep Dive Collective)

Andrea Rassell, Ashley Middleton, Bella Spencer, Catri Foot, Juho

When whales die, their carcasses sink down to the ocean floor, and give rise to complex ecosystems that supply sustenance to hundreds of deep-sea organisms for decades. Drawing on inspiration from the so-called Whale Fall, *Unrecognised Borders of Transient Beings* navigates the body as a porous and integrated ecological site. Through video, sound, surveillance technologies, and coded networks, the work invites participants to reframe their presence in an alternative environment, that provides a site of contemplation for the following questions: What kind of assemblages do we engage in consciously/unconsciously and physically/metaphysically? How does our body loop into the environment and what kind of micro choices have macro effects on ourselves and the world around us? What systems do we utilize to navigate differences? Do we need to create new systems of communication that facilitate a wider integration between human and non-human bodies?

← *Unrecognised Borders of Transient Beings* by Curious Minds (Deep Dive Collective), installed at STATE Studio, 2020, Photo: Ashley Middleton

← *Unrecognised Borders of Transient Beings* by Curious Minds (Deep Dive Collective), installed at STATE Studio, 2020, Photos: Ashley Middleton

HYPERTOPIA is a borderless territory and an open field for discussion. Times of polycrisis call for novel approaches that have the po-tential to inter-con-

physical exhibition at STATE Studio, we came up with a decentralized framework program that included digital Field Trips such as panels, exhibition tours, satellite events, as

FIELD WORK/WORK FIELDS

nect the local with the global, the inside with the outside and the now with tomorrow: Due to the lockdown and closure of the

well as a series of five self-guided Field Explorations that car-ried the show's core ideas from the gallery space into open terrain.

map
Field Explorations

Instead of sticking to conventional patterns of thought the Field Exploration program sent our visitors on the road. Starting from the artworks in the show, topics and ideas were taken up and developed further, both in the digital realm and in public places across Berlin. The exhibited positions were contrasted and complemented with other perspectives; a range of artists, scientists and thinkers were invited to introduce related projects of their own to thereby enrich and invigorate the issues at stake. Participants to the Field Explorations were sent along a range of routes with little cues and hints hidden behind barcodes as well as an online guide for each tour, comprising video messages curated along the themes of the exhibition. In addition to the exhibiting artists, contributors included: Martin Müller, Emilia Tikka, Theresa Schubert, Laureline Simon, Querstadtein e.V. and Mirthe van Popering. The following is a medley of contributions, a meeting of mindscapes, a subjective assemblage of diverse trains of thought, all drawn from HYPERTOPIA's hybrid program. Without claiming to be comprehensive, this section perpetuates fragments of the hypertopian project to be picked up and pursued by artists and researchers to come.

Follow this barcode to join STATE Studio's Field Explorations digitally.

Field Exploration with Alexandra Daisy Ginsberg
→ ROUTE: 1 52° 29'24.482"N 13° 21'34.603"E, STATE Studio 2 52° 31'43.4"N 13° 22'53.6"E, Bibliothek der Humboldt-Universität zu Berlin (Campus Nord) 3 52° 31'44.0"N 13° 22'36.2"E, Invalidenpark

Field Exploration with Ani Liu
→ ROUTE: 1 52° 29'24.482"N 13° 21'34.603"E, STATE Studio 2 52° 31'15.2"N 13° 23'53.1"E, Centaur und Nymphe 3 52° 29'19.9"N 13° 23'40.8"E, Otherland Buchhandlung

Field Exploration with Himali Singh Soin
→ ROUTE: 1 52° 29'24.482"N 13° 21'34.603"E, STATE Studio 2 52° 27'33.1"N 13° 22'09.2"E, Toteisloch Blanke Helle Alboinplatz 3 52° 27'33.0"N 13° 21'27.5"E, Natur-Park Schöneberger Südgelände

Field Exploration with Oriana Persico and Salvatore Iaconesi in collaboration with Querstadtein e.V,
→ ROUTE: 1 52° 29'24.482"N 13° 21'34.603"E, STATE Studio 2 52° 30'26.8"N 13° 19'56.8"E, Bahnhof Zoologischer Garten 3 52° 30'12.8"N 13° 19'39.0"E, Fasanenstrasse

Brandenburger Tor

Siegessäule

STATE Studio

Tempelhofer Feld

BIODIVERSITY AND RESILENCE

Biodiversity is the basis of everything, whether it is our health in the here and now or any form of desirable future. The variety of plant and animal life in the world is essential to agriculture and human well being. At various levels — genes, species, and ecosystems — biodiversity is the prerequisite for a resilient planet. Inspired by Dr. Alexandra Daisy Ginberg's project *Designing for the Sixth Extinction*, we looked into this big issue upon which all life ultimately depends, bringing together artists and scientists to explore biodiverse sustainable futures.

The Loss of Life on Earth — Facts and Figures

Josef Settele's career as one of Germany's most respected biologists and biodiversity experts began with bees and butterflies. While his field of research broadened over the decades, the keen interest in insects hasn't faded. After all, the threats they face exemplify the threat of an entire planet of the entire planet. There is a butterfly on the title of Josef Settele's new book, *Die Triple Krise: Artensterben, Klimawandel, Pandemien*, a personal account on species loss, climate change and pandemics, looking into the many links in between. As a guest speaker at HYPERTOPIA's biodiversity-focused Field Trip (which was realized in collaboration with *Science Notes Magazin* as part of the *Berlin Science Week*) Josef Settele shared elements of his expertise and experience as a co-chair of the Global Assessment of IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services). His presentation included some hard data on the state of the earth and its countless species facing extinction, which was collected and evaluated by him and his colleagues. With its 2019 report, the IPBES' research group painted the most comprehensive global picture of human-caused nature deterioration ever produced. The trends they explored are worrying and a clear call for action. A few extracts:

Fig. 1

The biosphere and atmosphere of the earth have been deeply reconfigured by people. Hitherto, 75% of the land area is significantly altered; 66% of the ocean area is experiencing increasing cumulative impacts; more than 85% of wetland area has been lost — ever since man took over the rule of this planet.

Earth may not yet be in the midst of a sixth mass extinction — but we are approaching it at alarming speed: In the past 1500 years, the world saw a dramatic increase in the cumulative number of species that got extinct (see Fig. 1).

A loss of 2,5% of amphibians may not seem a lot. But it's at least 150 species out of 6000. And this is only the starting point of an ongoing process. The trend is clear: Today's global extinction rate is tens to hundreds of times higher than it has been on average over the last 10 million years. And human impact increases.
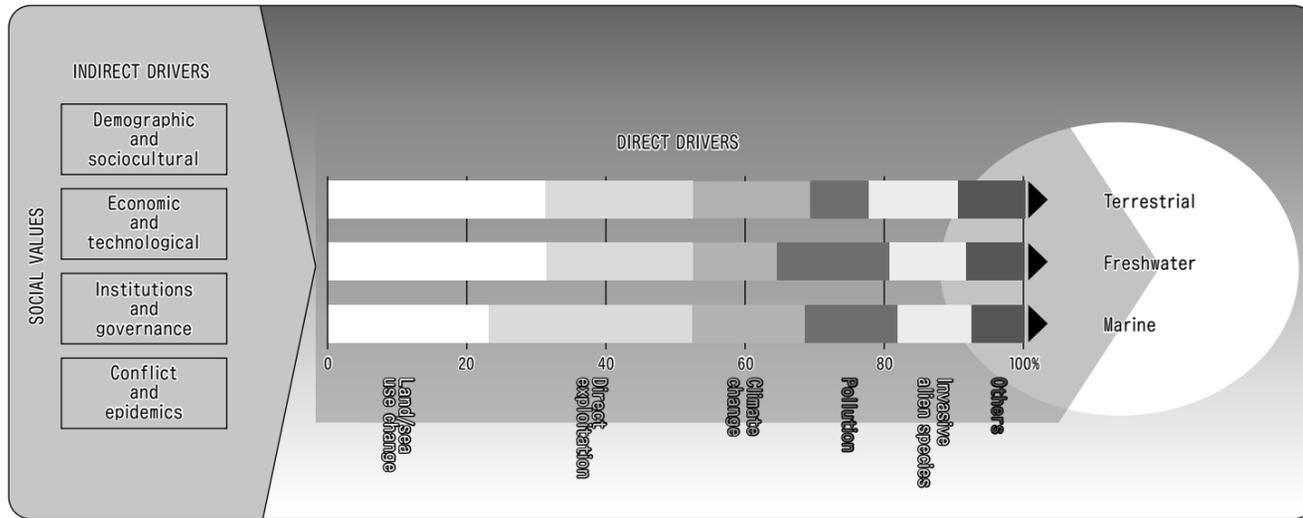
Fig. 2

We have dramatically reconfigured the "fabric of life" of our planet already. While the world is becoming increasingly interconnected, inequality is on the rise too. Living conditions deteriorate, as nature's potential to contribute to a good quality of life on earth has decreased considerably.

The main task now is to meet global societal goals through concerted efforts that address direct drivers of change, which have accelerated over the last 50 years to levels unprecedented in the history of humankind. But what's even more important than addressing these direct drivers is attending to the root causes (indirect drivers) of nature deterioration (see Fig. 2).

The core points are: a change of governance, a change of our economic system, of our concept of equity, and – a very important component – cross-sectoral planning. We also need incentives and last, but not least, an update of our social narratives and values.

What are we aiming for? Are we heading for the best GDP? Or are we shooting for long-term well-being? If we choose the latter, we have to initiate a radical shift in our attitude and dealings with our planet.

Some important components would be: Changes in production and consumption of energy and food. Low to moderate population growth. Nature-friendly and socially fair climate adaptation and mitigation.

Transformative change means a fundamental, system-wide reorganization of technological, economic, social and cultural factors, including paradigms, targets and values. At this point in time, it also means prompt action (go further and faster), focusing on the

root causes of nature's deterioration, as well as the coordination and integration across scales and sectors.

The link between science and art is one of the important, interesting, challenging, but also nice things that we have to look into in order to solve the pressing problem.

Home Improvement

Can we "better" planet Earth by redesigning life forms or complete ecosystems? Should we even try? How will synthetic biology affect the ecology of the Anthropocene? Should we turn to bioengineers in the attempt to circumvent a sixth mass extinction? Dr. Alexandra Daisy Ginsberg's transdisciplinary practice is guided by questions like these. As part of Hypertopia's biodiversity field trip, organized with *Science Notes Magazin* during *Berlin Science Week,* the artist gave glimpses into her intriguing investigations into the human impulse to improve the world. The following is an abridged transcript of her talk.
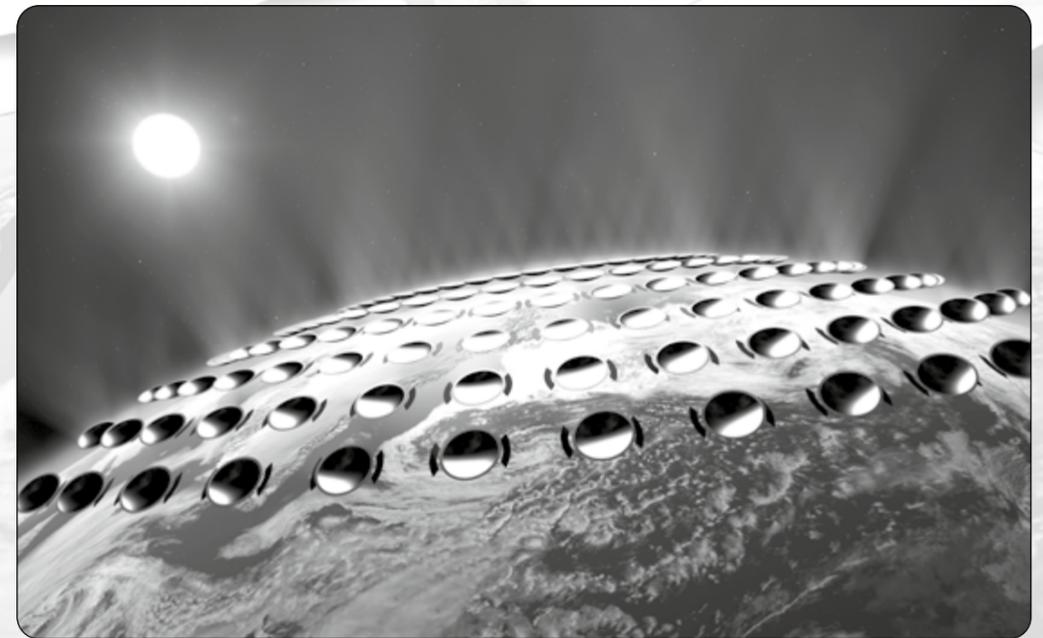
Geo-engineering, artificial climate control © Visdia / Shutterstock.com

SOLUTIONISM

The term "solutionism" has been adopted by the technology critic Evgeny Morozov. He defines it as the belief that humans can solve all sorts of difficult problems using technology. Morozov has written about it especially in the context of Silicon Valley. There, he sees this overriding belief amongst tech people that we can solve all societal problems by creating new technologies. For example, Amazon packages being stolen outside your front door can be solved by inventing the Ring Video Doorbell, which allows you to pretend to be at home to deter burglars or at least film the theft.

This culminates in the assumption that even the most enormous problems can be solved through technology. The greatest extent of this enters into the realm of geoengineering, where technology would be used to intervene at a global scale to mitigate the effects of climate breakdown. But this is an immense decision. We cannot know the unintended consequences of such an act. Questions of how to even reach a global consensus on such a choice remain unanswered.

The idea that faith in technological solutions is enough avoids social aspects of tricky problems and other complicated political mechanisms that we need

to address in order to solve them. Underpinning this is the optimistic belief that problems *can* or even *could be* solved – and that these problems *should* be solved. It is the assumption that life should be frictionless and trouble free – that we don't need to deal with or think about, for example, the environmental consequences of solutions. Solutionism is utopian, because it is based on the idea that all humans want the same thing, that we all have the same dreams and will be treated equally in the process of making the world better according to those who set the visions. Solutionism doesn't take into consideration the complexity of human society, let alone the complex ecosystems that we are part of on this planet.

MAKING THINGS BETTER

When we think about the potential of technology and of design to make things better, we must take into consideration their entrapment in capitalist systems of production. Ever since the Industrial Revolution, we've designed stuff for landfill. The job of the designer began then as a way to differentiate one manufacturer's products from another's. But that's not the core idea of design: Herbert Simon, the political scientist, described design as a process to change existing conditions to preferred or better ones. We need shelter, we design a house. We need warmth, we create a blanket. I'm fascinated by this fundamental desire to design, by this utopian belief that we can actually improve the world, what the sociologist Richard Howells calls a utopian impulse.

Jan Brueghel de Oude and Peter Paul Rubens: The Garden of Eden with the Fall of Man © Public Domain

But what about problems that are so big that neither designers nor anyone can solve them? What does it mean to solve a problem like human-induced climate breakdown and biodiversity collapse? Can it be solved? Designing a reusable bottle rather than a single-use bottle is a small step, but this is a bit like rearranging the chairs on the Titanic. The changes needed are at the scale of social systems,

values, elections and international agreements to challenge the fundamental incompatibility of a vision of sustainability and the reality of growth that modern economic systems are founded on. Gross Domestic Product is a universal measure of "better" in 2020. That's how we measure whether countries are getting better, by how much they produce. Nature isn't part of the calculations. We all play a role in changing the course of the future that we are part of.

That said, I'd like to look more fundamentally into this idea of a "better" nature. There's an imaginary that's being created of an "Edenic nature". Is that what we're talking about when we want to make nature better? Are we imagining going back to the kind of place the artists Jan Brueghel de Oude and Peter Paul Rubens portrayed in their painting *The Garden of Eden*? This would mean a reversal of human progress and even the radical belief that we need to remove humans from the picture. There was an interesting discussion last year around the curator Paula Antonelli's "Broken Nature" exhibition at the Milan Triennale, where she described a path to a more elegant extinction for humanity. That's not a hopeful proposition and there was some backlash. Humans are optimistic animals. I get out of bed even if the world looks pretty dismal and I think 2020 is a pretty dismal year, but the fact that we can imagine the world to be otherwise, that it could somehow be better, is fundamental to being human. The philosopher Ernst Bloch explored this perhaps unique trait of human hopefulness in *The Principles of Hope*, his seminal work written in some of the darkest years of the 20th century during the 1930s and 1940s. When we think that things are bad, we assume that a better world is possible. And even if it's not possible to make the world better, we feel we must at least try.

But what is a better world? I wrote my Ph.D. about this question of "better" and became fascinated as I heard technologists, entrepreneurs, designers, advertising campaigns and politicians talking about bettering things. I began to wonder: What's better? Whose better? And who gets to decide?

SYNTHETIC BIOLOGY

I'd come to this space through my exploration of a field of technoscience called synthetic biology, which – at the time – was a new approach to genetic engineering. It first emerged around 1999 as a group of visionary engineers sought to make biology better by making it easier to engineer. Their dream was that you could engineer DNA as code to program biology to do useful things for humans, and that this new programming code would be open source. Huge progress has been made

in the field, although programming DNA was not as straightforward as they originally imagined.

I first heard about synthetic biology in early 2008, and I wanted to understand this human desire to alter nature – to make it better. My practice reflected on the role of engineers and designers – which forced me to reflect on my role in it as well. From the beginning I heard synthetic biologists promising a better future and I wanted to know what better meant to them. Over time, I began to realize that within this community of scientists, "better" had very different meanings with very different visions and values attached.

Some had started to engineer microbes to produce fuel. The promise behind these biofuels is to create a world of sustainable abundance, where we can have what we want without changing our behaviors; where sugar cane grown in Brazil can be used to power jet engines. These visionaries promised disruption, but without disrupting anything! Big oil was investing. This was a vision where the same players could create the same products, keeping the same systems in place, the same kinds of transport, the same people making the money. Nothing has really changed, except that we're growing sugarcane and destroying forests rather than extracting long dead biology as crude oil somewhere else. What happened with that future was that the new processes couldn't compete with oil prices, and so many of these companies pivoted to making much more expensive products by the liter. A gallon of face cream is far more valuable than a gallon of oil. But the green veneer that making things with biology is naturally better still remains.

BETTER BIOLOGY > BETTER THE WORLD > BETTER NATURE

In the course of my research, I identified another, more radical vision of "better", based on the aspiration of bettering nature itself, of reinventing it and solving its problems whether they're human-created or not. There's a company called Oxitec, for example, that has developed a biological control system, genetically modifying mosquitoes so that their progeny don't survive. These mosquitoes have been released in trials into the environment for years now. This bettering of nature for our benefit lies at one end of a spectrum that perhaps ends with engineering ourselves, changing our own nature. Experiments on gene-editing human embryos are underway and with this potentially comes all sorts of unintended societal consequences.

I became very interested in this area in 2013 when I went to a conference at Cambridge University, where conservationists and synthetic biologists

were meeting for the first time. They were essentially discussing if they had anything in common, or conversely, if they would be a problem for each other. I was struck by their wildly different ideas of what was better.

Conservationists are, in a way, looking backwards to try and protect biodiversity from humanity. On the other hand, synthetic biologists are inventing new biodiversity for the benefit of humanity. What I hadn't been aware of at this point were discussions to try to combine these two fields.

A very provocative idea was being discussed at the meeting: Could synthetic biology be used to engineer nature to save it? For example, could coral be engineered to withstand warmer waters? Could we use genetic engineering to combat Avian malaria, a disease wiping out whole populations of birds in Hawaii? I began to wonder what the wilds would look like in this synthetic biological future.

That's how my work *Designing for the Sixth Extinction* began. The process of making the piece and presenting it to scientists for me was a way to instigate discussion with them. I wanted to explore how the dream of engineering nature that they were proposing would be managed, whose interests would be served and what kinds of philosophical, ontological and even legal issues might arise.

DESIGNING FOR THE SIXTH EXTINCTION

The main part of the work is a large photograph of a forest, exhibited as a light box, so that it looks like a window out into a possible future. You see a pristine biodiverse forest, but as you look closer you begin to notice unusual organisms lurking in the undergrowth. In the fiction that I created, these companion species would be designed to preserve biodiversity and released into the wild. The large image is accompanied by a series of smaller prints, describing the organisms along with their functions. I purposely chose to use the very instrumental language of patent applications. I was experimenting with what it means to take away the living-ness of a life form and just turn it into a machine. For example, the Self-Inflating Anti-Pathogenic membrane pump is a kind of fungus that I've imagined that would be designed to fight a very real tree pathogen called sudden oak death, for which no cure yet exists. The fungus-like device would inflate when it detects disease and inject a pathogenic serum into the tree that would help to mitigate the disease.

It's a fictional organism, but within the patent language I reference very real ideas from synthetic biology, which I was collecting in my research. This
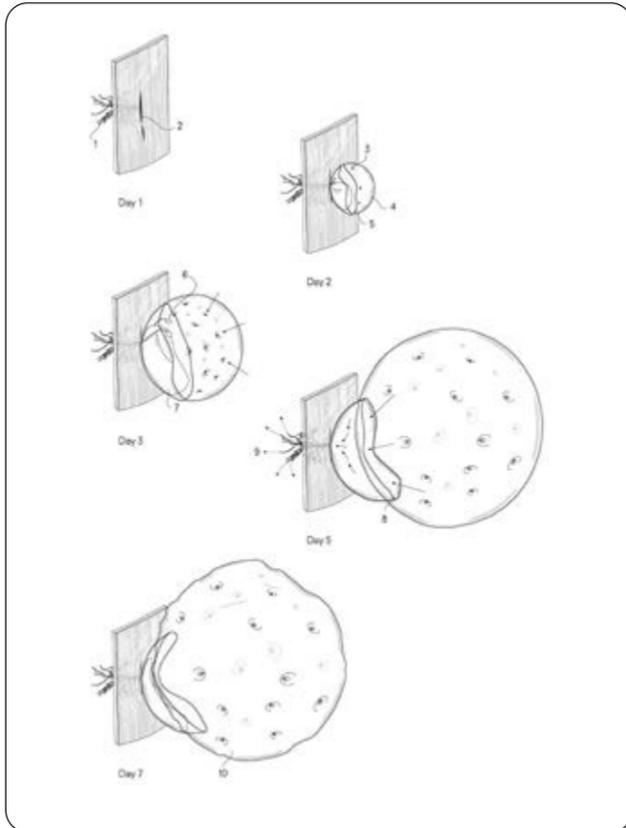
device could work on an expanded DNA system, a code with extra bases than the standard 4 (ATCG) that we are all made from. This would separate these machines from "nature". This is actually a real technology that's been proposed as a way to make design biology safer for release. In theory, it would be like a different operating system; it wouldn't be able to interact with natural biology in the same way. It's a bit like Mac versus Windows.

Then there is the Mobile Bioremediation Unit, a slug-like device that releases alkali slime to neutralize acidic soils caused by pollution. Within all of these organisms I imagined a "kill switch" so it would have a way to terminate itself, which is another real idea being developed to limit the lifespan of engineered organisms. Exploring this technical language through the patent application conceit was a way to think about how we remove care from other organisms. I also included a timeline that lays out the research into past ecological trends behind the project and linking them to how such a future might actually emerge. I sketched out a system, the kinds of institutions that might be created to enable this process: biodesigners being hired by corporations to engage in a new form of biodiversity "offsetting", which is a current conservation practice where one piece of land is available for

development and another piece of land is remediated to account for the loss of a pristine space.

The inflection point in the center corresponds to this moment today, where synthetic biologists and conservationists are having crucial discussions about the future of nature: After all, how do you decide when you really can't know all the consequences? Is this solutionist?

In the presentation that I've created, nature is saved with these new kinds of devices that are roaming around freely. But what's crucial for me and the way I've developed my practice over the last 10 to 15 years is that I really enjoy troublemaking. By that, I mean using the works as a provocation not just to the general public but also back into the field of science. That's why I present my work to those in the field, to debate with the people making decisions. To me, these aren't speculative designs to explore preferable futures but ways to potentially change the present.

When the project went public, there were headlines like "Synthetic Creatures Could Save the Planet" in Discovery News and I got an email from someone in the synthetic biology community who was worried that promising that nature would be saved would actually harm the future of synthetic biology because the public might be disappointed when scientists failed to save nature. I was even accused of potentially ruining the future of the science. My response was that I wasn't actually promising this future but reflecting on synthetic biologists' promises, as a way to prompt further reflection.

I was really happy when the editors of the scientific journal *Fungal Genetics and Biology* used one of the images from the work on the cover and referenced it in the editorial to prompt discussion with their expert readers about what they should or shouldn't design. That was a big moment in my practice where I realized how these works can be used.

What happens to nature when we get to decide what gets to live and what doesn't? The ostrich didn't decide to grow a longer neck to get a better vantage point over the other animals… Biology works in an evolutionary relationship with context. But humans can imagine, plan, design and envision. I think there's a very different set of forces as a result, and if we come back to this question of what is "better" for nature, we have to remember that nature doesn't operate this way. "Better" is a human idea, based on human values. Although we're part of nature, our ability to anticipate and hope (at present) appears to be unique to us. However, "better" in nature simply means of survival across
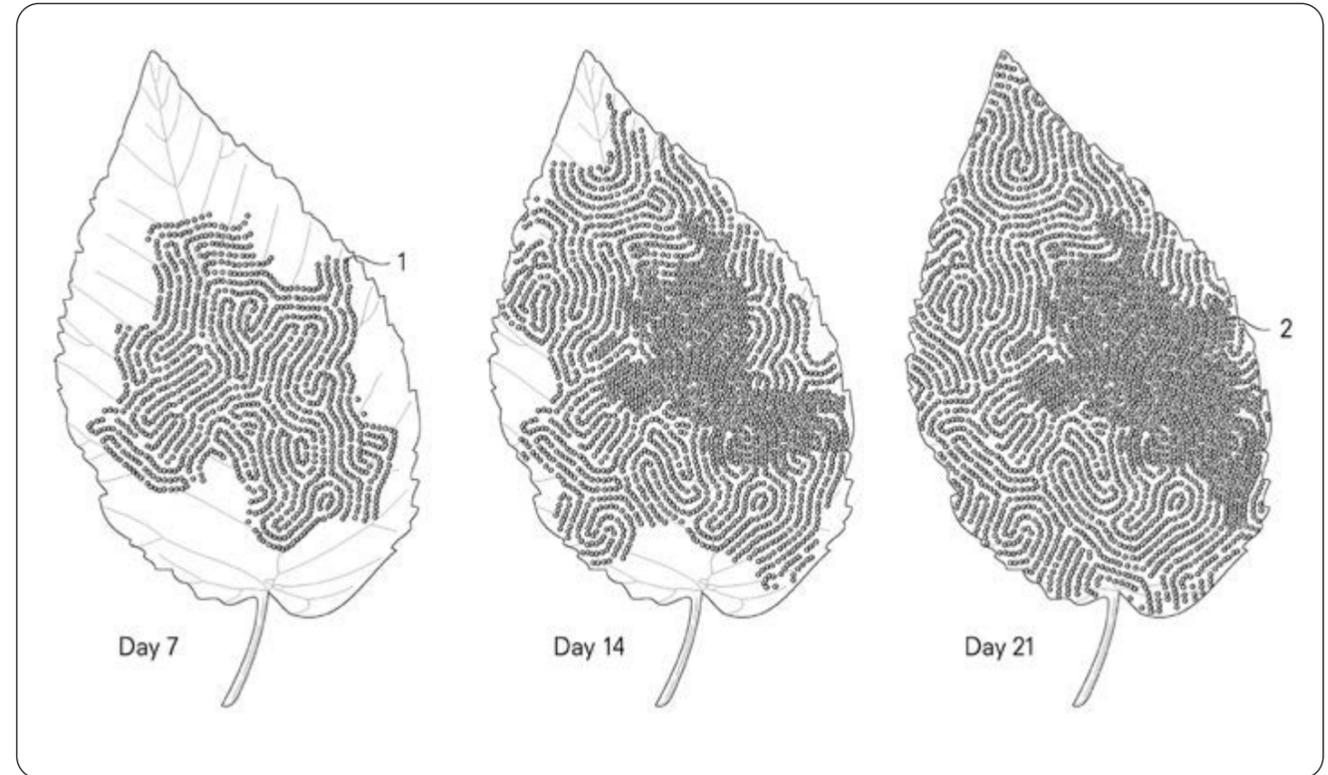
species, not individuals. Facing a climate emergency and biodiversity collapse, we really need to think differently. This is where there's been a shift in my work – in some way since this project – because we have to rethink our role in our natural world. What's better for nature is better for us.

WHAT IS BETTER FOR NATURE?

In 2020, we're seeing multiple crises of health, environment, economy and social injustice that are really all the same crisis: the outcome of the modern world that has been created, built on an idea of progress. I think there's also a crisis of imagination and action. I'm trying to tease out these problems of "better" in my work, especially the conflicts of modernity and colonial action over the last few centuries and how in our quest for "new" and "better", we ignore the value of what already exists. I'm curious why we feel loss for certain species, why we care and how I can create artworks that tease out reflection on these questions. I'm working to continue to ask questions, to tell stories, imagine alternatives, and in my next piece, a commission for the Eden Project in Cornwall launching in 2021, to enable action.

But what is actually better for nature? I think as we ask that and try to answer it, we can imagine that other worlds are possible, but we have to define

what we want. Artists can reflect on society; we can challenge it and communicate it in different ways. We can help imagine but we all need to be demanding as citizens of planet Earth: Who gets to imagine? How do we contribute to that imagination, who gets to decide and how do we demand change? This is such a crucial and painful time as we see the future of nature at a turning point. There's more to follow in in my practice as it develops, but I think each of us can also follow this mantra. It's not just about imagining that someone else will do it but how do we help enable a better future. Not just for us, but for other species and for other peoples.

One Resilient Earth: Glimpses into the Groundwork of a Promising Non-Profit

For Laureline Simon and her team at One Resilient Earth, there is nothing more fulfilling than fostering resilience and regeneration, in response to the climate emergency we are facing. Both the result and the accelerator of a more fundamental ecological crisis, climate change stems from an exploitative vision; from a notion of the Earth as an inexhaustible reservoir of resources. The international collective of researchers, artists and advocates argues. And there is no time to lose.

Photo: Leo Paul Ridet

"We propose to move away from exhausting ourselves, others and nature for some temporary relief or pleasure, and start protecting and regenerating all the ecosystems we host and belong to. Only then can we ensure that humanity cuts down greenhouse gas emissions and becomes more resilient to unavoidable climate instability," reads the mission statement on the website of One Resilient Earth, an organization that co-creates initiatives with a range of international partners. "We believe that a change has to happen within individuals' minds, in how they relate to living beings, time, and space," it continues. "We also believe that individuals are resilient, in the sense that they can recover from hurt and limiting beliefs, and have the ability to adjust to change easily. Last but not least, we believe in creativity and daring actions to transform the way humanity thinks and acts, and give rise to regenerative and climate-positive initiatives."

One Resilient Earth works with local communities and project partners open to rediscover and reinforce their inner resilience through context-specific initiatives: "We mobilize ancient wisdom and modern science, work across disciplines and generations, integrate new technologies when impactful, and value art as a channel for transformation," Laureline Simon shares, speaking for the whole team. When we asked her to ponder with us on possible ways out of the mess that steers us towards a new mass extinction in one of Hypertopia's hybrid Field Explorations, she refrained from recounting the facts and figures she has been presenting over and over in international conferences. Instead, she highlighted the perspectives of the direct witnesses of the climate disaster – people she's been working with on the ground: "If you talk to an oyster farmer on the coast of France, he'll tell you about the marine creatures he has been growing up with, and which are now gone. How some huge crabs have been taking over the bay he is working in, and how the sea has become distinctively warmer over the past two to three years. If you talk to an Indigenous woman from Africa, she'll tell you how this huge transnational land her pastoralist community has been travelling and living on has been turning into a desert over the past thirty years; how this is literally dislocating her community and totally transforming their traditional way of life."

Of course, those are only two of countless examples, we've all experienced others ourselves. "There may be areas you go back to regularly and where you notice how different plants and animals that used to be there in your childhood have disappeared," Laureline Simon says, asking us to become more attentive to the haunting feelings that arise, when we realize the signs of the mass extinction. "It can be felt, in our bodies, in our souls – it's there." With One Resilient Earth, she works in regions where the consequences of climate change and species extinction are particularly palpable, with those who are forced to feel the impact first. "When I have these interactions within the local communities we partner with, I really wonder: is this extinction process going to continue until there are no more Indigenous people, or no more local fishers, to tell us what's happening? What would be the state of the world today, if we could have kept this feeling in our bodies that we are one with the Earth as a system and that we've been one with it all along? I'd like to pay tribute to all the Indigenous peoples who have been shouting out to us this reality that the Earth is dying. And it is dying despite all the information we have, despite all the outcries, and the continuous work carried out to make us more aware of the soilless species that we have become."

Before she founded One Resilient Earth, Laureline Simon worked with the United Nations Climate Change Secretariat, where she was in charge of knowledge management for adaptation, supported the setting up of the Local Communities and Indigenous Peoples' platform, and assisted a task force on population displacements related to climate change. She also coordinated Resilience Frontiers, a collective intelligence process on long-term resilience, bringing together thought leaders in the fields of technology and sustainability. As someone who has kept her finger on the pulse of both trouble and progress for more than fifteen years now, she notes that – amid all the worrying data – there is reason to find hope. "The good news is that today, there seems to be more and more awareness among westerners. Many regenerative, nature-based or even nature-led initiatives are being designed and implemented as we speak. We are working on some with One Resilient Earth, and the United Nations Environment Program, for instance, has just proclaimed the UN Decade on Ecosystem Restoration, as a rallying call for the protection and revival of ecosystems all around the world. There are new theories, approaches, initiatives taking place, rewilding initiatives; even concepts such as regenerative economics that always make me feel extremely happy. Regenerative agriculture has an amazing potential for restoring the health of the soil, thereby helping to sequester more carbon. At the same time, it can help with climate change adaptation by making the food system more resilient, by dragging more water into the soil, hereby also restoring the health of the waterways around agricultural areas and bringing back biodiversity in areas where it has been long gone. Species are actually returning to areas where regenerative agriculture is being practiced. And then in turn, the food can help regenerate the health of the ecosystems inside our own bodies, which plays a part in how we interact with the ecosystems around us."

The approach Laureline Simon contemplates is based on visions that are very different from those

proposed (and questioned) by Alexandra Daisy Ginsberg's project *Designing for the Sixth Extinction*. They are more gentle, one might say. Perhaps more grounded, too. Laureline Simon knows that some people think of such restorative measures as being retrograde, based on ancestral ideas that they think can no longer apply — although we have no better method today to maintain the health of eco-systems. "Of course, it's an approach that rein-forces the role of small communities, who are tend-ing to the land and the ocean, planting sea grass, and trying to work more in balance with the Earth system. It involves learning from Indigenous peo-ples, respecting their rights, holding their wisdom in high regard, perhaps even reestablishing their leadership in the areas where they still live. But this doesn't mean there will be no technology, just that technology would be used — if needed — to support regenerative processes that are part of ecosystems in themselves. So in a way, innovation would be led by nature, developed in response to the needs of nature."

Photo: Leo Paul Ridet

As she is sharing this alternative vision of the future, Laureline Simon addresses us all: "How do you feel about it? What do you think? Is it a future you would want for yourself, that you could imagine living in? How do you feel about this idea that we could reverse mass extinction by implementing

a regenerative revolution on a large scale right now? Does a part of you fear that it's already too late, because of all the damage that's already been done? Because of the pace of climate change and of tipping points that are on the horizon?" We all know of the latest report published by the Intergovernmental Panel on Climate Change, which basically says that we have time until 2030 to halve the emissions, so as to remain within the 1.5 degree increase in temperature compared to pre-industrial levels. Because this is our best chance to avoid major damage, including reaching some tipping points that could wipe entire ecosystems that we belong to off the map.

To Laureline Simon, the mere pace of climate change washes ashore some of the most interesting questions of our times: "How do we design our own lives? Which decisions do we make in response to imminent losses? Based on my own experience, which can be questioned of course, no amount of science, including climate science, can tell you what the future that we are creating as we speak, will look like. And more importantly it cannot tell us either what it will feel like and how it will transform us along the way. So it leaves us in this position where we really have to choose the future that we want and try to contribute to it. So what do we choose? Do we choose to learn to die while making the most of life as nature slowly degenerates around us? Do we choose to support regeneration full on and try to relearn to live with nature, learn from Indigenous peoples' knowledge, reinstate their lead-ership and work with them because they have this major track record of conserving biodiversity — something we've not been so good at in the West? Or do we pursue merging with our technologies even more, thinking that maybe a synthetic Earth or synthetic ecosystem enjoyed by at least some beings is better than no ecosystem at all? As cyborgs we may have a very different life in this ecosystem, but perhaps this is a life worth pursu-ing, too. Or are we trying to work on some kind of hybrid that would bring together the best of both the natural world and the technological one?"

Asking questions can carry us to a deeper awareness. Laureline Simon encourages us to pose questions more often and to learn to listen — to ancient wisdom traditions as well as to ourselves. "I'm curious: how do those different visions and ideas make you feel? What do you think about them?" she asks into the airspace, at the end of her video message. We may not be ready to answer right now, but we certainly shouldn't wait too long either.

(POST-)HUMANISM AND THE QUANTIFIED SELF

From smart AI appliances to prosthetics, from CRISPR-Cas 9 to Augmented Reality, recent technological ad-vancements are impacting our lives like never be-fore. As we eagerly optimize ourselves and relentlessly track our physical activity, we are becoming more and more intertwined with our high-tech devices, in a constant effort to improve the human condition. Incited by Ani Liu's exhibit *Untitled (A Search for Ghosts in the Zoom Machine)*, which was entirely planned and produced over online video calls during the first lockdown, HYPERTOPIA's frame-work program shed some new light on an old question: What does it mean to be human, in a technologically-altered world?

mEat me:
## Theresa Schubert's Investigations into Biotech Cannibalism

Some of the most relevant critical responses to the Anthropocene and its dire consequences can be loosely lumped together under the umbrella of the "posthuman turn". For several decades, especially since the turn of the millennium, a pioneering breed of theorists has been promoting a non-hierarchical ensemble of all sorts of species as a way of countering human hubris. In terms of the post-human approach, the question of what it means to be human is inextricably tied to the status of the animal. To boil it down to the most fundamental ideas, we're all made of cells, atoms, molecules—and we're all in the same boat. In an age where techno-logical enhancements and prosthetics are putting our concept of self to the test, old hierarchies no longer hold.

"By turning into humanoid hubris, we are becoming animal," the theorist Rosi Braidotti argues. Her words are recited by Berlin-based researcher and media artist Dr. Theresa Schubert in the concept text of her most recent project, the performance piece mEat me. Inspired by Braidotti's notion of a zoe-centred egalitarianism that clearly resists "the trans-spe-cies commodification of life by advanced capitalism," Theresa Schubert has turned herself into a bio-commodity: In late 2019, a plastic surgeon performed a biopsy on the artist's thigh muscle, removing a tissue sample for cell culture. The obtained cells were lab-grown (multiplied in a serum made from her own blood), then seeded onto an edible gellan gum matrix in the form of a meat patty.

Through proposing her own flesh to be made into a produce to be potentially introduced into the food chain, Theresa Schubert asks for a re-eval-uation of our dealings with our bodies, their materiality, and eventually, of our relationship with the environment. As part of one of HYPERTOPIA's virtual Field Explorations, we invited the artist-researcher to present her curious concept of biotech cannibalism. "This is of course a provocation but it's not science fiction or some morbid dystopia, it is a possibility, at least technically," she explains in her video message, providing a bit of scientific background: "In 2013, Mark Post, a professor at Maastricht University, was the first to showcase

a proof-of-concept for cultured meat by creating the first burger patty grown directly from animal cells. His company Mosa Meat BV is working on getting cultured meat to the market since then and has finally raised funds for industrial-scale output planned for the end of 2022."

There are many reasons why we still don't have lab-grown meat in supermarkets. Besides high research costs, there is the traditional animal farm-ing lobby, as well as insecurities in regard to quality controls. Meanwhile, Singapore has been the first city-state to approve lab-grown chicken by Eat Just Inc. to be sold this year. In Europe, however, we are nowhere near a market entry, which is also due to a lack of public acceptance, Theresa Schubert notes.
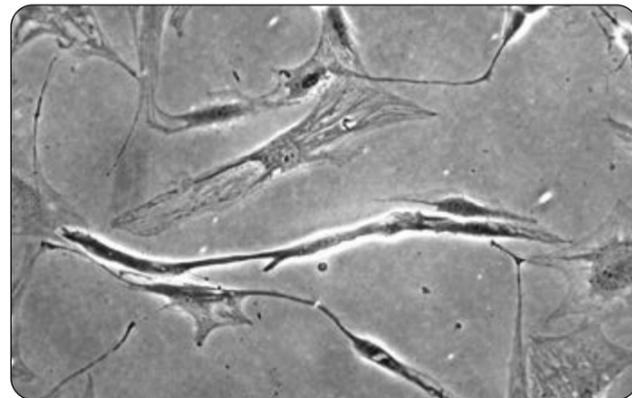
Biopsy muscle cell microscopy photo © VG Bild-Kunst

"Modern biotechnology has made it possible to grow new organs and tissue from our cells. Genome editing in theory allows us to construct a human as if it were a manual for a product; this has turned our bodies into a ground for engineering, and to a certain degree, made them reconstructable. Through new in vitro meat production techniques, we could use our own bodies to feed ourselves; we could literally eat ourselves and yet stay alive." In the concept text of her project, Theresa Schubert also quotes the technoperformative artist, robotics researcher, and cyborg experimenter Stelarc, whose creative inventions have been renegotiat-ing the capabilities of the human body since the mid 1990s: "The body is not seen as a personality or

mEat me Performance, Photo: Tina Lagler/Kapelica Gallery Archive © VG Bild-Kunst

gender. The body is seen as a kind of evolutionary architecture." That is, something to be refined and reconfigured using state-of-the-art technolo-gies, something to experiment with.

Compared to Stelarc's transhumanist visions and despite her provocative approach, Theresa Schubert's rationale is rooted in very real problems: "I want to raise awareness for issues around bio-ethics, body politics and the inhumane treatment of animals in industrial farming," explains the artist, who developed the project in collaboration with Kapelica Gallery, Kersnikova Institute in Ljubljana, and bioengineers of the Slovenian therapeutical company Educell. In the performance, she first enters the stage with rubber gloves and a butcher apron, slic-ing up a large piece of beef, recreating the biopsy on her own leg. A second part features her as a lab technician, wearing a one-piece chemical protection suit, creating in vitro meat. Videos from the actual laboratory processes are shown with text and voice in a staged dialogue between the artist and her artificial self. Multi-channel live sound and her voice clone have been created by composer Moisés Horta Valenzuela, also known as ࣿEXꓤℭꝪSMOS. In the third and final part, Theresa Schubert prepares her lab-grown meat and offers pieces to the audience.

"The COVID-19 pandemic added unforeseeable relevance to my project," she notes at the end of

her video message, addressing participants to the HYPERTOPIA field exploration. "Back in March, the assumption was that the Corona virus may originate from wild animals, like bats, that have passed it on to farmed animals. As intermediate hosts of the disease, these animals have infected humans through consumption." As animal industrialisation requires more and more space, farms expand into natural terrain, drawing near forests and other wildlife hab-itats. Theresa Schubert refers to an article pub-lished on the Chinese blog Chuang in February 2020, that discussed the "evolutionary pressure cooker of capitalist agriculture and urbanization" in more detail. "The virus behind the present epidemic was, like its 2003 predecessor SARS-CoV, as well as the avian flu and swine flu before it, bred at the nexus of economics and epidemiology," the artist says. "It's not coincidental that so many of these viruses have taken on the names of animals."

To put an end to these fatal developments, Theresa Schubert suggests a radical reconfiguration of the whole industry: "Why don't we leave animals out of it? Why don't we become our own suppliers for meat through employing biotechnological methods? How would you feel if you could grow your own or your lover's meat at home and then cook it together?", she asks in a voice far too pragmatic to be dismissed as mere provocation.

The New You:
Time Traveling to Technotopia

Welcome to the year 2050. We all have digital clones now, perfect likenesses of ourselves, created from the myriad data collected by our body sensors, networked homes and smart cities. The scenario may seem ominous. But we have, in the meanwhile, managed to make the most of technology, so that we can enjoy the benefits of our virtual quantification without having to fear potential abuse or the loss of humaneness or individual freedom. We asked Ani Liu to slip into her future self and answer a few questions with the wisdom of speculative hindsight.

Q: Back in 2020, the harmonious reconciliation of technology and humanism seemed somewhat utopian. In retrospect, what major turning points enabled the meaningful symbiosis of man and machine?

A: A shift in the societal views of how to distribute resources. Back in 2020, I was very concerned with unequal access and systemic racism and colonialist ideas perpetuated by our technologies. The work continues currently in 2050, but the major turning point in the symbiosis of humans and machines would have to do with access, distribution and social change.

Q: What recent technological innovation has been a real game-changer for you?

A: Recent breakthroughs in cheap, renewable energy, of course. We are still in a scramble to undo the environmental damage we have caused since the industrial revolution. The second breakthrough is in predictive vaccines generated with machine learning that allow us to create vaccines for strains of viruses that we have not yet encountered. In hindsight, we learned so much from the pandemic of 2020.

Q: What kind of information do you still keep to yourself, instead of having it stored and analyzed in the cloud?

A: There are some embodied memories that I am not sure can be fully stored in the cloud. The memory of lactating and breastfeeding, for one. A swirl of hormones including prolactin, oxytocin, and the euphoria and dysphoria of new motherhood.

Q: Which of your personal shortcomings still cannot be compensated by tech?

A: Despite many advances in machine learning and artificial intelligence, humans (including myself) are still notoriously bad at predicting the future because of the complexities of our emotional registers.

Q: And which of your talents turned out superfluous, now that virtual helpers have gotten so smart?

A: As a child, I used to pride myself on my good memory which is now, of course, superfluous.

Q: A growing number of terminally ill patients choose to have their consciousness uploaded to a computer. Would that be an option for you? (Please briefly indicate why?/why not?)

A: While it would be wonderful to continue to know my daughter, granddaughters, and great granddaughters as long as I possibly

can, I don't believe the idea of an infinite life is something I aspire to. Respecting Earth's cycles, giving as much as I can while I am alive, and being reabsorbed back into the dirt within mortal bounds makes the brief and wondrous lives we live more precious.

Q: Now that we have pills with practically no side effects for all sorts of emotions: Which one's your favorite?

A: It has certainly been a game changer now that everyone is taking kindness pills.

Q: If in your next life you had to reincarnate into a non-human life form, which one would it be?

A: I would enjoy understanding the world through distributed intelligence, such as fungi.

Ever since the Epic of Gilgamesh or the Rig Veda, poetry has helped humankind deal with the many challenges of worldly existence. The more complex the world gets, the greater our demand for forms of expression that counter the crisis of imagination; the more we need lyrics and narratives that open up new ways of thinking and eventually enable us to overcome old faults and fallacies. Departing from—and starting with—Himali Singh Soin's series of works *we are opposite like that*, this section seeks

MYTHOLOGIES

NARRATIVES

AND

ALTERNATIVE
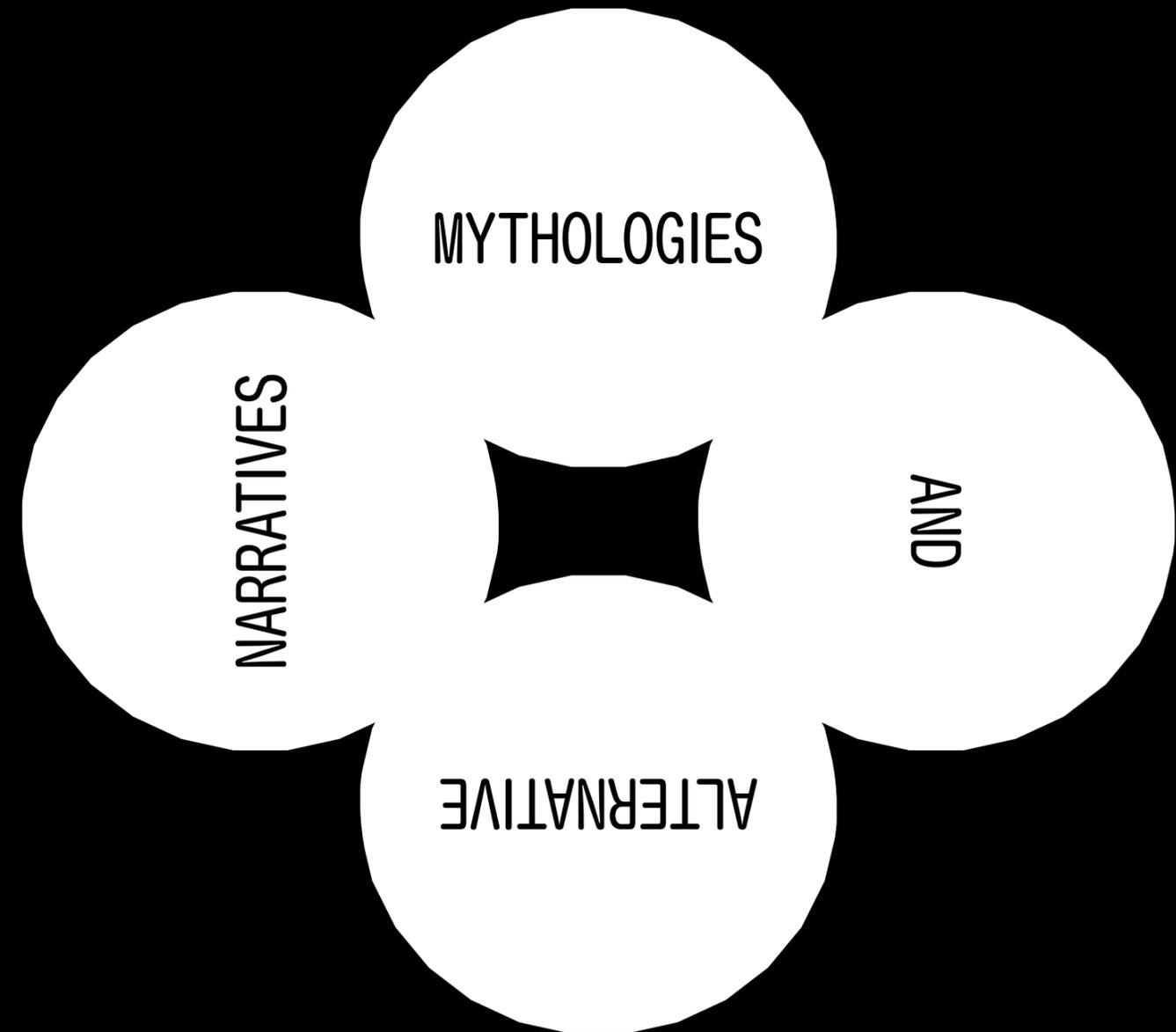
to incite an investigation into the power of poetry, storytelling and myth, while challenging the idea that we are the only ones who write history: How many hidden stories are inscribed in soil layers, deep ice, in the material structures of our planet? How many defunct, debunked legends underpin our worldviews? Which ancient (hi)stories are still holding true? Which non-human perspectives help us draft desirable futures?

Polar Perspectives 1:

SUBCONTINENTMENT
By Himali Singh Soin

South Asian Futurism does not fantasise about a future
Because it cannot isolate the future from the past
It fantasizes about a life in-between

It wishes to grab language by its horns
Grab the English language by its horns
And wring it off its yes' and nos and everythings and nothings and hang it out to dry
In the equatorial sun in the middle of infinity

Its locus is entangled: material and spiritual
Subliminal and subversive and submissive at once.

Bipolar[1].

South Asian Futurism is a witness to the ash-warmth of the morning when
The newspapers have smacked the iron-clad gates and a few are lost in trees or transit–

South Asian Futurism dismisses its title
Denouncing South Asia as a universal region without specificity
Denouncing futurism as an accomplice to the violence that comes with acceleration.

South Asian Futurism would like to call itself Subcontinentment.

A skewed portmanteau of
subcontinent and *contentment*

An idealistic futurism that is scientific but does not believe in science as a solution
Its science fiction does not project a dystopia despite the carbon
It wants an alchemy of knowledges, it wants rumours, humours, hypotheses, it wants ancient imaginaries
And everyday erasures, it wants to rest.

Where happiness is fleeting, our contentment finds rest.
Not rest like stillness, but the kind of rest in music,

A held pause, an interval with the pedal down.
Or rest like a lilypad[2], floating flat against water
An absolute zero coated in an armour of wax
Repelling the too-muchness of life
Lightness borne by horizontality.

We are the poetry of brown bodies.
We take your criticality
And raise you immediacy

Subcontinentment says:
It is a part of and apart from
Subcontinentment says:
We are one body
That is killed over and over again
If we are not cautious.

The spectre of freedom
In a world which cannot be reversed
But reprinted[3]
In the form of 2000 rupee notes
Purple hearts
Dreaming of life on Mars
Where money will be cosmic and
Gandhi will look through lotus-coloured glasses
And see temples built on tombs
Palimpsests of pulverizing precarity.
Praying to the gods of geometry[4]
Their indeterminate equations,
To the reflection of light by the moon,
To suspension, apparition, gravitation, levitation, indirect vision.

Subcontinentment swerves through space
It aspires, transpires, desiring
First of all an understanding of labour
Love lost to slavery
Subcontinentment is retrospective but it is not repair
It does not revisit its indentured past[5]
But it does not try to escape it

1   This manifesto stems from the writer's journey to the polar circles, where she was confronted with her alienness in a landscape otherwise used for outer space simulation experiments. As part of a series of fictional ice archives, south asian futurism anti-chronicles the geopoetic links between the poles and the subcontinent.

2   Water lilies are considered sacred across South Asia and are the national flower of Bangladesh and Sri Lanka. They open at dawn and close at dusk. Their rhizomatic root structure may be read as a representation of lateral thought. Pancake ice formations at the poles have been likened to frozen lily pads. The stillness of ice is termed 'a condition of absolute zero'.

3   In 2016, Prime Minister Narendra Modi, leader of the Hindu nationalist BJP party (whose symbol is a lotus), announced the overnight demonetization of all ☐500 and ☐1000 banknotes in an effort to sift out 'black' money. While it had no effect on those with cabinets full of cash, the poor in rural areas committed suicide believing their money to be worthless. Shortly after, a high currency ☐2000 note was issued in the colour purple, with an image of Mangalayaan, India's Mars Rover, printed on it.

4   Aryabhata (476–550 CE) was an Indian mathematician-astronomer who proposed that the glint of the moon is due to the reflection of the sun's rays on it. He also used a method called pulverisation (etymology: dust), involving recursive algorithms that break coefficients down into smaller fractions. India's first satellite is named after him.

5   After the abolition of slavery, the British replicated a system of bonded labour in which 2 million Indian indentured workers were brought to 19 colonies to work on sugar, cotton and tea plantations, and rail construction projects in the West Indies, Africa and Southeast Asia. One of the many epigenetic, vicarious traumas that shadow our lives today.

Imitate it
Sublimate it

Subcontinentment is an oath:
We matter.
It is a re-interpretation
A limited vocabulary
With infinite combinations
Like a place without a perimeter.
We are anti-directional, anti-event
Our days are counted but our time will not run out
Subcontinentment is replenishment

Subcontinentment like the age old saying,
remember the future!
The chuckles that sentence gets every time
Even in the mirror universe
Where time unfolds another way
Countering memory
or
Avant garde delay

we are opposite like that
We are ours
We are kinetic
We are still
We are non-violent
We are complicit and cinematic
We are not a unified we
But incline toward a collectivity
Autonomous and fugitive

Subcontinentment emphasises interdependence
Over individualism
Speculation
Over spectacle

We, the south asian futurists,
Now the Subcontinentmentalists,
Petition from the equator for new meridians

We wait for the classical collapse of capital from the nucleus of a bat's being
We are tarnished by the corrosion of materialism
We parse, forage, name again

We claim an ethics of belonging
An aesthetics of not

Subcontinentment is a reclamation:
Enthusiasm reconfigured.
The mobilisation of positivity
Subcontinentment is always already smiling
Subcontinentment believes that happiness is related to goodness
But neither is related to enhancement
It wants to clean garbage not by flinging it into space where golf balls and garters
Smash into the sun's stellar radiation and combust out of any evidence at all.

88-89

Charged by crisis
It dances its discontent
Its revolt is not lethargic
It emerges hardened with dust
When it freezes, it releases heat[6].
It is not fatigued by
The alien antibodies that move through it

We, the Subcontinentmentalists,
Align ourselves with the
Afrofuturists,
Sinofuturists
Ethnofuturists,
Indigenous futurists

All the intergalactic dreaming
Our retro-foresight
The boomeranging to the moon
The salt desert like a blank slate of ice
The alienation of extra-terrestriality

Subcontinentment is anti-extinction
It proposes radical survival

To be as it is.
Inhabit the architecture of loopholes

Subcontinentment looks up toward the Arctic where maybe the Vedas found home in the low
sun and the early moon
and maybe not[7]
Subcontinentment looks downward toward the Antarctic, with whom it shared edges and
borders way back when in Pangea
It finds common fossils, one of them an embossed *ficus religiosa*
It finds mica, which shimmers like something far and rare

Subcontinentment says: *Go there.*
Huddle close together
Against the wind.
Pleasure, even at the end.
We are opposite like that

→ *Subcontinement* is part of a larger collection of texts, published in summer 2020, in the context of Himali Singh Soin's
project *we are opposite like that*.

6   A phenomenon known as salt flux, occuring in the polar regions due to melting ice.

7   In 1898, politician and astronomer Bal Gangadhar Tilak wrote 'The Arctic Home in the Vedas'. Substantiated by passages from
the Vedas, this account hypothesizes that Aryans lived in the Arctic while it was warm, and migrated to Asia due to glaciation and
ice floes around 8,000 BC. Today's Brahminical orders insist that they originate within Hindustan. Both are disturbing miscalculations
of ancient history. The Vedic excerpts, however, are uncanny, predating conjectural accounts of the existence of the poles at all.

Polar Perspectives 2:

A response to Himali Singh Soin's artwork *we are opposite like that* by Berlin-based storyteller Mirthe van Popering

Part 0: Introduction

Wait, slow down.

There's a story I'd like to tell you.

Like you, I stood at the edge of a black pool in State Studio, watching Himali Singh Soin's *we are opposite like that*. Seeing before me a clear inverted mountain floating over the horizon and its many reflections washing up at my feet.

Like you, I dipped into clairvoyant narratives, folding "us" back into a true story older, deeper than those of science, selfhood, borders, binaries, modern "isms" and the anthropocene.

A story of ice.

In that story, Himali recalls the Victorian nightmare of white human bodies losing ground. Of a new world order, where another whiteness enters, annihilates and covers over the land. And then we wake up to an unheard perspective: the voice of an elder, the ice herself.

There's no need to travel far to meet the ice. She's right here in Berlin, where the recent and ancient past bleed through the cracks of our everyday. If you look and listen past the surface, past everything that has become ordinary by repetition. If you re-take time.

Let me tell you something about stories.

Part I: The way stories matter.

Stories matter. Stories are our imprint: a trace of who we are now. Not only do they weave the past into our present landscapes; they shape our bio-graphies and societies, our fears and our desires. A story told enough times solidifies. It becomes a truth of sorts – a paradigm, a nation, a gender. A script for our thoughts and a matrix for our bodies. The more we iterate certain stories, the harder it becomes to alter them.

We forget they were stories at all.

That is unless we change our pace, step out of the score, skip a beat to listen deeper. In the in-between place and time of reflection and imagination we can revisit the distribution of roles, the plot, scripted lines and our own position. We can navigate to the systemic crevices hidden behind embellishments or plain ignorance. And we can and start to imagine what we've been told *otherwise*.

That's because stories do not only trace past movements. They are a portal towards future worlds, too. Stories are the vessel for time-travel and teleportation. They have the power to let us see through different pairs of eyes and let us ani-mate any conceivable shape. Every story tells something about who we are and uproots the ego by summoning our spectres.

And once we learn the skill of storytelling, we can collectively forge a change of plot.

Part II: The kettle lake, a meditation.

Do you see the lake?

I'd like you to go near it. Go nearer than you would.

These waters before you hold stories and mythol-ogies that have long become a mystery. Into its depths, legends have been spun and its surface has mirrored times beyond imagination. Right where you stand right now once sat a giant block of dead-ice, left there by a glacier to be buried – by sands, stones, sediments and ages. To melt, slowly. A slowly *so* slow that it's unspeakable! A pace beyond reason.

Right here, buried ice was once transforming, it's cold thawing, its hardness softening. Its solid becoming liquid… Until it left nothing but a sinking emptiness, a void to be filled up with life from times to come.

Now.

You stand at the edge. Living, breathing. Listening into the past and what if.

You move closer you
could see the clouds at your feet, in a dark glossy heaven
shed leaves adrift and there, your own reflection
looking back mirroring your shapes in *real time* liquid-solid contours are you fading yet?
Feel the moist autumn soil pressing against
the soles of your feet. Imagine: layers of sediments,
eras blanketing each other, supporting you now.
Gravity rooting you. History, rooting you. Society and your beliefs. Rooting you. Loved ones. Rooting you.
Beckon all the things that hold *you* in place.

Breathe. *(breathe in and out)*

Look deeper sink your eyes
through the mirror

dip your mind
into the deep where knowing stops sink your "I"
myself
below surface
past waking in between sleeping circular movements
repetition and days collapsing into nights
un-see

(breathe in and out)

Listen
listen close enough to hear the
spectral presence of ice the rhythm of epochs
echoes of humans haunting a very deep future

now rest your self
in the abyss of time where
ice melts into a body of drops where you melt into
a body of drops where loss turns to love and "I"
erodes where
new streams and rains intimately mingle with translu-cent bodies and excess water sheds into the
soil and the sky over time

Ask yourself:
now that you are here, who are you?

DATA

DREAMING

Our capacity to collect and analyze big amounts of data is transforming the world and the way in which we inhabit it. From climate change to poverty, collecting data informs our decision-making and diversifies our understanding of adaptation. How can data make the invisible visible and open up new opportunities for social imagination and interaction? How can it be decoupled from exploitive mechanisms? Do we need new, data-driven rituals to come to terms with the many challenges of our time? The following chapter aims to provide an impetus by sketching out ideas on how to readjust our relationship with data.

Konstruktive Datenkunst: Das Künsterduo Salvatore Iaconesi & Oriana Persico im Interview

Im Untergeschoss des STATE Studios, dessen aktuelle Ausstellung HYPERTOPIA zu transdisziplinären Gedanken-reisen in ein mögliches Morgen einlädt – erzählt ein elektronischer Apparat von der Armut der Welt. Anstelle von Worten nutzt er moduliertes Licht. Es leuchtet rot und versteht sich als Warnung, aber mehr noch als Werkzeug, Transmitter, Methode. Die Mission des Objekts namens *Obiettivo* (italienisch für Ziel) ist ambitioniert: Als Teil eines Projekts namens *Datapoiesis* möchte es den Wandel der Welt begreifbarer machen – indem es Daten „erlebbarer" macht. Hinter *Datapoiesis* steht das Research Center HER: She Loves Data, ehemals Human Ecosystems, aus Rom – und dessen kreative Köpfe Salvatore Iaconesi und Oriana Persico, die sich als Duo auch AOS (Art as Open Source) nennen. Wir haben mit den beiden über KI und die Welt sowie das sinnliche Potential von Daten gesprochen.

Q: Wer seid ihr? Was ist HER: She Loves Data? Was ist euer Hintergrund?

A: In loser, ungeordneter Reihenfolge: Skateboarding, Robotik, Rave Partys, strategische Kommunikation, Hacking, Wissenschaftsphilosophie, Schreiben. Wir kochen beide sehr gern. Keiner von uns hat Kunst studiert, wir kommen eher aus der Kommunikationswissenschaft, Informationstechnologie und der Philosophie. Eine Kombination, die in Zeiten wie diesen so typisch wie symptomatisch erscheint...

„HER: She Loves Data" ist eine besondere Art von Research Center. Es verbindet künstlerische und gestalterische Methoden mit natur- und geisteswissenschaftlichen und technischen Aspekten. Wir erforschen die existenziellen, sozial-psychologischen Implikationen der modernen Informationstechnologie. Mit „HER: She Loves Data" haben wir eine technologische Infrastruktur geschaffen, die uns erlaubt, als eigene kleine Institution zu agieren und unsere Arbeit durch die Zusammenarbeit mit Stadtverwaltungen, Organisationen, Unternehmen sowie anderen Institutionen oder Forschungseinrichtungen in der Mitte der Gesellschaft zu positionieren.

Q: In den 1940er-Jahren verstand man Daten vor allem als „übertragbare und speicherbare Computerinformation", seither hat sich der Begriff samt seiner Bedeutung verändert. Heute gelten Daten als Währung, Kommunikationsmedium, ein Mittel die Welt zu beschreiben (und bestenfalls besser verstehen zu können), etc. Welche

Definition ist euch am liebsten? (Und: Do you love Data?)

A: Daten und ihre computerbasierte Interpretation sind mittlerweile längst zu einem grundlegenden Aspekt des menschlichen und sozialen Lebens avanciert. Als kulturelle Artefakte bestimmen Daten die Art und Weise, in der wir uns ausdrücken und definieren. Sie haben dem Öl als wichtigstem Rohstoff längst den Rang abgelaufen. Wir müssen uns mit ihnen beschäftigen und einen nachhaltigen, verantwortungsbewussten Umgang mit ihnen erlernen.

Q: Ich frage euch das als kreative Köpfe eines Projekts namens *Datapoiesis*. Wie kam es zustande und welche Ziele verfolgt ihr damit?

A: *Datapoiesis* ist in Ivrea entstanden. Die italienische Stadt (in der Region Piemont, am nördlichen Rand der Po-Ebene,) war mal so etwas wie das Silicon Valley Europas. Im Gegensatz zum heutigen Silizium-Tal Kaliforniens wurde in Ivrea an Konzepten für einen sozialen Kapitalismus gearbeitet, der den Künsten und der Kultur allgemein einen sehr hohen Stellenwert einräumen sollte. Leider sind diese Ideen im Lauf der 60er-Jahre mehr oder weniger im Sande verlaufen. Wir haben in Ivrea einen Workshop geleitet, der von unseren Freunden bei PlusValue und ICONA organisiert wurde – einer Gruppe kreativer Unternehmer, die den Geist der Olivetti-Werke wiederbeleben. Während wir in die traditionsreiche Geschichte des Unternehmens Olivetti eintauchten, stellten wir uns immer wieder die Frage, was ein Entrepreneur

wie Adriano Olivetti wohl heutzutage tun würde. Wir glauben, er würde sich mit Datentechnologie beschäftigen, um vorwärtsgewandte Objekte entwerfen und produzieren zu können, für die Bedürfnisse, Erwartungen, Ansprüche und Visionen unserer Zeit. Natürlich würde auch seine Firma nach Profit streben, aber sie würde sich auch den ethischen und sozialen Verantwortungen stellen, die fortschreitende Informationstechnologien, künstliche Intelligenz, etc. neben all den neuen Möglichkeiten mit sich bringen. Mit diesen Überlegungen hat Datapoeisis begonnen.

A: Im Englischen gibt es den Neologismus „Senseability", der eine sinnliche und körperliche Erfahrbarkeit beschreibt. Wir finden, dass unsere hypervernetzte Gegenwart neue Formen einer solchen „Senseability" braucht. Um den Klimawandel und seine Konsequenzen zu erfahren, reichen unsere eigenen Sinne und Möglichkeiten zum Beispiel nicht aus. Um seine Folgen auswerten zu können, bedarf es enormer Datenmengen aus allen Regionen der Erde – und entsprechende Rechenkapazitäten. Was wir aber ebenso brauchen, sind neue Formen der Datenvermittlung. Hier setzt *Datapoiesis* an. Bei den Objekten, die aus dem Projekt hervorgehen, handelt es sich um Kunstwerke, Möbel, elektronische Geräte und Gadgets, deren Gestaltung im Wesentlichen von modernen Daten und deren Verarbeitung ausgeht. Ihre Funktion besteht darin, neue Formen der Reflexion, Emotion, Kollaboration, und Diskussion zu befördern und komplexe Phänomene der globalisierten Welt auf neue Weise erfahrbar zu machen. Das geht nur, indem man neue Verbindungen schafft, zwischen Informationen und ihren Agenten, zwischen Design, Kunst, Tech und Aktivismus. Wir wollen Konzepte entwickeln, die den komplexen Zusammenhängen unserer ökologischen und gesellschaftlichen Umwelt nachspüren und ein Gefühl von kollektiver Verantwortung stiften. Mit PlusValue und ICONA als Partnern und dem Budget einer ersten öffentlichen Ausschreibung in der Tasche, haben wir begonnen, diese Vision in Aktionen und Objekte zu überführen.

A: Der Kontakt zu STATE kam über AI for Good Global Summit zustande. Das ist eine Plattform der Vereinten Nationen, die den Dialog über vorteilhafte Nutzungsmöglichkeiten künstlicher Intelligenz vorantreiben möchte und die Entwicklung konkreter Projekte fördert. Das STATE Studio Team hat mit AI for Good zusammengearbeitet, wir hatten *Obiettivo* dort eingereicht und als die Kuratoren ihre aktuelle Ausstellung konzipierten, haben sie sich an das Objekt erinnert. Daraufhin hat sich ein wunderbarer Dialog entwickelt. Wir sehen uns nie einfach als Künstler, die Werke ausstellen, wir möchten die Schnittstelle zwischen Kunst und Wissenschaft aktiv mitgestalten. Kunst-Wissenschafts-Kollaborationen sind ja gerade ein großes Ding, aber in unseren Augen sind solche Partnerschaften nur dann wirklich wertvoll, wenn sich alle Seiten aktiv beteiligen, um innovative Forschungsmethoden, Formen, Prozesse, oder Konzepte zu entwickeln. Bei STATE hat man das Potential der gegenseitigen Bereicherung gleich gespürt. Einerseits kommuniziert und ergänzt *Obiettivo* die Ideen der Ausstellung, andererseits eröffnen Ort und Kontext neue Zugangsmöglichkeiten zum Objekt und den Ideen dahinter.
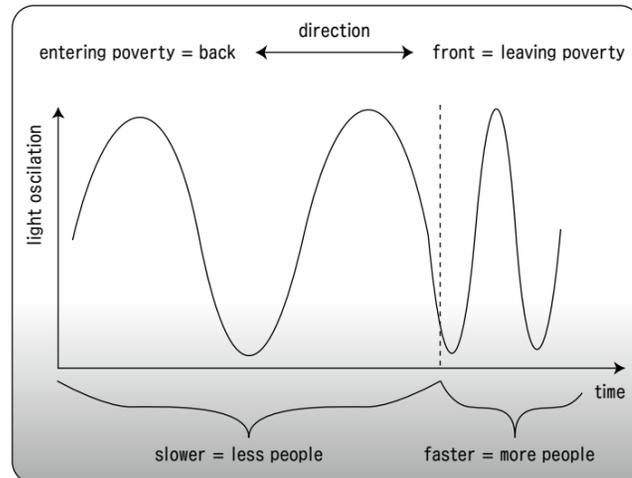
How to read Obiettivo © AOS

A: *Obiettivo* ist eine Warnleuchte, die auf die Daten internationaler Organisationen reagiert – genauer auf die Anzahl an Menschen, die im Sinne des UNDP (United Nations Development Programme) in extremer Armut leben, also weniger als $1,90 am Tag zur Verfügung haben.

Obiettivo wird mit Datensätzen der UN, des OECD, der Weltbank und der World Poverty Clock gefüttert, die zunächst aufeinander abgestimmt werden (unterschiedliche Organisationen nutzen unterschiedliche Standards, Referenzen und Recheneinheiten). Die regelmäßigen Berichte von UN, OECD und der Weltbank bilden die Datengrundlage, gleichzeitig werden Echtzeit-Updates der World Poverty Clock in ein neuronales Netz eingespeist, das mit historischen Datensätzen trainiert wurde, um die Entwicklungszahlen besser deuten zu können. Aus dem Abgleich dieser Datensätze ergibt sich die Zahl der Menschen, die den Bereich, den die UNDP als extreme Armut definiert, verlassen – oder zur Gruppe der extrem Armen hinzukommen. Während die gesamte Datenverarbeitung in der Cloud passiert, wird dieser Wert an das eigentliche Objekt weitergegeben, um dessen Licht zu modulieren: Eine hohe Frequenz bedeutet, dass die Zahl extrem armer Menschen zunimmt, eine niedrige signalisiert eine sinkende Tendenz. Zudem verändert sich der Bereich, der beleuchtet ist: Bei sinkendem Werten wandert das Licht nach vorne, bei wachsenden nach hinten.
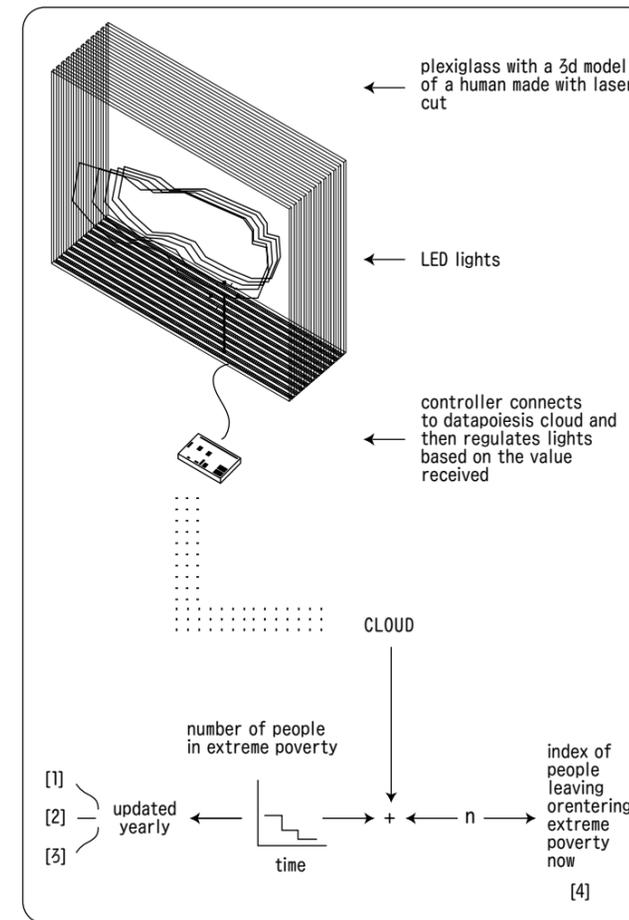
Schematic diagram © AOS

A: Unser Alltag ist voller Rituale, sei es in der Schule, im Büro oder auf der Straße, in unserem Konsum- und Kommunikationsverhalten, Selbstentfaltung und Selbstdarstellung. Mittlerweile sind viele dieser Rituale mit neuen Technologien verbunden. Diese empfinden wir jedoch insofern als defizitär, dass wir uns in ihren Prozessen kaum orientieren können. Wir fühlen uns etwas verloren, aus unterschiedlichen Gründen. Einer besteht in der Tatsache, dass wir all diese Technologien erst relativ kurz kennen und sie doch bereits so vieles verändert haben. Hinzu kommt, dass die meisten Rituale, im Rahmen derer wir im Alltag mit datenverarbeitenden Technologien in Kontakt stehen, konsumorientiert und vor allem von wirtschaftlichen Interessen geprägt sind. Sie sind darauf ausgelegt, Menschen und ihre Aufmerksamkeiten in Vermögenswerte zu verwandeln. Wenn wir nicht wollen, dass sich diese extraktiven Prozesse verstärken, müssen wir diese technologiebasierten Rituale neu erfinden. Das ist schwierig, weil es uns an der nötigen Vorstellungskraft fehlt. Wir befinden uns in einer Art Krise der Imagination, vor allem, was unsere Beziehung zu Daten, Technologien und nicht-menschlichen Akteuren betrifft. Wir nutzen digitale Technologien als Services und sehen sie auch als solche an. Stattdessen sollten wir beginnen, sie als existentielle kulturelle Artefakte anzuerkennen und neue Kosmologien erdenken, die uns dabei helfen, die Welt und uns selbst besser zu verstehen. Wir werden sehr bald merken, dass wir nicht das Zentrum der Welt sind. Ein guter erster Schritt für die Verbesserung unserer Vorstellungskraft ist das Ende des mensch-zentrierten Designs.

A: Unsere datapoietischen Objekte erfüllen zwei Grundfunktionen, über die eine – das Erschaffen einer neuen „Senseability" – haben wir schon gesprochen. Die andere geht auf das spekulative Potential zurück, das in fast jedem Prototyp steckt. Es geht also darum, der besagten Krise der Imagination etwas entgegenzusetzen – auch durch die Erprobung unterschiedlicher Anwendungsmöglichkeiten. Ob nun als Kunstwerk oder Designobjekt befindet

sich *Obiettivo* gerade im Erprobungsprozess, gemeinsam mit Institutionen, Schulen, Stiftungen, Ministerien gilt es herauszufinden, welche Rolle das Objekt einnehmen kann, an welchen Orten es funktioniert, wie es zum Totem oder auch zum Produkt wird. Bestenfalls entwickeln verschiedene Akteure, Communities oder Organisationen eigene Ideen davon, wie das Objekt gebraucht werden kann. Es ist ein generativer Prozess. Irgendwann würden wir *Obiettivo* gern in globale „Rituale" integriert sehen. Das höchste Entwicklungsziel des UNDP ist es zum Beispiel, dass kein Mensch mehr in extremer Armut leben muss. In diesem Kontext könnte *Obiettivo* als rituelles Center-piece dienen, an dem sich die internationale Forschungsgemeinschaft, Politiker und Volks-vertreter versammeln. Die Verbindung von Kunst und Technologie könnte den Status Quo vor Ort erfahrbarer machen, aber auch den positi-ven Effekt einzelner Beschlüsse, den Wandel.

Q: Aufhören zu leuchten würde *Obiettivo* erst dann, wenn die Anzahl extrem armer Menschen weltweit irgendwann auf unter 500 000 fallen sollte. Besonders wahrscheinlich ist das leider nicht. Die Schere zwischen Arm und Reich vergrößert sich und in Zeiten der Pandemie nimmt die Armut drastisch zu, viele Prognosen sind düster – selbst dort, wo es den meisten Menschen bisher vergleichsweise gut ging. Neben der ökonomischen Situation verschlimmert sich die ökologische, noch nie waren die Anzeichen der systemischen Krise so deutlich spürbar wie jetzt. Was macht eure Arbeit zu einer validen Form von Aktivismus, in Zeiten wie diesen?

A: Ein konkretes Beispiel: Im Januar haben wir begonnen, unser Research Center umzustrukturieren, um uns komplett auf die Entwicklung datapoietischer Objekte konzen-trieren zu können. Im Februar brach dann die Pandemie aus und unser Forschungsthema bekam neue Bedeutung, im Zuge dieses plane-tarischen Ausnahmezustands wurden Daten zu etwas Existentiellem. Überall auf der Welt wurde den Menschen plötzlich bewusst, dass Ihre Freiheit rauszugehen, zu feiern, zu arbeiten oder sich mit Freunden zu treffen, am dünnen Faden langer Zahlenkolonnen und Statistiken hing. Die Medien bombardierten uns mit Daten – mit Todeszahlen, Infektionsraten, mit den Zahlen fehlender Beatmungsgeräte und Intensivpflegebetten – ihnen zu entkommen war unmöglich, ohne dass man sich viel mit den psychologischen und gesellschaftlichen Implikationen beschäftigte. Als Künstler und Re-searcher haben wir uns gefragt: Wie können

wir diesem aggressiven Info-Krieg ein medi-tatives Moment abgewinnen, das uns dabei hilft, uns selbst und unserem Umfeld näherkommen? So begann unsere Arbeit an „Data Meditations", einem neuen, datapoietischen Ritual, dass die Idee des Datenaustauschs reinterpretiert, um trotz räumlicher Isolation Nähe zu ermög-lichen. Dabei fungieren Daten als Vermittler von Empathie und Solidarität oder als Formen autobiografischen Ausdrucks. Alle Tragödien, auch Pandemien, haben einen kathartischen Effekt, deren Kern die Agnition ist: Sobald wir anerkennen, wer wir wirklich sind und wie die Dinge liegen, können wir doch kaum anders, als sie mal mit anderen Augen zu sehen.

Q: Die Grundstimmung im STATE Studio, der Berliner Galerie, in der *Obiettivo* aktuell steht, ist optimistisch. „Das Ausstellungskonzept folgt der Fragestellung, wie der anhaltende Moment des gefühlten Ausnahmezustands die Beziehung zwischen Mensch, Natur und Technik auf eine Art transformieren kann, die Nischen der Hoffnung eröffnet und zu nachhaltigem Handeln ermutigt" schreiben die Kuratoren. Inwiefern ist *Obiettivo* eine konstruktive Form des Alarms?

A: Indem das Objekt neue Formen der Auseinan-dersetzung ermöglicht. Anstatt Daten einfach zu visualisieren, nutzt es sie performativ, was zu Kritik anregt, aber auch neue Erkenntnisse schafft. *Obiettivo* setzt dem bloßen Daten-spektakel einen Akt der sinnlichen Erfahrung entgegen. Daten sind nicht objektiv, son-dern immer ein Produkt von Konstruktion und Interpretation.

Q: Was hilft euch persönlich, positiv zu bleiben?

A: Verliebt zu sein, konstruktive Ideen zu entwickeln und diese zu teilen. Wenn man, wie wir alle jetzt gerade, mit einer komplexen und schwierigen Situation konfrontiert ist, lässt sich der Konflikt nicht mehr so bildlich beschreiben oder begreifen wie ein Molotow-cocktail. Wir können die Dinge nicht mehr alleine angehen. Dass muss man sich klar machen, auch wenn es bedeutet, mit Menschen und Organisationen arbeiten zu müssen, die man nicht mag. Wie sonst sollen wir mit so großen Themen wie dem Klimawandel fertig werden?

Q: Viele Leute haben Bedenken, was die Verbreitung künstlicher Intelligenz in unserem Leben betrifft. Glaubt ihr, dass wir sie brauchen, um positiven Wandel umsetzen zu können?

A: Als Künstler und Forscher schaffen wir Erlebnisse, die Menschen dazu ermutigen sollen, sich aktiv am Transformationsprozess zu betei-ligen und ihre Meinung zu sagen. Wir dürfen die Debatte um künstliche Intelligenz, Informa-tionstechnologien und den Umgang mit Daten nicht ausschließlich Technikern und ihren Blasen überlassen. Es geht um unsere Ideen vom sozia-len Zusammenleben – ob nun in Koexistenz mit KI oder ohne – und um unsere Rechte, die wir immer wieder neu aushandeln müssen.

Q: Es gibt viele Konflikte, die Kunst allein nicht lösen kann. Glaubt ihr nicht, dass wir neue globale Bestimmungen brauchen, was den Umgang mit Daten, KI und so weiter betrifft?

A: Auch ÖkonomInnen, TechnikerInnen oder JuristInnen werden diese Konflikten allein nicht beikommen können. Wir müssen alle zusammenarbeiten – und die Kunst wird dabei gern unterschätzt. Technologie hat viel mit Wahrnehmung zu tun, sie beeinflusst die Art und Weise, in der wir die Welt sehen und fühlen. Wir erfinden Technologien, aber die Technolo-gien erfinden auch uns. All die psychologi-schen, sozialen, existenziellen Implikationen der neuen Technologien eröffnen ein immenses Terrain, das es mit den Mitteln der Kunst zu erkunden gilt – so ist es schon in anderen Phasen der Geschichte gewesen. In Bezug auf Daten und KI sind regulierende und aktivisti-sche Ansätze meist recht defensiv: Sie wollen Privatsphäre erhalten, das Individuum schützen, etc. Dagegen ist nichts einzuwenden, im Gegen-teil: Gott sei Dank gibt es Menschen, Institu-tionen und Organisationen, die sich für unsere Rechte einsetzen. Aber das hilft uns wenig, wenn es darum geht, den Wandel der Welt und des Menschseins zu begreifen oder uns mit kom-plexen Umgebungen auseinanderzusetzen, in denen eben nicht nur wir selbst, sondern auch andere, nicht-menschliche Daseinsformen exis-tieren. Wenn wir nur defensiv denken, werden wir mit der Komplexität unseres Planeten nicht auf verantwortungsvolle Weise umgehen können. Was wir brauchen sind ganzheitliche Ideen, die imaginativ und inklusiv sind. Ein perfekter Job für die Kunst, oder nicht?

Q: Mit *Obiettivo* hat euer datapoietisches Projekt ja gerade erst begonnen, sich zu materialisieren. Was kommt jetzt? Welche anderen Ideen habt ihr in der Pipeline?

A: Ein neues Projekt haben wir gerade in Palermo gemeinsam mit dem dortigen Ecomuseo Mare Memoria Viva gestartet. Es heißt U-DATInos

und ist als generative Installation einer unserer wichtigsten Ressourcen, dem Wasser, gewidmet. Unser Fokus bleibt jedoch weiter-hin auf der Umstrukturierung von HER: She Loves Data. Das neue Konzept ist extrem umfangreich und umfasst Aspekte wie Co-Living, alternative Energie- und Lebensmittelproduk-tion – sowohl in urbanen als auch ländlichen Gebieten. Im September haben wir Rom verlassen und sind für eine einjährige Residency der Opera Barolo Foundation nach Turin umgezogen. Die kommenden Monate sind für Peer-Reviews unseres Konzepts reserviert, an denen Kulturinstitutionen, Universitäten, StudentInnen, KünstlerInnen, und BürgerInnen beteiligt sein werden – vor Ort, in ganz Italien und interna-tional. Auf Basis dieses vernetzten, kollektiven und öffentlichen Prozesses möchten wir die Rolle des Research Centers neu definieren und beginnen, eine wirklich zeitgemäße Institution aufzubauen – gemeinschaftlich und über sämt-liche Grenzen hinweg.

The development of Artificial Intelligence is one to the most important events in recent history. At a moment when many see the development of AI as more threatening than beneficial, a growing coalition of researchers and innovators around the world is working towards a use of *AI for Good*. This movement is gaining significant momentum and brings up relevant questions just at the right time. It also drives business and innovation in areas where Artificial Intelligence is used as a promising tool for sustainable development.

In only a few thousand years, human activity has become the most defining influence on our global ecosystem. The pace of change has rapidly accelerated in the last 250 years since the invention of the steam engine and the resulting first industrial revolution. Now, we are at the brink of a new revolution, which is driven by the transformative power of emerging technologies. Artificial Intelligence, genetic engineering, AR/VR, robotics, and 3D printing will fundamentally change our lives in the future – at a much faster pace than any technology before. While it has been possible to learn from our mistakes when testing out new inventions of the past, one fatal error could now be just

too much. Which means that, now more than ever, we have to engage in strategic thinking to make sure these technologies are used in a beneficial way.

Technologies are tools and can only provide value when applied for a meaningful goal. It is our responsibility to constantly evaluate the direction and to identify desirable goals. In 2015, the United Nations published the 17 Sustainable Development Goals as a roadmap to guarantee a sustainable future by 2030. These goals range from ending hunger and poverty over realizing sustainable energy and gender equality to preserving our biodiversity.

Over the last few hundred years, technology and innovation have led to a vast improvement of our living conditions. While surely, technology is also among the culprits of many of our problems, it is clear that technological development and innovation will be at the heart of moving towards a sustainable future. In many instances, we have simply just passed the point at which a pure limitation of our human impact will do the job.

AI can play an important role in forwarding sustainable development. This is not because of the hope – or fear – of the advent of a hypothetical future super-intelligence which will solve all of our problems – or be our worst problem all together. The hopes are based on some key capabilities within the domain of AI, such as data analytics or pattern recognition.

Most of the recent advances in Artificial Intelligence are based on the application of different increasingly sophisticated Machine Learning techniques. Using such algorithms, computers are equipped with the ability to learn without being explicitly programmed. What you need to train the algorithms

is always the same: a suitable set of training data and sufficient computational resources to do the training. The fast paced growth of both data and GPU – brings about ever more astonishing applications of Artificial Intelligence.

One exciting field of AI application lies in the use of satellite data. The US startup Planet Labs was founded in 2010 by 3 NASA scientists. Today, it operates the largest satellite fleet in history, with over 200 mini-satellites orbiting our planet. The first goal of the startup was to scan the entire landmass of the planet once a day. They reached that goal in late 2017. Companies can now access that data and even order custom features. That means that private access to close to real-time monitoring of the earth's surface has become reality.

An interesting AI use case of satellite data is Global Fishing Watch. The initiative was launched in late 2016 as a transparency platform with the goal to protect the world's fisheries. Every day, it processes over 22 million position messages from more than 200,000 ships to detect patterns that signify which vessels are fishing, when and where. Another notable use case is a research project at Stanford University, that examines high resolution images of rural areas in Africa to identify infrastructure and other characteristic features, track progress and ultimately, to eliminate poverty.

The agricultural sector is surely bound for an AI revolution as well, with hopes for higher efficiency and lower consumption of vital resources. A few years back, Montreal-based startup Nectar developed a fully integrated beehive management system. After their custom sensor has been applied, it allows beekeepers to monitor their hives in real-time with their smartphones without

disturbing the colony. A little later, San Francisco-based vertical green-house company Plenty hit the headlines for closing the biggest seed fund round in AgTech ever. The world's biggest tech fund, SoftBank Vision, invested over $200 million in the company. Plenty uses IoT sensors and machine learning to grow crops vertically indoors using only light, water and nutrients. It claims to use only one percent of the water needed in traditional farming while growing up to 350 times more produce on one square meter.

In the energy sector, a lot of excitement buzzes around the implementation of intelligent networks, that connect producers, consumers, storage, and supply energy just right when it is needed. AI is used to predict energy consumption peaks and help with real-time optimization of operations settings. The German company Gridhound, for example, targets network providers. It is a spin-off of the *Institute for Automation of Complex Power Systems* at the RWTH Aachen. The company developed a cloud-based Advanced Distribution Management System. It allows network providers to monitor and optimize their distribution grids in real time through a pay-per-use machine learning based software solution.

On the private consumer side, smart home monitoring systems like Ecoisme connect with all major appliances to measure power consumption and analyze the user behavior. By sending out reminders and suggestions (like closing the door of your fridge that you may have left open), Ecoisme promises to save up to 15% of electricity. There is great potential on the research side, too. One example is Berkeley Lab's Materials Project that combines machine learning with density functional theory calculations to identify promising new material compounds.

With so much potential for sustainable AI applications at hand, it is crucial to develop common principles that should make sure that all AI technologies are applied responsibly.

A very important area is the topic of Explainable AI, which wants to crack open the black box of machine learning algorithms and provide ways to understand the reasoning behind machine decisions. Only this in turn will provide a route towards accountability of AI systems. Just look at the case of the tragic and fatal Uber accident a few years ago that ended in the death of a pedestrian, along with the suspension of all of Ubers testing of self-driving car activities. The aftermath of the tragedy shows how important it will be in the future to be able to assess the reasons behind certain decisions of AI systems.

Other concerns are digital ethics and the establishment of guidelines to make sure that autonomous agents comply with our moral standards. Data privacy will become even more important as we need to protect individuals from the growing desire for data since it is the most valuable resource for more powerful algorithms. Wide-spread AI education, accessibility, and meaningful initiatives are crucial to prevent corresponding technologies from increasing the global divide and being employed for the benefit of a few powerful countries and organizations.

Not long ago, several thousands of AI researchers around the world, including thought leaders like Tesla's Elon Musk and Deepmind's Demis Hassabis, signed a petition for a ban of autonomous weapons systems. In 2018, the German DIN Institute started a working group on Artificial Intelligence, focusing on standardization as a way to more AI safety as well as addressing issues like ethics and data

privacy. Later that year, Deutsche Telekom invited industry experts for a pre-release of the company's first AI Guidelines. Industry initiatives like Partnership on AI or Audi's Beyond initiative engage with the topic through fostering collaboration and targeted projects.

Another important initiative has been started in 2017 with the AI for Good Global Summit, hosted by the United Nations in collaboration with the XPRIZE Foundation. It creates a neutral platform for exchange and brings together UN officials with AI and industry experts to build common understanding for the opportunities and challenges brought about by AI technologies. In 2018, the second AI for Good Global Summit first presented practical AI for achieving applications focusing on the achievement of the Sustainable Development Goals.

Using the words of US historian Mervin Kranzberg: "Technology is neither good, nor bad; nor is it neutral". More than 50 years ago, Stanley Kubrick released its science fiction opera "2001: A Space Odyssey" where the autonomous computer HAL attempts the hostile takeover of the spacecraft Discovery and its crew. While these doomsday scenarios are certainly not at immediate stake, it is vital to ensure that a technology as powerful and transformative as Artificial Intelligence will be used for the benefit of all species.

We have to create efficient incentives for innovators to develop AI applications for sustainable use. We have to ensure the responsible application of all AI technology, everywhere on the planet. We have to promote AI education, literacy and accessibility in order to prevent a threatening digital divide. We have to foster global exchange and cooperation around the topic to make sure that the right ideas and solutions find their suitable targets. This is what AI for Good is about.

COMMUNITY AND CONNECTIVITY

The situation caused by the COVID-19 pandemic is unprecedented for all of us. Not only does it disrupt our daily lives, but it thwarts our need for togetherness and shared experiences. Its isolating effect has brought new relevance to a range of pressing concerns about the future of social cohesion: What is an agent in an interconnected world? Can we overcome conventional categories of thought and readjust our notion of the individual, in favor of shared strengths and collective visions? And last but not least, what can we learn about fostering community by looking at nature?

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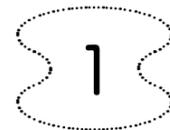
Curious Minds: A Learning Journey

A brief introduction to STATE Studio's ongoing community initiative by its coordinators Lise Ninane and Fotini Takirdiki.

At STATE, we are convinced that the challenges of our era ask for new ways of learning, producing knowledge and interconnecting with one another. For six years, STATE Festival and Studio have gathered an open circle of people that dare to dive into alternative ways of approaching societal and planetary questions. Every person that interacts and collaborates within the STATE spheres brings a new potential for knowledge and skills exchange, opening a large space of possibility. This led us to create Curious Minds: a transdisciplinary community of thinkers and practitioners working at the intersection of art, science and technology. Its purpose is to explore and challenge the boundaries of present knowledge and to shape unconventional ideas for our future.

When we started the Curious Minds initiative at the beginning of 2020, we asked ourselves: How can an exhibition-laboratory act as a learning space for its community of artists, scientists and civic participants? How can we enable deep connection and deep collaboration within a diverse collective? In order to approach these initial questions, STATE Studio started a collective learning journey that is still ongoing.

The very first step was to connect with other community initiators and listen to them. In order to find out what community might mean in the context of an exhibition-laboratory, we invited Lieke Ploeger and Rachel Uwa into the process. Both are inspiring visionaries when it comes to alternative community building in Berlin. Lieke has been the co-founder of SPEKTRUM Berlin and the Disruption Network Lab, where she has formed a strong activation programme for their communities. Rachel Uwa is the founder of the School of Machines, Making & Make-Believe, where she facilitates alternative learning experiences in the areas of art, technology, and human connection. Bringing both on board and learning from their insights has really stuck with us.

An important next step was going out there to find out who our community actually is and what their needs towards a community are. Some thoughts we had: What forms of curation and facilitation are needed from our side? What intensity level of interaction is desired? What resources and infrastructures are required? To address them, we created a questionnaire and planned a participative evening where we would test our programme ideas. The general assumption was that not much facilitation was needed from our side - it is indeed all about the people; so in that sense, less has actually been more. The main need has been creating an open and informal atmosphere that makes interacting easy.

When the pandemic started we had to rethink our programme and transfer it into the digital spheres. What came out of it is the Art-Science Monthly, an open meet-up that virtually takes place every third Tuesday of the month. During these meetings, we share thoughts, practice open-mindedness and create new bonds, while imagining alternative futures. Each session starts with impulse talks by an artist and a scientist; just enough to get inspired and start an exchange. Next to those evenings, we have launched the Community Journey as a way to collaborate in a small peer group over a period of three months towards a specific common goal.

If you have a keen interest in societal questions, an open and collaborative mindset, as well as a desire to learn from others and would like to get involved, feel free to approach us via curiousminds@state-studio.com. We look forward to interconnecting with you!

Long Distance (C)all: Connectivity in Times of Covid19

The Covid-19 pandemic presents itself as a global community challenge, changing the ways in which we interact, connect and communicate with each other. We asked three artists who are members of our Curious Minds community: In what way does the current crisis encourage you to explore new ways of learning and collaborating together?

Margherita Pevere: I am biased because of the transdisciplinary character of my work and because the implications of Covid-19 do speak along the lines of my research: openness and vulnerability of bodies and environment. I am not a scientist and dare not to draw conclusions on a hugely unresolved emergency. I am an artist, an intellectual, which may allow me and my peers to see things from an unusual angle. Working with biological matter taught me the fundamental unpredictability of the living. I learnt preventing contamination and containment; I learnt to observe – and embrace – unruliness. But who is the parasite today? There has been copious discussion about the Anthropocene in recent years. And here we are.

I am astounded by the power of a liminal being such a virus to disrupt the world as we knew it. Humans are hunkered in danger because of a viral outbreak. Anthropocene, really?

I hope trans-disciplinary work will be at the core of the discussion and strategy on the current pandemics. We need virologists, politicians, economists, engineers to work together to alleviate suffering and counter economical collapse across nations. Importantly, we need to support doctors, nurses and caregivers. We need to protect those more at risk.

We need engineers and designers to come up with compostable sanitary consumables such as masks and gloves. We need to tackle the environmental consequences of pandemic containment.

But we also need to think broader than "us". We need to rethink our relation to other species and the environmental implications of the pandemics. We need to take care of animals, plants and whole ecosystems affected by pandemic consequences. We need to rethink the way our societies are not prepared to the moment "nature" kicks in. And so on. All these needs are interrelated: we have to address them transversally to be able to "see" things that are not otherwise evident.

With regard to the arts, we need to rethink how art can remain accessible to the audience. There are excellent examples of online platforms or streaming projects, but not everything can be streamed. I am aware of some initiatives that tackle the problems arising from a society in confinement (what about performing arts?), but also sustainability of the arts. I am afraid there are no easy-to-go solutions, and it's time for a general radical rethinking. I hope that artists' (and curators'! and producers'!) competence in unconventional and critical thinking may provoke and infect broader discussions in society.

Petja Ivanova: I feel that Covid has made broadcasting practices more visible. There is a new tendency in radio and community radio, in which community building is very Covid-related. I'm part of this movement at the moment, by collaborating with Archipel Station and on a broadcast of Cammack Lindsay for Cashmere Radio. And I am much more active in showing solidarity and trying to support all my friends that run initiatives for social justice, making the invisible visible and fighting for equality in these challenging times.

Veronika Dräxler: Since the lockdown, I started to explore methods of how to stabilize successfully when going through a crisis. This is a topic I would like to learn everything about and interview professionals in this area for my research. I think it's important to focus on learning how to create safe spaces that encourage a non-judgemental way of learning and collaborating, since we already experience way too much stress because of uncertainty from outside these days.

→ Read the full interviews online: www.state-studio.com/community

Double Reflection/Doppelreflexion

© *To Fear, Hope and Desire Again*, Lotte Meret (film still)

Zwei Künstlerinnen, die Methoden des Miteinanders erforschen. Zwei Galerien, die sie zusammenbringen, um Ideen gegenüberzustellen, Gemeinsamkeiten nachzuspüren und Synergien zu nutzen. Während Dominique Kochs Arbeit *Holobiont Society* als Teil von HYPERTOPIA im STATE Studio ausgestellt war, fand Lotte Merets Solo-Show *fragil* einige Kilometer entfernt im EIGEN + ART Lab statt. Im Rahmen eines unserer Field Trips haben wir den beiden Künstlerinnen ein paar Fragen gestellt und in Kooperation mit Marie Gerbaulet, ehemalige Kuratorin des jungen Projektraums der Galerie EIGEN + ART, gegenseitige virtuelle Rundgänge angeboten. Dabei ging es um Gemeinsamkeiten, um organische Systeme, um den Wert künstlerischer Kollaboration, um Formen des Austauschs und um geteilte Ambitionen. Nicht zuletzt um Zusammenhalt, nicht nur – aber ganz besonders – in Zeiten der Krise.

Welche Kernthemen untersucht und verhandelt ihr in euren Arbeiten?

Dominique Koch: Ich verstehe meine künstlerischen Arbeiten eigentlich als eine Art offenes Gespräch, als konstruktiven Austausch, von dem ich nicht immer weiß, wo er dann hinführen wird – allein schon weil der Prozess nicht zwangsweise linear verläuft. All meine letzten Arbeiten gehen von naturwissenschaftlichen Themen aus und versuchen, das System, in dem wir leben kritisch zu hinterfragen. Es ist ein System, in dem wir uns zumeist als Einzelkämpfer definieren und die Gesellschaft entsprechend strukturieren. Die Natur hingegen funktioniert überhaupt nicht so. Also diesen Einzelkämpfer, den gibt es im Grunde gar nicht. Mich fasziniert die Idee, dass sich eigentlich alles im Austausch befindet. Das versuche ich dann auch in der Machart meiner Arbeit umzusetzen.

Meine Video- und Audioinstallation *Holobiont Society*, die in der Ausstellung HYPERTOPIA zu sehen war, nimmt den Begriff des Holobionten als Ausgangspunkt. Dieser beschreibt ein biologisches System, ein symbiotisches Gesamtlebewesen, in dem menschliche und nicht-menschliche Agenten in einem ständigen Austausch miteinander stehen und auch nur so überlebensfähig sind. Vom Prinzip der Symbiose inspiriert, bringt auch die Arbeit unterschiedliche Blickwinkel und Denkweisen zusammen, die sich gegenseitig erweitern und ergänzen. Ich ziehe den Holobiont sozusagen als Modell heran, für einen kritischen Blick in unsere politischen und sozialen Strukturen.

Lotte Meret: Generell dreht es sich bei meiner Arbeit oft um Grenzziehungen. Ich untersuche, wo wir die Grenze zwischen uns und anderen ziehen, was wir gelernt haben als anders und fremd wahrzunehmen. Wie wir aber auch lernen können, diese Normen zu hinterfragen und sie herauszufordern. Wir neigen grundsätzlich dazu, unsere Identität als stabil und getrennt von äußeren Kräften wahrzunehmen – aber das stelle ich ganz bewusst in Frage. Für mich ist alles vernetzt: Unsere Körper mit unseren Geräten, Objekte, Familienstrukturen, Politik, Gewohnheiten, Routinen, Sprache und Bilder; all das spannt sich weiter in grösseren Spiralen über Jahre und Jahrhunderte. Mir geht es um ein Denken, das nicht zentralperspektivisch ist, das nicht allein vom Menschen und seinen Bedürfnissen ausgeht.

Als Künstlerin und Designerin arbeite ich multidisziplinär und bediene mich Forschungsansätzen aus unterschiedlichen Bereichen, zum Beispiel der Psychologie, Psychoanalyse, Mikrobiologie, Epigenetik, Kognitiven Neurowissenschaft und der Soziologie. Außerdem fließen Aspekte der Gender Studies und des feministischen Materialismus in meine Arbeiten ein – insbesondere solche, die der Linearität konventioneller Geschichtsschreibung komplexere Netzstrukturen entgegensetzen. Auch alternative Arbeitsweisen wie die Signaturenlehre aus der chinesischen und ayurvedischen Medizin, die auf interaktive Wechselwirkungen und vernetzte Systeme setzen, interessieren mich sehr.

In meiner Ausstellung im EIGEN + ART Lab hatte ich die Möglichkeit, verschiedene Arbeiten als Gesamtkomposition im Raum zu verbinden. Metallskulpturen als materielle Übersetzung für ein entwickeltes Videospiel, aufgespannte geritzte und tätowierte Latexhäute und eine Videoinstallation mit poetischen und wissenschaftlichen Erzählungen führten in eine mythologische Anderswelt, in welcher die Grenzen zwischen Menschen, Maschinen, Tieren, Pflanzen und Mineralien durchlässig werden. Die Ausstellung begab sich auf die Suche nach neuen Methoden des Miteinanders. Es ging aber auch, wie der Ausstellungstitel *fragil* suggeriert, um die Sichtbarmachung von Unsicherheiten, Störungen, Instabilität und darum, inwiefern das Zeigen von Schwäche auch eine Stärke sein kann. Dieser Ansatz zieht sich thematisch durch all meine Arbeiten und setzt sich in Material und Technik fort. Vor diesem Hintergrund ist es mir häufig wichtig, technische Elemente wie Platinen, Kabel und Stromleitungen oder auch Haken und Aufhängungen offenzulegen und / oder sie installativ zu integrieren, sodass sie Teil der Objekte werden.
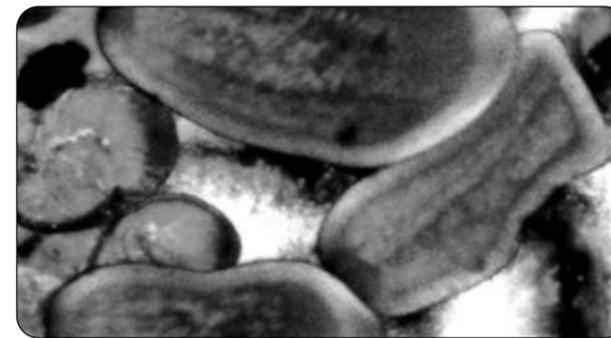
Welche Rolle spielt Forschung in eurem künstlerischen Prozess und wie übersetzen sich die Ergebnisse eurer Recherche in euer künstlerisches Werk?

DK: Der Rechercheanteil meiner Arbeiten ist immer enorm wichtig und ganz breit gefächert. Oft beginnt es damit, dass ich Gespräche führe mit unterschiedlichen Denkern aus verschiedensten Wissensgebieten. Ziel ist dabei zunächst, ein Environment zu schaffen, das den Zugang für den Betrachter auch auf ganz anderen Ebenen ermöglicht oder gar garantiert. Das ist genau diese forschende Freiheit, die ich interessant finde und die ich versuche wirklich auszunutzen. In deiner Arbeit, Lotte Meret, gehst du ja eigentlich ähnlich vor und verbindest das ebenso wie ich in raumgreifenden Installationen, die auf vielerlei sensorischen Ebenen, über Bild, Ton und auch Sprache versuchen, dem Betrachter theoretische und philosophische Aspekte näherzubringen.

LM: Einmal verglich jemand meine Arbeitsweise mit unserem körperlichen Verdauungsprozess. Das hat mir sehr gut gefallen. Ich mag es, viele Bilder, Geschichten, Forschungen und Zeitalter für eine Recherche regelrecht zu konsumieren, zum Beispiel ganz viele Filme zu einem bestimmten Thema zu sehen. Auch Bibliotheken und Archive werden dann zu Popcorn-Tüten für mich, ich kann nicht mehr aufhören zu essen. An die Auswertung gehe ich dann instinktiv, oft auch mit einer bestimmten Fragestellung im Kopf. Gefühle, wie Adrenalin, können sehr hilfreich sein bei der Auswahl. Nach und nach spannt sich dann ein gedankliches Netzwerk für mich auf, mit dem ich ganz automatisch jede soziale Interaktion, Gespräch oder jedes Objekt, die mir unterkommen, in Bezug setze.

Während des Prozesses können Unfälle beim Filmen passieren, ein gutes Gespräch, eine Begegnung, eine ungute E-Mail, das speist sich alles ein, wird Teil des Projekts. Mein Arbeitsprozess ist immer auch ein Recycling materieller und immaterieller Ressourcen aus meiner Umgebung.

In welcher Verantwortung seht Ihr euch als KünstlerInnen, gerade auch in Zeiten der Krise?

DK: Ich sehe die Verantwortung eines Künstlers durchaus darin, die Welt kritisch zu betrachten oder zumindest kritische Fragen zu stellen. Ich würde es aber als Privileg beschreiben, dass der Kunstkontext uns diese Möglichkeit gibt, dass wir eben unterschiedliche Inhalte von unterschiedlichen Wissensgebieten zusammenbringen können – und zwar auf eine ziemlich freie Art und Weise. Dadurch entstehen neue Verknüpfungen, die sich nicht ergeben würden, wenn jeder in den eigenen Konventionen und Blasen verhaftet bliebe.

LM: Durch die Möglichkeit, verschiedene Forschungszweige miteinander und ineinander zu verzweigen, können wir als KünstlerInnen Diskurse und Denkräume eröffnen, die sonst oftmals aus Angst oder aufgrund anderer Hindernisse verschlossen bleiben. Von dieser interdisziplinären und häufig sehr spielerischen Forschung verspreche ich mir, eine humorvolle Sprache zu finden, die ein besseres Verständnis füreinander und unser Umfeld ermöglicht. Das ist für mich aktuell eine Herausforderung, in der wir alle gemeinsam stecken, ich genauso wie alle anderen. Ich möchte mit vorgefunden Methoden auf neue Methoden hinweisen, eine Art Ressourcenaktivierung. Mir ist das Aneignen und improvisieren mit Materialien und Techniken wichtig und für Methoden des selbstständigen Erlernens zu begeistern. Eine häufig vernachlässigte Kraft der Kunst ist es, Neugier zu erwecken.

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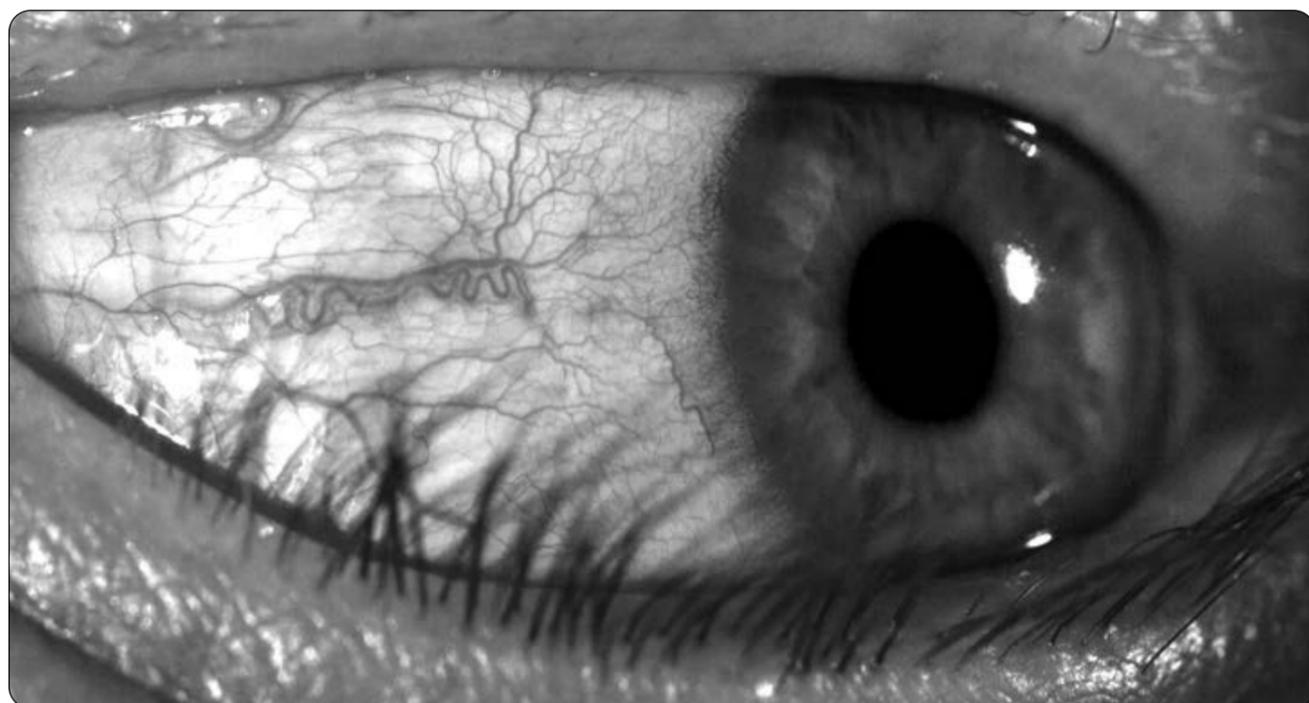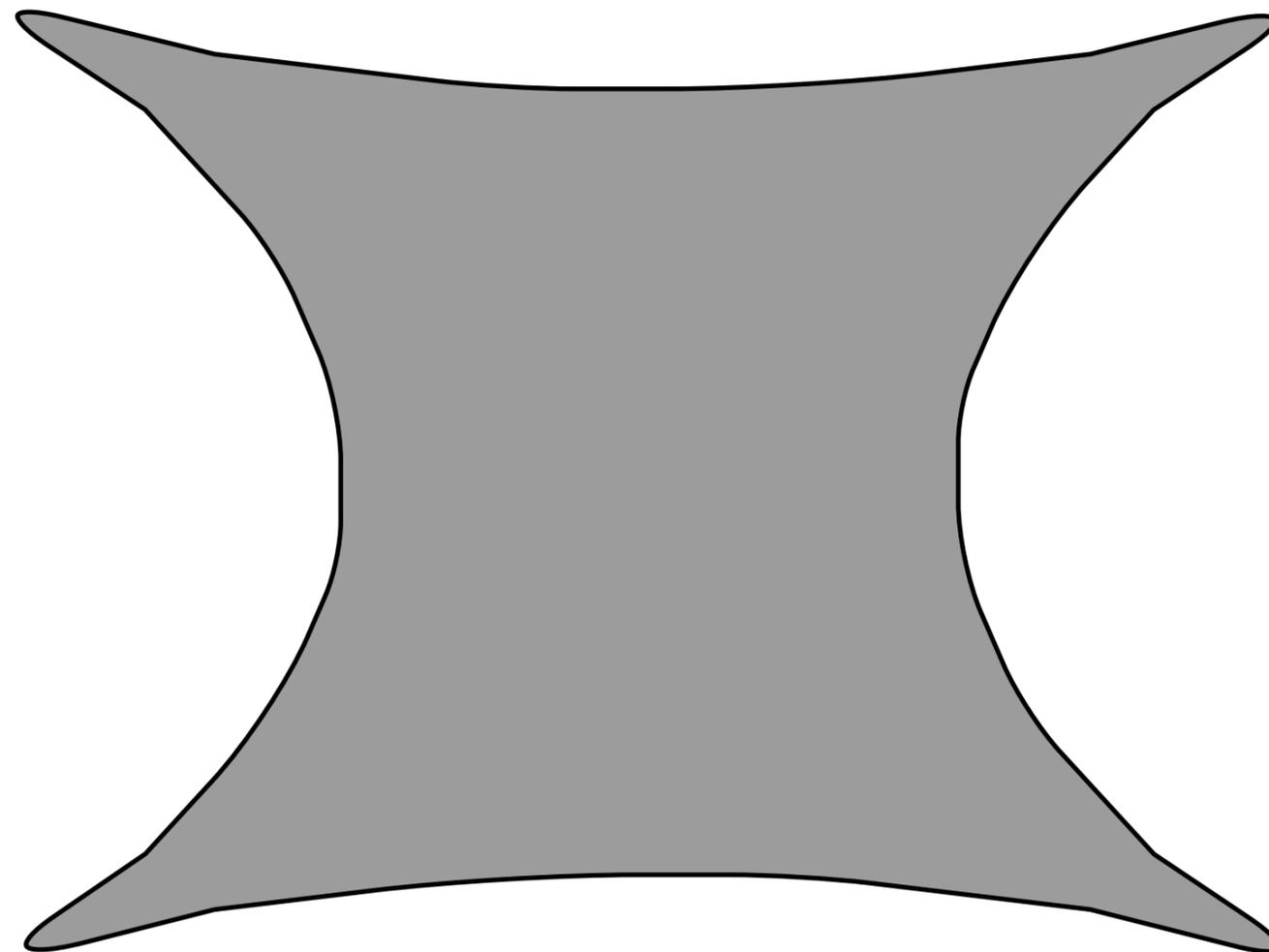
OUTRO

The Curious Minds Community:
Art Science Monthly

What happens when two different minds interconnect and get to think about how they think? The ArtScience Monthly is about putting our curiosity into action and learning from one another via collective exchanges.

Every third Tuesday of the month, we host an open meet-up, the ArtScience Monthly, that invites new curious minds to get involved and join the community. We share thoughts, practice open-mindedness and create new bonds, while imagining alternative futures beyond disciplinary boundaries. Besides, each session starts with impulse talks by an artist and a scientist.

These events are organized by STATE Studio in the framework of Curious Minds: a community program that aims to explore new forms of collective thinking, learning and acting at the intersection of art and science.

Sign up:

AKAW — The Futures Card Game

AKAW is an exploratory card game for dreamers and curious minds that has been developed by STATE Founder Christian Rauch. It is meant as a collective tool for thinking about the possibilities of a sustainable future in a more holistic and creative way. One can look at it as a real-life tarot-deck for exercising future thinking abilities. The main idea is to let the imagination roam free to merge trends and technologies that are trans-forming our world and to look at them from different perspectives. By matching random combinations of cards, players are encouraged to explore unexpected synergies and scenarios. The goal of the game is to come up with a future fiction — a little story, particular aspect or situation of a hypothetical world of tomorrow.

Alongside the release of AKAW will be the launch of RIDE Futures, a think and do tank born out of STATE Studio. RIDE Futures is a collaboration with Jens Meyer, internationally renowned strategy professor and former director of the European Center for Executive Development, with the goal to help groups to embrace the possibilities of the future in a more playful and creative way.

If you are interested in the AKAW world, get your copy of our first release:

Hidden Clip

As part of HYPERTOPIA Jana Maria Dohmann's participatory installation *Weaving Social Textures* explored the potential of collectivity and social negotiation, which undoubtedly determine our future in many ways. Check out her performance and witness how a collective web of decisions is formed.

Contributors

Alexandra Daisy Ginsberg

Dr. Alexandra Daisy Ginsberg examines our fraught relationships with nature and technology. Through artworks, writing, and curatorial projects, Daisy's work explores subjects as diverse as artificial intelligence, exobiology, synthetic biology, conservation, biodiversity, and evolution, as she investigates the human impulse to "better" the world. She is lead author of Synthetic Aesthetics: Investigating Synthetic Biology's Designs on Nature (MIT Press, 2014.) She studied architecture at the University of Cambridge, was a visiting scholar at Harvard University, and received her MA in Design Interactions from the RCA. Daisy exhibits internationally. Her work can be found in museums and private collections, from MoMA New York to the Royal Academy. Talks include TEDGlobal, PopTech, Design Indaba, and the New Yorker Tech Fest.

Ani Liu

Ani Liu is a research-based artist working at the intersection of art and science. Her work examines the reciprocal relationships between science, technology and their influence on human subjectivity, culture, and identity. Ani's work has been presented internationally, including the Venice Biennale, Ars Electronica, the Queens Museum Biennial, Boston Museum of Fine Arts, the Asian Art Museum, MIT Museum, MIT Media Lab, Mana Contemporary, Harvard University, and Shenzhen Design Society. She holds a B.A. from Dartmouth College, a Masters of Architecture from the Harvard Graduate School of Design, and a Master of Science from MIT Media Lab. Ani is passionate about integrating multidisciplinary approaches into her practice and is currently teaching at Princeton University. Her studio is based in New York City.

AOS (Salvatore Iaconesi and Oriana Persico)

The artistic team Salvatore Iaconesi and Oriana Persico observe the mutations of human beings and societies. With projects poised between poetics and politics, bodies and architectures, squats and revolutionary business models, the duo promotes a vision of the world in which art connects science, politics, and economics. Salvatore is a robotics engineer, hacker, interaction designer, a TED, Eisenhower, and World Yale Fellow. Oriana is a digital communication and inclusion expert and cyber-ecologist. Together, they are authors of global performances, publications, and artworks that have been exhibited all over the world. They founded the Rome-based research center Human Ecosystems Relazioni (HER) as well as the international network Art is Open Source (AOS), which is dedicated to the interconnections between art, science, and technology.

Curious Minds
(Deep Dive Collective)

The community platform Curious Minds challenges the boundaries of conventional knowledge production to promote new ways of learning and collective thinking. Conceived at STATE as an open environment that builds and fosters meaningful connections and engages in creative experimentation, the community works in small transdisciplinary teams on the tricky problems of our times. With backgrounds in the arts, science, technology and the humanities, Curious Minds' members have the opportunity to contribute to STATE Studio's program. For HYPERTOPIA, the explorative group project *Unrecognised Borders of Transient Beings* was developed by a Deep Dive Collective including:
Andrea Rassell
Ashley Middleton
Bella Spencer
Catri Foot
Juho

Dominique Koch

Dominique Koch (*1983 in Lucerne, Switzerland) lives and works between Basel and Paris. From 2004 to 2011 she studied photography at the Hochschule für Grafik und Buchkunst in Leipzig, Germany. Her multilayered installations can be described as discursive laboratories. In her practice, the artist integrates various fields of research to form intricate networks of knowledge, in which philosophy, molecular biology, neo-Marxism, and science fiction meet. Amongst her most recent group shows are "Protozone: Contamination/Resilience", Shedhalle Zürich (2020), "WE HYBRIDS!", Istituto Svizzero di Roma (2020), "Mycelium as Lingua Franca", A Tale of a Tub Rotterdam (2019), "Trees of Life", Frankfurter Kunstverein (2019) "Futurs Incertains", Musée d'Art de Pully (2019), "An Eye Unruled", Swissnex San Francisco (2019).

Himali Singh Soin

Himali Singh Soin is a writer and artist based between London and Delhi. She uses metaphors from outer space and the natural environment to construct imaginary cosmologies of interferences, entanglements, deep voids, debris, delays, alienation, distance and intimacy. Himali works across text, performance and moving image. Himali holds an MFA in Fine Art from Goldsmiths University, London, and has exhibited internationally, at galleries and cultural institutions including Whitechapel Gallery, London, Somerset House, London, and Gropius Bau, Berlin. She is a jury member for the Frieze Artist Award 2020 and part of the curatorial team of Momenta Biennale Montreal 2021.

Jana Maria Dohmann

Jana Maria Dohmann is an independent artist and art mediator living and working in Berlin. Her intermedial practice hovers between performative research, somatic methodology and installation art. Based on poetic scores and experimental arrangements, her participatory sculptures explore issues of collectivity, collaboration, as well as the element of physical touch. Jana's work has been shown at Kunstverein Kärnten, Galerie KUB, Leipzig and the Somatic Academy, Berlin. As part of her collaborative practice, she has worked as a performer for Tino Sehgal at the Volksbühne Berlin and Albertinum in Dresden. Her solo show PAYBACK is currently on show at Galerie Sindelfingen. She developed a format for performative art mediation for documenta14, has worked with the Boros collection and is presently attending the MA program "Cultures of the Curatorial" at HGB Leipzig.

Josef Settele

Prof. Dr. Josef Settele works at the UFZ—Helmholtz Centre for Environmental Research in Halle, Germany, where he heads the group on "animal ecology and social-ecological systems". Before being co-chair of the Global Assessment of IPBES, he acted as lead author in the Asia-Pacific Assessment and as coordinating lead author of the Pollination Assessment. He was also CLA of the 5th Assessment Report of IPCC. His research focuses on the interface of land use, climate, and biological diversity. He holds a PhD in Agriculture and is a professor of Ecology at the Martin-Luther-University of Halle-Wittenberg.

Laureline Simon

Laureline Simon has worked on climate change mitigation and adaptation at the international level since 2006. At the United Nations Climate Change Secretariat, she supported the setting up of the Local Communities and Indigenous Peoples' platform, a task force on population displacements related to climate change, and coordinated Resilience Frontiers, a collective intelligence process on long-term resilience, bringing together thought leaders in the fields of technology and sustainability. She started her career with the Indian NGO SEWA, in the Kutch desert, whose women taught her a lot about resilience. Laureline draws inspiration from nature and her two children, who help her daily take better care of the Earth.

Lotte Meret

Lotte Meret Effinger, born 1985 in Berlin, lives and works in Berlin. In her work Lotte Meret analyzes the effects of digital media and new technology on our identity. In her practice she articulates the interference of society and economy and its consequences up to individual emotions and self understanding. In our time of technological change, affecting our physical, sensory and social experiences, Lotte Meret wants to establish an understanding of identity as a hybrid phenomenon. She often engages in collaborations and projects which range from video, installation, text, performance to publications and exhibitions. Her work has been presented at OCT_LOFT, Shenzhen; NRW Forum, Düsseldorf; Goethe-Institut, Beijing; Kunsthal Rotterdam; Kunstverein Leipzig; Nottingham Contemporary; Kunstmuseum Bonn; Kunsthalle Basel; ZKM, Karlsruhe; Kunsthalle Baden-Baden.

Margherita Pevere

Margherita Pevere is an internationally acknowledged artist and researcher whose practice glides across biological arts and performance with a distinctive visceral signature. She is based between Berlin and Helsinki where she is completing a PhD (Artistic Research) at Aalto University (Finland) on biological arts and queer and feminist theory.

Mirthe van Popering

Mirthe van Popering is a Dutch storyteller and cultural analyst living and writing in Berlin. Alongside her work as a multilingual writer, translator and language coach, Mirthe tells stories that hold glimpses of today. Intuitively meshing fiction and fact, she seeks to unravel binaries and power structures, ultimately inviting her readers to imagine spaces of collective vulnerability and hope. Mirthe graduated in Modern and Contemporary Arts and Philosophy from Utrecht University and the Freie Universität Berlin in 2014. She earned a master's degree in Cultural Analysis at the University of Amsterdam in 2017.

Petja Ivanova

Petja Ivanova is a transdisciplinary artist who combines archeology, biology, physics, computation and the poetic in order to promote the 'poetic method' as a counterweight to the socially dominating 'scientific method'. She runs 'Studio for Poetic Futures' and 'Speculative Ecologies' out of a little caravan in Berlin. Very early in her artistic work with electronics and sensors she began to include mythological approaches, the magical and non-quantifiable, to analyse these connections in terms of deep time of media and technology. Frustrated by the simple causalities of quantification, she turned to overcoming the conceptual gap between nature and technology by working with crystals and electronic circuits; then with plants, microorganisms and now with insects and bacteria.

Veronika Dräxler

Veronika Dräxler (DE/EC) is an interdisciplinary artist, writer, and developer of spaces for dialogue. She utilizes websites, language, moving images, installations and performative rituals to create poetic narratives that research digital identity, (re)appropriation and (post)colonialism in relation to the existential pressure of being a human in late capitalism. She is a debutant of GEDOK Munich (2019) and the founder of Selbstdarstellungs-sucht.de—a blog about contemporary art and digital identity, awarded "Kultur- und Kreativpilot" by the German Government (2015).

HYPERTOPIA's earth station: STATE Studio Berlin.
Spatial and temporal coordinates: 52° 29' 24.482'' N   13° 21' 34.603'' E
23 October – 6 December 2020
HYPERTOPIANS in residence: Alexandra Daisy Ginsberg, Ani Liu, Dominique Koch, Himali Singh Soin,
Jana Maria Dohmann, Salvatore Iaconesi and Oriana Persico, Curious Minds (Deep Dive Collective)
Credit: © *Holobiont Society*, Dominique Koch (film still)