

# RADICAL SYMBIOSIS: THE SOCIAL LIFE OF MICROBES

EN



RADIUS  
Center for Contemporary Art and Ecology  
Kalverbos 20  
2611 XW Delft  
[www.radius-cca.org](http://www.radius-cca.org)



Drawing by Lisa Rampilli

# NATURECULTURES Chapter 3: RADICAL SYMBIOSIS: THE SOCIAL LIFE OF MICROBES

ELINA ALEKSEEVA  
JOHANNA BRUCKNER  
PENELOPE CAIN  
WIM VAN EGMOND  
LIZAN FREIJSEN  
ESCUELA DE GARAJE  
ASLI HATIPOĞLU  
MARIT MIHKLEPP  
NATALIA SORZANO

Imagine how wondrous hundreds of tiny moving beings must have appeared to a perplexed Antoni van Leeuwenhoek, when he first spotted microscopic life through his self-made, handcrafted lens. On the 7<sup>th</sup> of September 1674 he wrote a letter in which he described a sample of a white layer floating on the lake that we now recognise as a bloom of cyanobacteria. In this first glimpse, he spotted various different lifeforms and continued to find not just some new *animalcula*, but thousands upon thousands. He wrote many such letters to peers from the academic field, detailing the unusual shapes and movements of various different microbes which he observed, the tiniest of which were over a thousand times smaller than the cheese-mites he had previously been able to observe with his naked eye.<sup>1</sup>

Van Leeuwenhoek's microscopic world confronted our scientific understanding with fundamentally different dimensions of life and forms of coexistence and cohabitation, compared to what was previously known to be the relationship between humans and their world. In this microscopic universe, life develops different strategies for survival. What van Leeuwenhoek described in his letters were winding and turning bodies of microbes pivoting through liquids with each other in complex interrelations. These microbes were everywhere, and human beings had never been able to see them before. He started to take samples from his own body, from his teeth and gums which resulted in the realisation that even our bodies are filled with these tiny creatures.<sup>2</sup> Not only was his body brimming with microbes, but that of his wife, daughter, and every inhabitant of Delft as well.

This astonishing discovery took nearly a century for scientists to develop into the field of microscopy, and even more for microbiology to fully develop into a scientific discipline. For many years, microbes were believed to cause only disease and aggressive methods were applied to remove them from all surfaces and from within our own bodies, this was later shown to be incorrect since our microbiota are an important part of our digestive and health system.<sup>3</sup> Today, we are still discovering the abilities and consequences of the microbial worlds that live within us, affecting our health and culture.

Trends such as sourdough baking, pickling, and home-brewing are bringing together new communities interested in investigating microscopic beings in our daily life. Scientific analysis is one way to approach microbes, but artists bring a different knowledge of microbial sociality. The artists in this exhibition all share a deep concern with the role and effects of microscopic life intertwined with human sociality. Microbes dance, mingle, fuse and partner within human bodies, not only affecting health, but our cultural and social reality. With help of these tiny agents many cultural expressions are made possible, such as through fermentation that expresses a synthesis between local resources and microbiomes. The attentive consumption of fermented or microbially altered goods, such as wine and cheese, gives feedback on the health of an environment. Cultural ties are more precisely expressed by similarities in the gut biome than through DNA: a life together within a shared space and shared food, intimacy and hygiene slowly foster the same interior microbiome.

1 "These animalcula had diverse colours, some being whitish, others pellucid; others had green and very shining little scales; others again were green in the middle, and before and behind white, others grayish. And the motion of most of them in the water was so swift, and so various, upwards, downwards, and round about, that I confess I could not but wonder at it. I judge, that some of these little creatures were above a thousand times smaller than the smallest ones, which I have hitherto seen in [the rind of] cheese, wheaten flower, mould, and the like." Antoni van Leeuwenhoek, "Letter No. 6, 1674-09-07 to Henry Oldenburg & Letter No. 18, 1674-10-09 to Henry Oldenburg" in *Alle de Brieven. The Collected Letters*, (L-number: L-015 Collected Letters number: 11 Collected Letters volume: 1) DBNL - De Digitale Bibliotheek voor de Nederlandse Letteren < [https://www.dbnl.org/tekst/leeu027alle01\\_01/leeu027alle01\\_01\\_0013.php#b0011](https://www.dbnl.org/tekst/leeu027alle01_01/leeu027alle01_01_0013.php#b0011) >

2 Antoni van Leeuwenhoek, "Letter No. 75, 1684-09-16 to Antoni Heinsus" in *Alle de Brieven. The Collected Letters*, (L-number: L-134 Collected Letters number: 75 Collected Letters volume: 4) DBNL - De Digitale Bibliotheek voor de Nederlandse Letteren < [https://www.dbnl.org/tekst/leeu027alle04\\_01/leeu027alle04\\_01\\_0007.php#b0075](https://www.dbnl.org/tekst/leeu027alle04_01/leeu027alle04_01_0007.php#b0075) >

3 Baohong Wang, Mingfei Yao, et al., "The Human Microbiota in Health and Disease," *Engineering* Volume 3, Issue 1, February 2017, pp. 71-82, accessed 18 July, 2023 < <https://www.sciencedirect.com/science/article/pii/S2095809917301492> >

# 1 THE INVISIBLE WORLD AROUND AND WITHIN US

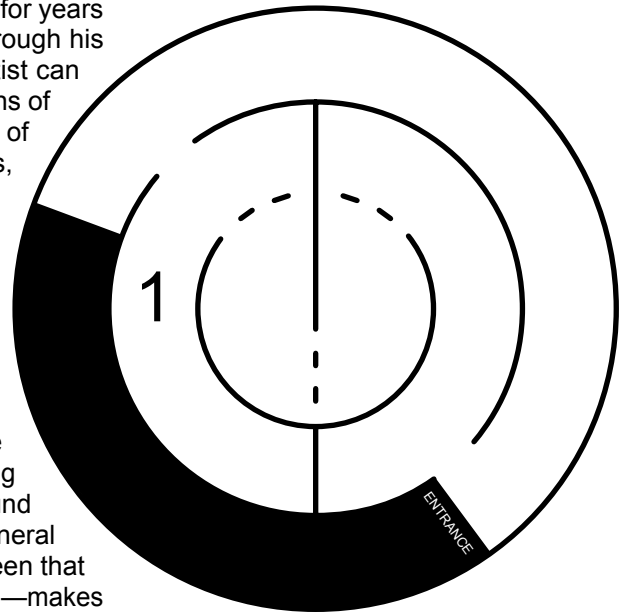
Since van Leeuwenhoek's time, the microscopic gaze has changed our understanding of the world. Artists, designers, and architects today are inspired by the microbial societies that flourish around and within us for the creation of increasingly resistant and self-repairing substances. Artists have the ability to appreciate both the aesthetic form of microbes, as well as collaborating with them in surprisingly different ways.

Antoni van Leeuwenhoek's early discovery made him the father of microscopy, which is essentially a registering of all things small. As one of the few artists in this specialised field, **Wim van Egmond** has made himself a name with his achievements in microphotography. Van Egmond has worked for years with microscopes and sets himself apart from scientific observers through his focus on the aesthetic presentation of his subjects. While any scientist can peer through a microscope searching for matters of fact, the artistic lens of microscopy uses this medium while searching for the best visualisation of its subject by means of colour and light. Through these collaborations, Wim van Egmond has developed an understanding of aesthetic forms as a tool for research: depending on subtle changes of light, the artist is able to highlight different parts of microscopic organisms. He regularly works together with Rob van Es, jointly forming a microscopy duo that organises historical reenactments in which animalcula from the water of Delft's canals are magnified by reconstructions of van Leeuwenhoek's hand-made single lens microscopes. For **RADIUS**, van Egmond has created a new work that resulted from a site-specific experiment. In December 2022 he collected microbial samples from the interior walls of **RADIUS**, specifically in places that were still damp during the initial phases of construction of the exhibition space. Here, he found the remains of microbial colonies that inhabit the walls and curious mineral patterns that surround you. An enlarged projection onto a circular screen that resembles a petri dish—in which these animalcula are commonly raised—makes visible the life that throbs in all corners of this planet.

The microbes that live in the crevices of this space and within our bodies are given a voice in a new sound-piece by **Marit Mihklepp**. Her work departs from a selection of writings by Antoni van Leeuwenhoek that describe his early encounters with microbes in a series of letters to other scientists. These words were a first glimpse at the inhabitants of the microscopic world that have been human collaborators for millennia. Van Leeuwenhoek's astonishment at the discovery that bodies are full of these pulsating creatures was only the beginning of an entire scientific field. Mihklepp presents a variety of writings to expand on van Leeuwenhoek's declarations of love to this invisible world. The microbe is taken by Mihklepp as the intermediary between the inside and the outside of the body, from the intestine to the walls of the exhibition space and beyond. Mihklepp searches for poetic images of possible interrelations between humans and the microbial world through language. Through a series of instructions, commentaries, and poetic inflections, we find a contemporary bestiary of an invisible world that she projects on the same wall that provided van Egmond's starter cultures.

Microbes as sentient collaborators are the central performers in the work of **Aslı Hatipoğlu**, whose practice is dedicated to working for and with her microscopic fabricators. The conditions and preferences of yeasts and other beings are expertly designed for their comfort and needs in the containers that make up this installation. From beer and wine to sauerkraut, the fermentation processes of microbial life have had a significant impact on the ability of the human species to overcome the challenges of food preservation and fighting water-borne illness. Hatipoğlu's work delves deep into the site-specific potential of cross-contamination of humans and microbial neighbours and what that implies to our species regarding hygiene in the future.

Housed in aquariums, a living colony of yeasts and bacteria are eating and growing in relation to the space which hosts **RADIUS**'s invisible microorganisms. Earlier, Hatipoğlu exhibited tanks with kombucha, but noticed that the microbes in these are light-sensitive. Following this, she developed a system to display them to the audience while respecting their need for darkness and interspersed light. In her research to better understand how current food technologies affect the internal workings of the human body, Hatipoğlu came across the



centuries-old use of bile fluids for the Ebru water-marbling technique—a Turkish tradition of ‘painting on water’—including the use of CMC (Carboxymethyl cellulose).<sup>4</sup> The bile fluids act as a surfactant agent which helps pigments to be broken down in order for them to expand and bind to paper. Kombucha forms a biofilm of cellulose called SCOBY—a symbiotic culture of bacteria and yeast—as a by-product of fermentation, which Hatipoğlu combines with the materials of Ebru water-marbling in order to observe how her collaborators paint. The environment of RADIUS, as well as the light that is activated through a motion-sensor, puts the spotlight on the microbes. Simply by attending, the visitors of this exhibition are contributing to the life and dynamic of Hatipoğlu’s collaborators.

## 2 PETRI DISH CULTURES

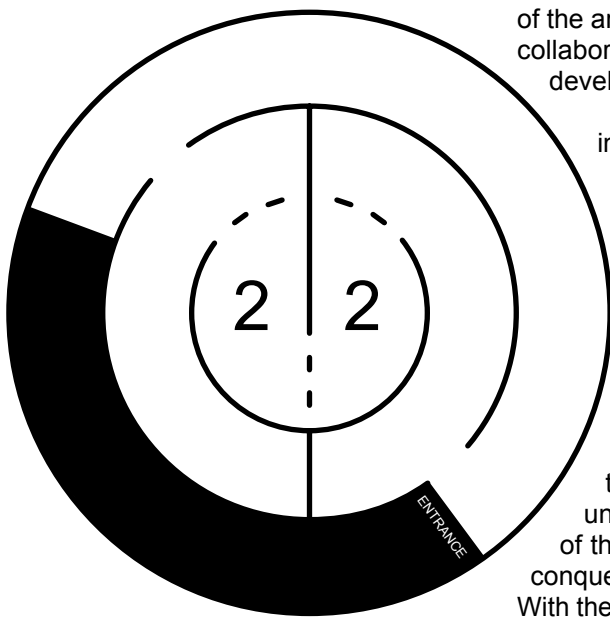
The central section of the exhibition, located in the circular ‘core’ of RADIUS, serves as a communal petri dish. Similar to the work of Wim van Egmond, the petri dish recalls the scientific environments in which lab-grown microbes proliferate, yet the artworks in this section undermine any attempt at categorisation. By relating this central space to laboratory equipment for microbial growth, the space highlights the transparency and constant development of the works in this exhibition. The circular configuration separated by rounded arches is the core of the architectural structure and a living entity that is in constant motion. Here, collaborations between artists and the public take place, each influencing the development of the space in minute but incremental ways.

The alternative pedagogy collective **Escuela de Garaje** was founded in Bogotá but has partially migrated to Europe with two of its members—Santiago Pinyol and Mariana Murcia. Their practice has developed a methodology of creating site-specific schools that typically involve fermentation and pirate libraries to redistribute diasporic knowledges. The project in RADIUS, called *Garage School: Underground* (2023), takes the form of a speakeasy built with compressed soil blocks. It houses the equipment and operation of a distillery for moonshine and honey wine made with raw honey from Delft. The premise of the school follows the incredible discovery and reversal of invisibility that van Leeuwenhoek’s microscopes brought to the microbial world. The term *underground* references all things invisible, illegal, and informal, the minuteness of which served as a cover-up for unrecorded activities until this discovery. Perhaps it was not a coincidence that the ‘invisibility’ of the microcosmos came to an end in the 17<sup>th</sup> century at a time when the conquest of overseas territories overlapped with the conquest of the invisible. With the invention of a microscope capable of magnifying up to two hundred and seventy times, van Leeuwenhoek accessed the microcosmos: a space that was discussed and theorised for many centuries before their actual discovery, but remained unseen until then. As Pulitzer Prize winning journalist Ed Yong puts it in *I Contain Multitudes*, van Leeuwenhoek documented everything:

*He conducted methodical experiments. Even though he was an amateur, the scientific method instinctively ran deep within him — as did a scientist’s untrammelled curiosity about the world. Through his lenses, he gazed at animal hairs, fly heads, wood, seeds, whale muscle, skin flakes, and ox eyes. He saw marvels, and he showed them to friends, family, and scholars in Delft.*<sup>5,6</sup>

Both the honey wine and the spirit produced in the speakeasy are infused and aged with plants from the surroundings and barks of trees included in the publication *Sixteen Trees of Delft* by Alice Ladenburg.<sup>7</sup> The idea of producing a ferment and a spirit for the exhibition is inspired by how fermentation enthusiast Marissa Percocco speaks about ‘culturing events’: as ceremonial possibilities to enrich the start of a fermentation process by inviting others to add something—a flower, yeast, bacteria—that kickstarts the process. This enrichment is both ceremonial, with the process becoming a memory of a moment, and practical, as the bacteria are gathered.

The speakeasy will include a reader with a variety of texts that have been contributed by the ecosystem of RADIUS: the other artists, curators, and team members. As a design for radical knowledge-sharing, it is accessible through a PirateBox: a Wi-Fi router with a USB disconnected from the Internet that allows sharing files anonymously and locally. Previous schools organised by Escuela de Garaje have taken place at BAK in Utrecht and Rib in Rotterdam where they have proposed a critical exploration of our intimate relation with the microcosmos of bacteria, focused on the biopolitical dimension of fermentation processes and the transformations they entail. Through a series of practical



4 CMC is a cellulose gum that is synthesised by the alkali-catalysed reaction of cellulose with chloroacetic acid which is then used in industries producing detergents, paper, food and textiles.

5 Ed Yong, *I Contain Multitudes* (London: Vintage, 2017).

6 Ed Yong’s longstanding interest in microbes led to his informed and accurate reporting in the early days of the COVID-19 pandemic. This won him worldwide recognition and the Pulitzer Prize in 2021.

7 Alice Ladenburg, *Sixteen Trees of Delft: A Guide for City Exploration* (Delft: RADIUS, 2023).

experiments with different techniques and ingredients, these have engaged with the entangled experiences of fermentation that are situated in stories of food, migration, and colonialism.

In this section Wim van Egmond has also set up an observation site where live bacteria can be seen through his accessible microscopy tools. Today, microscopes are readily available, and can be made by anyone who knows what materials to use. A home-made microscope can be created using a phone or tablet and inserting a tiny convex glass with magnifying potential onto the camera. Through this DIY set-up we can investigate the microbes that are living and growing within the artworks.

In the space, a textile piece by **Lizan Freijssen** creates areas of comfort separate from the cold climate of RADIUS' hard stone walls. Since the 1990s, Freijssen has dedicated her studio to creating tactile work based on the process of hand-tufting; with one of the longest-running practices in The Netherlands, her designs have become a symbol of the technique. Inspired by fungi and microbes, her works echo the circular and organic formations of creatures too small to see. In the piece presented at RADIUS, Freijssen has recreated the open network patterns of mycelium that grow in various combinations and directions not dissimilar to the mineral deposits on the walls of the space. Hard surfaces often offer the perfect environment for networks such as lichen to attach themselves to; between the open areas of the tufted material, real stones with lichen, and dried squashes holding seeds and fungi, invite visitors to view these delicate lace-like forms of life.

**Elina Alekseeva** has developed her artistic practice as a careful observation of nature's designs and the act of foraging as a means for reinterpreting relationships. Serendipity is an essential component of this practice as it was for van Leeuwenhoek's initial discovery of microbes. Inspired by the small glass bottle of water that carried the first microbial samples from the Berkelse Meer to the microscope, Alekseeva performed a historical retracing of Van Leeuwenhoek's steps searching for today's physical traces of past events. This took her around Delft to De Groenzoom, the dunes at Monster, the banks of the Meuse river, and the bioluminescent shores made possible by light-producing bacteria. Each area is connected by waterways, linking the habitats of each of these microbiomes. The foraging method searches for connections by following a 'gut feeling' rather than looking methodically for something specific.

The sustainable display cases that house these samples are made of fabric and wood that reference van Leeuwenhoek's profession as a cloth merchant as well as pieces of the landscape that contextualise the area and microbial cultures of Delft and The Hague. This tactile element of foraging complements Freijssen's textiles, which protect and contain life forms in more than aesthetic ways. This project confirms that human beings have many ways of knowing outside of Western rationality, and that a hunch coming from the gut might confirm van Leeuwenhoek's analyses in different ways, including deep intimacy with the land written in billions of invisible love stories.

Following the investigation of love stories, **Penelope Cain** presents the film *Flourish* (2022). The narrative is a non-human tale that unfolds as an alga and a fungus meet each other and connect in a defining embrace. Lichens are symbiotic organisms that depend on both algae and fungus to survive. The alga digests and processes energy that also supplements the fungus, while the hard structure of the fungus builds a protective umbrella for the algae that shields it from the elements. This organism that is commonly found on rocks is, in reality, a community that thrives off of mutual support. Cain collaborates with microscopy laboratories from phases of research to creating her work. In a reverse motion compared to van Egmond, she uses scientific findings about the microbial world to tell love stories and interdependencies between species. While lichen may need years to grow, microscopic findings have opened up the possibility to think about our relationships through non-human time and different constructs of relation.

All these projects ultimately question the notion of the individual. Collective practices are a way of life and survival that extend to the microbial world. Hugging gestures and the tactile presence of microbes open up the suggestion of intimacy and touch.

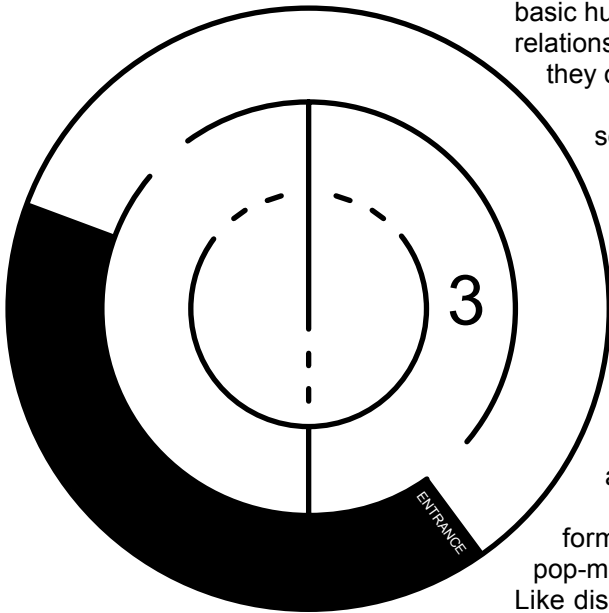
### 3 AN INTIMATE RELATION

The last section is a site of intimacy, physical closeness and touch. We are used to closeness as an expression of human relationships, yet, we are rarely conscious of how microbial life informs these ties. In this section artists counter the anti-microbial narratives of heteronormative conventional health, and foster imaginative new relationships with and through the microscopic world. They highlight the quotidian role microbes play in our daily life and how our perception changes depending on aesthetic context. The exhibited artworks appeal to basic human instinct and question the assumed binary precondition for human relationships. The shapes of microscopic life are as diverse as the possibilities they offer to conceive relationships between humanity and the environment.

**Johanna Bruckner's** recent work engages with matter on a microscopic and particle scale and questions scientific knowledge as a foundational perspective for sexual and romantic encounters. Through a poetic approach to molecular research, she develops her video installations as scalable situations that explore objective observations of particle physics or microbes as propositions for human relationships. In her latest video work *Metabolic Hardware* (2023) she navigates the behaviour of microscopic and robotic life in various iterations and replicates their interactions with human bodies as potential alliances for post-hetero-normative health and relationships. This investigative approach underscores potentials, limits, differences and similarities of life on various scales, while poetically speculating on queer, aleatory agencies of more-than-human experiences.

**Natalia Sorzano** has set up the second iteration of the installation-performance *Mud and Sticky Band* (2023). The band performs a concert of pop-musical references and melodic leftovers that haunt the musical present. Like discarded material, this musical 'dirt' hosts the unwanted and haunting underbelly of society that is intrinsically part of our surroundings. The band members are discarded branches and twigs covered in bugs and dirt that would normally be seen as the refuse of nature. However, this band is part of a cycle of birth and rebirth in which digestion and decomposition and all things sticky are seen as a life-force of futurity. The viscosity of mud and swamps is related to sexual desire in the texts of Sarah Ahmed in which stickiness is the environment for coming-together and producing new forms in a planetary microbial soup. Sorzano's muddy bands perform a constant score of pop in an expression of *joie de vivre*.

This final installation leaves the exhibition with a vision of lust in life that celebrates the complex relationship that humans maintain with their microscopic surroundings. We are all connected intimately with our communities through the invisible cultures that live on, outside, and within us and that connect us not only to all other human beings, but to the environment that makes life possible.



# YEAR PROGRAM NATURECULTURES

In 2023, RADIUS will present seven exhibitions, including three solo presentations and four group exhibitions, with a coinciding public and educational program. The year program takes shape on the basis of naturecultures, a term that refers to the increasing entanglement between nature and culture, enforced by climate change and ecological breakdown.

## AT RADIUS IN 2023

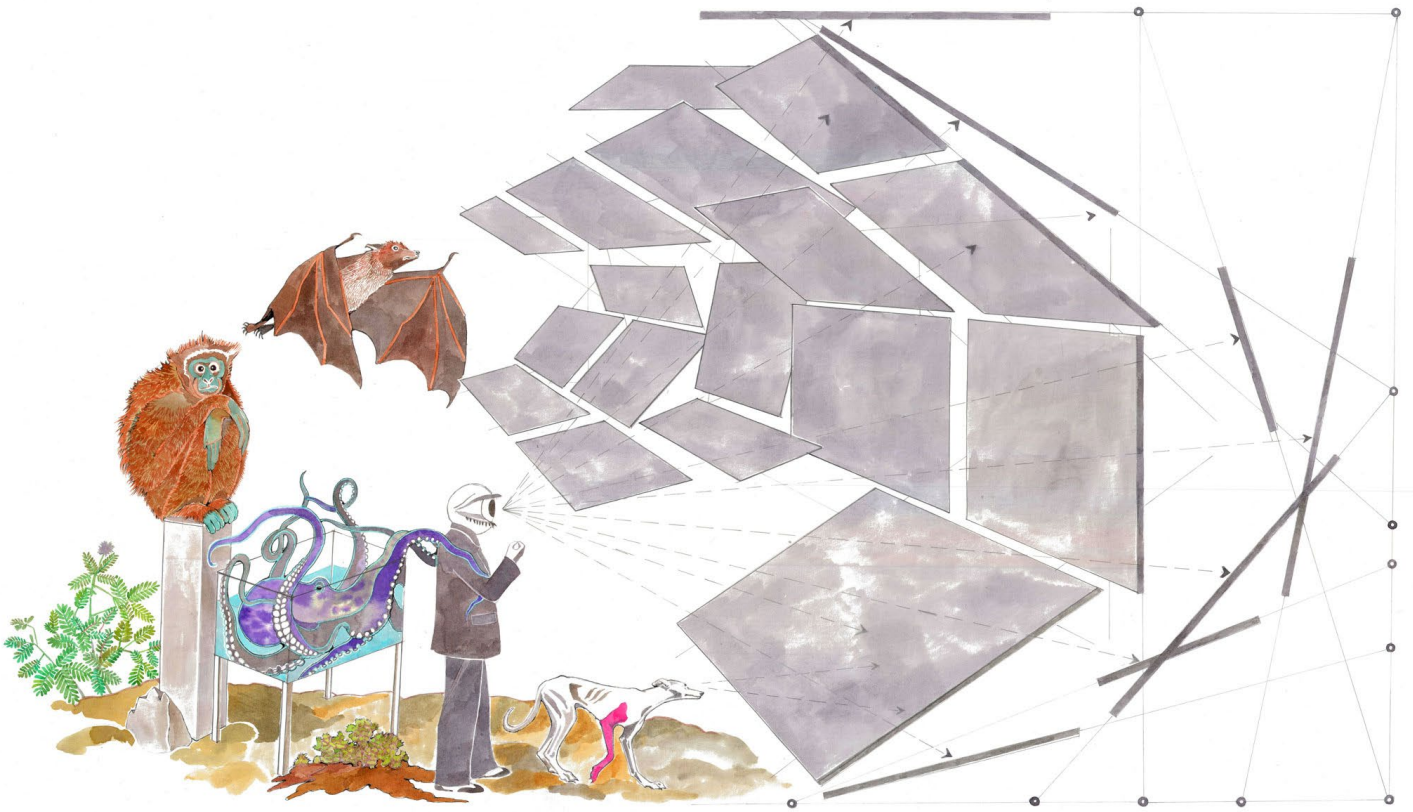
We start the year with the group exhibition *THE MEASURE OF THE WORLD*, revolving around the ghosts of Western Enlightenment thinking and the relationship between science, truth-finding and the consequential creation of world views. With the work of fifteen artists, the exhibition stands as the starting point for the year program and presents a first counterpoint to the current crises that bear witness to the perverse reality of modernism. For primary school students, we present *ONDIERPLEZIER*: a workshop that pays tribute to weeds and pests and wonders: shouldn't we appreciate these "invasive species" instead of see-ing them as a threat?

The following group exhibition *THE GLASS CITY* zooms in on the Westland—the largest contiguous agricultural greenhouse complex in the world, located between Hoek van Holland, Delft and The Hague—with the question: how can monocultural agriculture, often focussed on profit maximization, be reconsidered to more reciprocal, sustainable and fair systems of food as a common good? At the same time we present a solo exhibition by OSCAR SANTILLAN, which centers around the continuity between colonial botany and the contemporary destruction of our planet. How can indigenous knowledge and emerging technologies such as artificial intelligence and virtual reality contribute to more reciprocal modes of existence?

As part of the Antoni van Leeuwenhoek Year—the Delft cloth merchant Antoni van Leeuwenhoek became renowned with his microscopes and is regarded as the founder of microbiology—we present the group exhibition *RADICAL SYMBIOSIS: SOCIAL LIFE WITH MICROBES*, curated by guest curators Angels Miralda Tena and Mateo Chacón Pino. The exhibition takes the form of a petri dish, in which artists experiment with and present work on the basis of bacterial and microbial worlds, as an endless conversation between people and the living environment. In SISSEL MARIE TONN's solo exhibition, the audience encounters three bog bodies, who collectively hum, murmur and converse with each other about their transcendental experience of becoming-with the bog. In the educational workshop *MIJN MICROBEN EN IK*, for secondary school students and adults, the microscope becomes the central medium, as a means to link awareness about micro life to the pandemic and the ways in which humans treat the Earth and its natural resources.

The year program concludes with the group exhibition *THE POLITICS OF THE ARMED LIFEBOAT*, a project by Diana Al-Halabi and Hilda Moucharrafiieh which examines the differences between climate politics and the current political climate. Subsequently, we present JUNGHUN KIM's solo exhibition, for which RADIUS will be transformed into a biotope in which geological meditation and entanglement beyond the exclusively human-oriented are central.





Overview drawing of the *NATURECULTURES* year program by Lisa Rampilli.

*There is no border where evolution ends and history begins, where genes stop and environment takes up, where culture rules and nature submits, or vice versa. Instead, there are turtles upon turtles of naturecultures all the way down. Every being that matters is a congeries of its formative histories—all of them—even as any genome worth the salt to precipitate it is a convention of all the infectious events cobbled together into the provisional, permanently emerging things Westerners call individuals, but Melanesians, perhaps more presciently, call dividuals.—Donna Haraway, *The Haraway Reader*, 2004.*

The term naturecultures originates from the feminist scientist Donna Haraway. She introduced the concept to describe the intertwined histories of a multitude of life forms on Earth, to reveal new ways of thinking about agency and power, difference and sociality, forms of existence and knowledge. Naturecultures is a term that arises from the scientific questioning of binaries—including, for example, human/animal, object/subject, and nature/culture—that are deeply rooted in the intellectual traditions of the sciences. The pronounced boundaries and divisions produced within and between scientific fields have led to the separation of humanity and nature, sometimes to the point of exempting humans from fundamental physical properties and laws of nature. The term naturecultures has no clear definition. Rather, it is a vibrant and unruly spectrum of transdisciplinary approaches united by a common argument: approaching and maintaining worlds that are more than human requires a change in the methods and tools with which we study those worlds. In other words, to remove the boundary between nature and culture, a radical mixing of disciplines including art, design, architecture and science is necessary. In this sense, naturecultures is a synthesis of nature and culture that recognizes their inseparability through ecological relationships that are formed biologically, physically and socially.

The thinking in binaries and divisions that emerged from Western Enlightenment thinking has failed, although its consequences are no less real and dualisms have (had) real consequences. The cultural field that deals with the Anthropocene—the current human-dominated epoch—oftentimes considers this as a new revelation, that while anthropologists and scientists have been challenging the contradiction between nature and culture for decades. This contradiction, they argue, is the basis for a dangerous belief in human exceptionalism, the root of both progress (for a few) and catastrophe (for the rest). Yet thinking in binaries in the cultural sector—between nature/culture, object/subject, human/non-human, organic/inorganic, natural/synthetic—is still the rule rather than the exception. But challenging contradictions alone is not enough! To understand the violent consequences of thinking in terms of exclusion mechanisms, we must divide history through new prisms, perspectives and points of

view. We need to develop a counterpoint to the centripetal force of the dominant narrative of the Anthropocene—which centres on a particular type of human—by telling centrifugal narratives that recognise the vast inequalities generated by the various forces changing our planet.

Artists have always sought new ways to experience, represent and interact with 'nature'. Although the addition of quotation marks in the previous sentence shows how dramatically the perspectives on nature have changed in recent decades, and how much this has changed the way we talk about 'culture'. If we just think about the way in which 'nature' has re-entered 'human' history and 'culture' through climate change, we have to agree that there is a hybrid world. If the way we imagine the world changes, how should this be reflected in the way we create and interpret art?

In 2023, RADIUS looks at the deep dividing line we have drawn between ourselves and our living environment and asks: what makes this pattern so persistent? How can we use imagination to move from a human-centred vacuum to a world continuum of naturecultures? How can we learn to recognise the magnitude of the current climate regime without succumbing to despair? How can we transcend anthropocentrism in the Anthropocene and remove the human from the center of humanity? How can we reshape the canons that define how the world should be seen and what is considered important in it? How can we endorse what we mean when we say "we"? How do you move from dominant ways of seeing to ways of experiencing the world that makes use of the entire sensorium and rejects a one-sided perspective? How can a center for art, ecology and climate be more than a fashionable phenomenon and be embedded in everyday life? How can responsibility for the living environment—more than a rhetorical, symbolic commitment—be compatible with the impact of an art institution on that same environment?

As the recently deceased philosopher, anthropologist and sociologist Bruno Latour put it, "we have never been modern." Yet we will have to keep finding new ways to learn to live in the ruins of modernism and capitalism that surround all of us; we need to "stay with the trouble," as feminist philosopher of science Donna Haraway suggests. At RADIUS we take this assignment to heart and with the *NATURECULTURES* year program in 2023 we will look for the possibilities of a more earthly Earth.



NATURECULTURES, Chapter 3  
RADICAL SYMBIOSIS: THE SOCIAL LIFE OF MICROBES  
2 September — 19 November 2023

ELINA ALEKSEEVA  
JOHANNA BRUCKNER  
PENELOPE CAIN  
WIM VAN EGMOND  
LIZAN FREIJSEN  
ESCUELA DE GARAJE  
ASLI HATIPOĞLU  
MARIT MIHKLEPP  
NATALIA SORZANO

**Guest Curators:** Mateo Chacón Pino and Àngels Miralda  
**Exhibition text:** Mateo Chacón Pino and Àngels Miralda  
**Translator:** Marie Louise Schoondergang  
**Graphic designers:** Sabo Day and Augustinas Milkus

**RADIUS TEAM**

**Director and curator:** Niekolaas Johannes Lekkerkerk  
**Assistant curator:** Sergi Pera Rusca  
**Project manager production and publications:** Eva Burgering  
**Project manager education:** Fleur Knops  
**Marketing, communication and PR:** Daan Veerman  
**Technical support:** Menno Verhoef and Stefan Bandalac

**This exhibition has been made possible with the support of:**

The Municipality of Delft  
Gieskes-Strijbis Fonds  
FONDS21  
Mondriaan Fund  
Iona Stichting  
the Swiss Arts Council Pro Helvetia  
documenta Institut  
Overvoorde Gordon-Stichting / Pauwhof Fonds  
Eesti Kultuurkapital  
Stroom Den Haag.

**RADIUS**

Center for Contemporary Art and Ecology  
Palverbos 20  
2611 XW, Delft  
Netherlands  
@radius-cca.org  
www.radius-cca.org

