



PRESSEINFORMATION

● Sept. 2022

● **CHRISTA SOMMERER &  
LAURENT MIGNONNEAU**

The Artwork as a Living System

02.09.22–26.02.23, OK Linz

**A retrospective at OK Linz is honoring the extensive work of Christa Sommerer and Laurent Mignonneau - two of the most innovative and internationally renowned media artists and researchers.**

The exhibition provides an overview of the oeuvre of the Austrian-French artist duo Christa Sommerer and Laurent Mignonneau since the early 1990s. Drawing on natural science, technology, and art, they pioneered the Art of Interface, in which innovative technical interfaces enable the visitor to physically interact with the artwork.

Very early on, they utilized algorithms in their works — to represent not only living forms but also their evolution and growth. In their installations, which are created only through the actions of the audience, man-made artificial systems are shown, that exhibit behavior like natural living organisms. Technical devices originally designed by the artist couple produce virtual realities and immersive environments that enable new kind of experiences, like exploring the growth of plants or the behavior of tiny computer-generated creatures, such as flies and beetles, and their embedding in complex ecosystems. Their works, some classics of digital art, open a new horizon

in which artworks act as living systems. Few artists have shaped the transition from the moving image media phase to the living image media like Sommerer and Mignonneau.

The retrospective is a tribute to their life's work as internationally active media artists, pioneers, researchers and teachers of interactive art, it comprises fourteen works from the years 1992 to 2021 and for the first time makes the archive of the artist duo in an augmented reality environment accessible.

The exhibition is a co-production of the ZKM | Karlsruhe, the OÖ Landes-Kultur GmbH, Linz and the iMAL, Brussels, and is accompanied by a scholarly publication on their entire body of work in English, edited by Karin Ohlenschläger, Peter Weibel and Alfred Weidinger in the Leonardo Book Series at MIT Press.

Curator: Genoveva Rückert

**EXHIBITION**

**CHRISTA SOMMERER und LAURENT MIGNONNEAU**  
**The Artwork as a Living System**  
**02.09.22 – 26.02.23**

**OK Linz**

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**OPENING HOURS**

THU – SUN, 10:00 – 18:00

**BOOK PRESENTATION**

SUN, Sept 11th 12:00, OK Linz

und als Live Stream: <https://youtu.be/fixX2OPryII>

**ARTIST-TOURS**

Fr, Sept 09<sup>th</sup>, 16:00

So, Sept 11th, 11:00

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Press information and photographs: <https://www.ooekultur.at/presse>

## THE EXHIBITION

### **Interactive Plant Growing, 1992**

Interactive, computer-based installation, pedestals, plant pots with plants as interfaces, computer (PC, operating system: Windows 10, custom software), electronics, spotlights, projector, plant lamps, custom made interface

Interactive Plant Growing is an installation about the principles of life and about virtual evolution that is based on the interaction of the visitors with plants which are living interfaces. If you touch the plants carefully with your hand, you establish a connection with the natural vegetation which transmits electromagnetic tension to a computer. Thus ferns, vines, mosses, and cacti become interfaces that link the physical with the virtual world. A program then processes the data and converts it simultaneously into the parameters that determine the growth of the virtual plants. By touching the plants you provide the decisive impetus for the ever-changing digital landscape to grow, and you thus become a part of a system that connects the analog environment with an artificial world. This work combines current knowledge from the fields of systems theory, evolutionary biology, and the discourse on humankind's relationship to the natural environment, to computing, and artificial life with the theme of the landscape in the history of art.

### **Anthroposcope, 1993**

Interactive Installation, microscope, plant as interface

Someone risking a look through the microscope of the artists Christa Sommerer & Laurent Mignonneau, won't initially spot a creature, because it will only spring to life by the pulsation of the viewer – who therefore becomes the creator of a new type of virtual organism. Anthroposcope samples the data of the heartbeat with the biological impulse of a plant into an artificial creature, the viewer/creator can explore and manipulate, which in fact resembles natural organisms, although it's not "living" in biological terms, but an artificial existence co-created by a human being and a plant.

Restored version for the exhibition "World Machine" at OK Linz (AT)

### **A-Volve, 1994**

Interactive, computer-based installation, monitor, acrylic glass pool, pedestal, computer (PC, operating system: Windows 10, custom software), loud speaker, tablet, camera, custom made hand tracking system

*A-Volve* is a virtual, interactive artwork which creates an environment that is inhabited by a number of artificial organisms; you can create a creature by simply drawing it with your finger on a touch screen. The habitat is a kind of fish tank full of water. The movements of the creatures depend on their given shape, the drawing determines their fitness, survival, and the principles of artificial evolution. The creatures react to the movement of your hand in the water. If you hold your hand above a creature, you can protect it against predator creatures, but holding it for too long will use up its lifetime, and the creature will die.

The evolution of these artificial organisms is influenced by the interaction between the creatures and the visitors. New mutations and the combination of artificial creatures follow natural reproductive mechanisms according to Mendel's laws of inheritance. By connecting the natural space of the water with the virtual space of the creatures, *A-Volve* reduces the boundaries between "real" and "virtual" to a minimum.

Developed at Advanced Telecommunications Research Institute, Kyoto (JP). With support of NTT Intercommunication Center, Tokyo (JP) and National Center for Supercomputing Application, Illinois (US).

### **Phototropy, 1994**

Interactive, computer-based installation, camera, pedestal, flashlight, computer (PC, operating system: Windows 10, custom software), projector, mat, spotlight, peripheral device

“Phototropism,” literally “light eating,” refers to the process whereby organisms like bacteria and plants capture solar light as a source of chemical energy synthesize food and survive. If you take the flashlight provided in your hand and shine it onto the projection screen in front of you, you can observe how the computer-generated virtual insects follow the light to reach the energy level they need to absorb nutrients.

Once they have enough energy they can also mate with other insects of the same species and create offspring—more and more insects can appear and fill the whole screen. In this case, light is the interface that connects the real environment with the artificial world. In the work *Phototropy*, the evolution of the virtual ecosystem depends upon your behavior. Although the torch is easy to handle, using it requires a certain degree of caution and awareness of the creatures. If you move the light too fast, the insects cannot follow it and, consequently, they do not have time to reproduce; if you move it too slowly, they reach the light too quickly and burn up.

First shown at Artifice 94, Saint-Denis, Paris (FR).

### **Life Species II, 1999**

Interactive, computer-based installation, projector, computer (PC, operating system: Windows 10, custom software), spotlight, pedestal, keyboard, speakers, mouse

*Life Species II* explores the relationship between genetics, art, and text. The work is conceived as an artificial life habitat. You can generate artificial organisms by typing words or text on the keyboard located on the pedestal. Each letter corresponds to a genetic code, allowing you to create artificial creatures and feed them with the letters that make up the text.

The appearance of the creatures is as varied as the texts that are typed and sent—letters and words determine the shape, silhouette, color, texture, and the number of limbs. Your text will also help them to grow bigger and eventually reproduce with other creatures, for their artificial lives depend upon the typed characters that provide them with nutrients. The program developed by Christa Sommerer and Laurent Mignonneau allows written text to be “translated” into genetic code and transformed into three-dimensional visible creatures.

With support of Advanced Telecommunications Research Institute, Kyoto (JP).

### **HAZE Express, 1999**

Interactive, computer-based installation, touch screen, computer (PC, operating system: Windows 10, custom software), train seats, train interior

*HAZE Express* is an interactive installation where you can embark on an imaginary journey and look on the passing landscape through a virtual window as if you were sitting in a train, a car, or an aeroplane. It is hard to recognize the features of a landscape when you observe it at high speed. The moving landscape becomes a flow of images, an accumulation of shapes, silhouettes, and colors that merge to form a mist of impressions.

This gives you the feeling of traveling at speed without actually moving at all. On this interactive journey you can pause the images, freeze the frames, and examine their composition in detail by moving your hand over the surface of the window, propelling or

breaking the visual fluid. The virtual landscape consists of images generated directly by an algorithm.

Developed at the International Academy of Media Arts and Sciences, Gifu (JP).

### **Mobile Feelings, 2002–2003**

Interactive installation, bubble chairs, mobile feeling devices, electronics, cushion, table, carpet

*Mobile Feelings* is an interactive installation that explores the ambivalence of sharing personal information with an anonymous audience. Instead of communicating orally or through images with people we know, this work allows you to link up with strangers by virtual touch and bodily sensations, using a mobile interface specially designed to send and receive tactile signals. When you hold one of the devices in your hand, its miniature sensors and actuators capture your heartbeat, pulse, and breathing. The person sitting opposite you receives the translated data and thus, can perceive and feel these most private sensations through the actuators, vibrators, ventilators, and micro-electromechanical and micro-bio-electrochemical systems embedded inside the devices. Sharing these intimate bodily perceptions with strangers can evoke a strange, unsettling feeling of closeness.

Developed for France Telecom Studio Creatif, Paris (FR).

With support of Institute of Advanced Media Arts and Sciences, Gifu (JP).

### **Eau de Jardin, 2004**

Interactive, computer-based installation, plant pots with plants as interface, panoramic screen, projectors, computer (PC, operating system: Windows 10, custom software), electronics, custom made interface

*Eau de Jardin* is an interactive installation that transports you to an imaginary world of water gardens. The work consists of a triptych formed by projections onto a curved screen that creates an immersive and reflective virtual water garden. In front of the projections, several flower baskets hang down from the ceiling of the gallery. They contain plants such as peace lilies, ferns, and ivies. When you approach the vessels, the plants sense your presence and transform the electromagnetic signals into a virtual landscape, with shapes similar to those of the plants in the glass vessels. If you carefully approach the living plants, the virtual life flourishes on the screen, changing with each visitor and creating a multitude of images of an aquatic garden environment. With the images reflected on the surface of the virtual water, *Eau de Jardin* creates several virtual layers and renders the boundaries between real and artificial vegetation permeable.

Commissioned by House of Shiseido, Tokyo (JP).

### **Life Writer, 2006**

Interactive, computer-based installation, typewriter (custom made interface), projector, chair, table, computer (PC, operating system: Windows 10, custom software)

*Life Writer* consists of an analogue typewriter that is capable of producing digital texts. If you type something on it, the letters turn into artificial organisms with a life of their own. When you type a text, the corresponding letters appear as characters projected onto the paper. However, when you press the carriage return lever, the letters on the screen transform into small black, artificially alive creatures that move randomly over the surface. The artificial organisms are based on a genetic algorithm that translates the text into specific appearances, behaviors,

and movements of these organisms. Depending on their genetic code, the artificial creatures react faster or more slowly. To survive, they also need to eat other letters as food. If you continue to type on the typewriter, the creatures will try to eat the newly typed letters. By turning the roller knob, they can also move back and forth or be deleted from the paper to make room for new creatures.

Commissioned by the Museum of Contemporary Art Cleveland (US).

### **The Value of Art, 2010**

Cat, Portrait of a Lady, Unquiet Sea Interactive installation, oil paintings, printer, electronics, paper rolls

Attention has become the new currency in media, both in traditional media as well as in the social networks.

Following this logic, you could link the economic value of artworks directly to the attention observers pay to it. *The Value of Art* focuses on this phenomenon: a series of interactive paintings invite you to reflect conceptually and pragmatically on “the attention economy” and on how value is created in the art world. Each painting has an inbuilt sensor that counts the number of visitors and the time they spend standing in front of it. The computer system processes the data and immediately records it on a counter placed at the side of the work. Ten seconds of the viewer’s attention amounts to one euro increase in the artwork’s value. The longer people look at the respective artworks, the more they increase in value.

First shown at Mediations Biennale 2010, Poznan (PL).

### **Portrait on the Fly, 2015**

Interactive, computer-based installation, camera, monitor, computer (PC, operating system: Windows 10, custom software)

In the interactive installation *Portrait on the Fly*, about 10,000 computer-generated flies initially appear on a monitor, buzzing around each other. A camera mounted above the monitor captures your image. As soon as the image recognition software detects outlines and contrasts in front of the camera, the digital insects have a goal. Within seconds, the flies position themselves on the screen, and the contours of the recorded people are recognizable as a portrait. The flies are constantly on the move and are always rearranging themselves. They are not programmed to depict anything specific; they follow an algorithm that tells them to stay in dark or high-contrast areas of the captured image. *Portrait on the Fly* invites us to reflect on our fondness for taking photographs of ourselves (the selfie culture), examining concepts of identity, impermanence, and transience. In art history, the housefly animated here is a symbol of mortality and death.

First shown at Vancouver Art Gallery as part of FUSE Festival at International Symposium of Electronic Arts 2015, Vancouver (CA).

### **Portrait on the Fly, 2015–fortlaufend**

Digital prints

Derived from the interactive software for *Portrait on the Fly* from 2015, Christa Sommerer and Laurent Mignonneau created a series of plotter drawings and digital prints of people’s portraits on paper. The vectorbased drawings of the digital portraits, whose outlines are formed from drawings of flies, are printed with a modern pen plotter similar to the ones produced in the

1960s. In the form of graphic images, the artists thereby immortalize ephemeral moments of brief interactions.

The idea of going back to a unique original image, after having explored process-based and ephemeral art, also relates to a fundamental problem of media art—the need to create artifacts that remain unaltered and can be preserved. Here Sommerer and Mignonneau seek to preserve unique original images of portraits of experts, theoreticians and artists from the field of media art including Anne Marie Duguet, Lynn Hershman Leeson, Hannes Leopoldseder, Tomoe Moriyama, Karin Ohlenschläger, Christiane Paul, Jasia Reichardt, Jill Scott, Victoria Vesna.

### **People on the Fly, 2016**

Interactive, computer-based installation, projection screen, camera, projector, computer (PC, operating system: Windows 10, custom software)

*People on the Fly* is a participatory artwork originally conceived for a large-scale media façade. Here you can watch yourself transforming into a swarm of flies. As you move around in front of the projection screen, within seconds, a large number of flies start to buzz around your body; if you stand still, the insects fly away. A specially developed image recognition software detects everybody in the exhibition space and communicates the generated data to artificial, programmed insects.

The resulting image scenarios are in constant flux; they are constructed and deconstructed, people become visible and disappear again within a swarm of insects. *People on the Fly* celebrates the fleeting moment and the hustle and bustle of everyday life, where you only have to stand still for a brief moment to see your own image.

First shown at K11 Media Facade as part of the exhibition Electronic Vibes during the International Symposium of Electronic Arts (ISEA) 2016, Hong Kong (HK).

### **Scavengers, 2020**

Computer animation, monitor, color, no sound, 6:06 min.

Beetles form an order of insects with over 350,000 known species. They come in many variations and forms, and they have fascinated people since the very beginning. They are a crucial part of our ecosystem, and insects also digest and process organic material and put it back into the ecosystem cycle. Humans, however, in the most recent period of Earth's history have had a significant impact on the climate and ecosystems, resulting in a global climate crisis, environmental pollution, and the extinction of many animal species, including insects.

*Scavengers* is a computer animation projected onto a panoramic screen that immerses you. It alerts us to the importance of beetles for our environment: artificial insects struggle to clean up human-produced garbage.

These scavengers in the animation try to digest inorganic trash and pollution and turn it back into nature. Of course, this is a utopian vision; it is up to the humans inhabiting the Earth to accomplish this task.

Developed for TRANSART Festival 2020 at Centro Trevi, Bolzano (IT).

Supported through MEET | Digital Culture Center, Milan (IT).

### **To Bee, 2021**

Computer animation, monitor, color, no sound, 2:50 min.

Bees and other insects are essential for human survival. Without their pollination efforts, we would not be able to enjoy many fruits and vegetables, materials for clothing and housing.

Besides their importance to the ecosystem, the estimated value of insects' pollination work is now estimated at billions of Euros. But the rapid decline of insect populations over the past two generations calls for urgent action. There is a saying that if bees die, humans will go extinct as well.

Christa Sommerer and Laurent Mignonneau want to raise awareness of the interdependent relationship between humans and insects. To Bee is a computer animation where generated bees enact complex flying patterns and form short slogans. The bees serve as a reminder to act responsibly, protect the environment, and make choices in awareness of what is at stake: "To bee or not to bee."

Developed for the exhibition MUTA NATUR 2021 at Vienna Künstlerhaus, Vienna (AT).

### **AR[t]chive, 2022–fortlaufend**

Interactive, computer-based installation, HoloLens 2, computer (PC, operating system: Windows 10, local webserver), furniture

The augmented reality installation AR[t]chive offers a playful glimpse into an interactive digital archive as an embodied experience, using the artworks of Christa Sommerer and Laurent Mignonneau as a starting point.

After you have put on the Microsoft HoloLens 2, you can explore, create, and play within a mixed reality space. Here digital data that coexist as texts, photographs, and terminologies interacts with the physical environment of the exhibition space. By approaching the AR objects and grabbing them with your hand, you can move them around, arrange them differently in the space, or enlarge the images. The immersive technology of the AR smart glasses allows a user experience that moves between the physical as well as the virtual world.

Funded by the Austrian Federal Ministry of Education, Science and Research (BMBWF).

Developed in the context of Infrastructures for Digital Arts Teaching and Research in Higher Education (LeFo), Krems (AT). LeFo project leader: Oliver Grau. LeFo-Team University of Art and Design Linz (AT): Christa Sommerer, Laurent Mignonneau, Tiago Martins. LeFo-Team University of Applied Arts Vienna (AT): Ruth Schnell, Martin Kusch. Software by Tiago Martins. Data Sorting and Scanning by Lea Schnell, Barbara Jazbec, Julian Stadon.