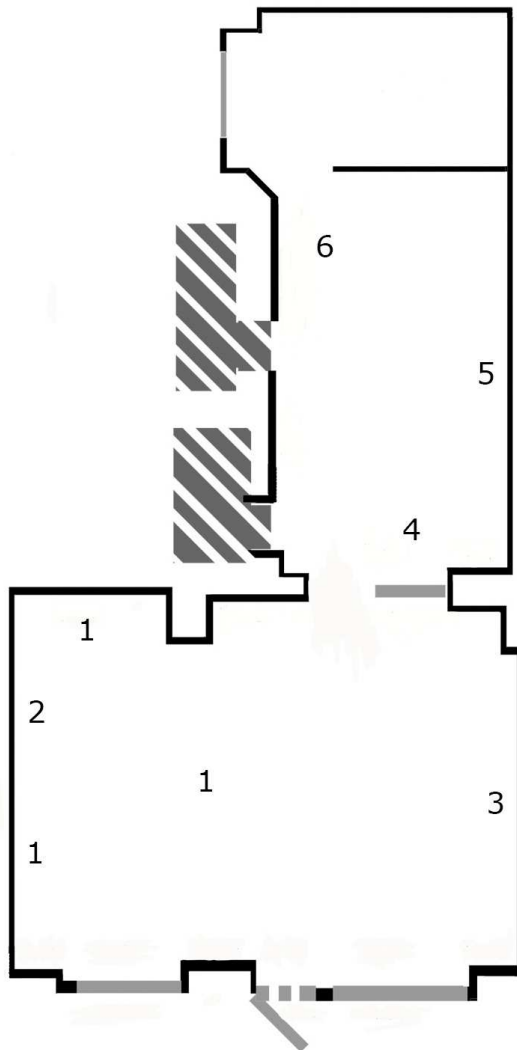


## Growing Geometries – Evolving Forms

Theresa Schubert

29 August – 20 September 2015/ Fri – Sun, 2 – 6 pm



In the exhibition *Growing Geometries – Evolving Forms*, artist Theresa Schubert presents works from the last 3 years, which have arisen in the context of her artistic research project on the subject of creativity and collaboration from a posthuman perspective.

The front room is dedicated to a **study on self-growing geometries (1-3)**. The main actors here are mushrooms (*Pleurotus ostreatus*, *Agaricus bisporus*, and *Agrocybe aegerita*; *Lentinula edodes*, *Macrolepiota procera*). The young mushroom caps are tattooed with a tattoo machine. During their growth, the change of the motifs will be documented. The fungus is, therefore, not only the artist's canvas, but also an artist itself. This can be observed in a living installation (1). Drawings from previous experiments (2), as well as photographs of tattooed mushrooms (3) provide a documentary framework.

In the back room there are 3 **works (4-6)** dealing with the organism *Physarum polycephalum*. The so-called plasmodial slime mold is, in this state, the largest acellular organism known in the world. As a biological curiosity this type of slime mould serves as a model organism for network optimisation. It can be interpreted as an 'actor' who distributively solves geometric problems.

This property is the basis for the experiment "**Growing Kolmogorov-Uspensky Machines**" (4). Oat flakes are colour coded (RGB) with food colouring and distributed in different patterns. The grown connections of *Physarum polycephalum* were observed and documented in drawings. This experiment attempts to implement Kolmogorov's hypothetical computer by means of a biological organism. Unlike the Turing machine, which proposes medium a linear tape as storage, Kolmogorov's model is based on distributed memory locations.

In the multi-year series of experiments "**somniferous Observatory**" (5) the influence of hypnotic and sedative substances on the growth of *Physarum polycephalum* is investigated. The experiment is a reenactment of the scientific study of Hans Peters and Peter Witt of 1948, in

which they investigated the influence of drugs on the nervous system of spiders and the functionality of their networks.

Moreover, *Physarum polycephalum* responds sensitively to light and has the ability to optimise its growing network to simultaneously take maximum food. These properties form the basis for the generative installation "**bodymetrics**" (6). Here visitors can watch a virtual slime mold growing on their skin. There it searches for food that it finds in dark areas (wrinkles, shadows, moles). New individual protozoan networks appear again and again on human bodies.

The exhibited works have been developed as part of Schubert's PhD research at the Bauhaus University Weimar. They seek to challenge common understandings of creativity and emphasise a posthuman view on the world and its creatures. Furthermore, it is an investigation into the aesthetics and mechanisms of natural growth processes, how they can be controlled, and where chance and obstinacy of nature prevail.

### **1 Growing Geometries (tattooing mushrooms)**

Installation (*Pleurotus ostreatus*, *Agaricus bisporus*, *Agrocybe aegerita*, automated mushroom observatorium, time lapse-video, tattoo station)

2014-15

### **2 growth tracings** (from the project Growing Geometries)

*Ink on transfer paper*

2014

left: Experiment #1, right: Experiment #8

### **3**

**A from square to circle** (blue ink)

**B from circle to square** (green ink)

**C rotational geometry** (blue square, red axis)

**D rotational geometry** (red square, blue axis)

*Lambda-prints* from the project Growing Geometries

2015

### **4 Growing Kolmogorov-Uspensky Machines**

*Pencil and watercolour on paper, petri dish with *Physarum polycephalum**

2014

### **5 somniferous observatory**

*LightJet prints on alu-dibond, framed*

2011-13

A #1 (*Physarum polycephalum*)

B #5 (*Physarum polycephalum*, cannabis)

C #2 (*Physarum polycephalum*, tobacco)

D #8 (*Physarum polycephalum*, valerian)

### **6 bodymetrics**

*Installation (generative, interactive video with sound)*

2013-14

A collaboration with Michael Markert and Moritz Dreßler.

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