

## EDITORIAL

# BIOLOGICAL ART AND EDUCATION

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Art & Science Education is topical. The concept of “multi literacy” is highlighted in the new curriculum for the Finnish schools. Multi literacy means an ability to understand basis and discourses of different subjects. In contemporary multitasking society wide knowledge base is appreciated, sometimes to the detriment of specialization and deeper analysis.

However, to combine art and science does not necessarily mean a fashionable shallowness. Working in collaboration as experts on their own fields artists and scientists can find new perspectives that haven't been thought about before within these areas of knowledge. Or, artists and scientists can together play with crazy ideas such as growing an edible steak from one tiny cell.

Scientific experiments are often means for confirming or invalidating hypotheses and concepts already developed in advance by a researcher. But typical to artistic thinking, experimentation in bioart is associatable and as a mode: “what will happen if I do this?” As art in general bioart develops experiments in order to raise new questions.

Biotechnologies are situated withing a field that is made up of relationships between inorganic matter and living beings, as well as human social institutions and relations. If perception and making something with hands (humanism) are still held to be authentic, we are reluctant to realise that technologies can produce something not possible to make by human hand. And this something can even be a living or at least semi-living organism. In contemporary art bioart and many other combinations of art and technology try to consider why it disturbs and even frightens us.

Questions about nature and humanity preoccupy both artists and scientists, but often from different grounds and emphasis. In Aalto University art and science meet in an interesting ethical chiasma for example in the Department of Art and also in the study program of art education where some students work with theses dealing with problems of biological art and education.

In 2012 was launched in Aalto ARTS Department of Art a biological art unit, *Biofilia – Base for Biological Arts*.

*“It offers a platform and infrastructure for trans-disciplinary research and education that aim at creating cultural discussion and innovation around the topics related to the manipulation of life and biological processes at a practical and theoretical level, including philosophical and ethical dimensions.”* (<http://biofilia.aalto.fi/en/about/>)

This definition is written by Ulla Taipale, who was the Project Manager for Biofilia the first three years. She and the Laboratory Manager Marika Hellman worked in close collaboration with Oron Catts and Ionat Zurr from Australian bioart laboratory SymbioticA. Catts and Zurr gave all of their expertise on how to design and produce a complex wet lab for artistic purposes. The lab is situated next to the Aalto LUMARTS (STEAM) laboratory, and Biofilia has already organised several art & science courses for high school students as well.

In October 2014 the Department of Art organised Bio/Art/Education – Symposium on Bioart to find out connections between science and various genres of art, and their relation to art education. Biological art was not only seen as a manipulation of cells and genes but it was discussed in relation to ecology and especially to environmental art, performance, robotics, and body art. Two articles (Meskus and jagodzinski) in this special issue of Synnyt/Origins are based on presentations in the symposium, and two others (Jorgensen and Lindman) are written for this publication.

Mianna Meskus discussed in the Symposium about the concept of nature. In her article *Technoscientific shaping of human nature – But what does nature stand for?* she explores the ambiguous character of the concept of nature and the role nature has in our technoscientific society.

In his article *Earthworks and bioart, ethics and cosmology* Darren Jorgensen argues that through the contradictory ideas of earthworks and land art, it is possible to think about the distinction between biotech art and bioart, as well as the ethics of this new idea in art. The essay focuses on two sites of bioart which represent different modes of artistic practice: the SymbioticA laboratories in Perth, Australia, and the Parco d'Arte Vivente in Turin, Italy.

Jan Jagodzinski finds one of the tasks for bioart to create such life forms that help us to grasp humans' relation to non-human life. He discusses ethics of bioart by examples of works from molecular bioart as well as from body art.

Pia Lindman, the head of Biofilia, outlines the ongoing and future educational and research projects in Biofilia in collaboration with actors from Europe, Australia and US. According to her, synthetic biology is now activating and connecting lines of thought, and putting our human perspectives on life to the test. In Biofilia life is explored at least from three points of view: in relation to food, matter and mind. Lindman describes that the work done in Biofilia aims at addressing artists, the scientific community, philosophers, and the wider audience without a sense of urgency and competition that might be taking a hold of emerging corporations and scientific enterprises.